

In this unequal contest betwixt Common Sense and Philosophy, the latter will always come off both with dishonour and loss ; nor can she ever thrive till this rivalship is dropt, these encroachments given up, and a cordial friendship restored : for, in reality, Common Sense holds nothing of Philosophy, nor needs her aid. But, on the other hand, Philosophy (if I may be permitted to change the metaphor) has no other root but the principles of Common Sense ; it grows out of them, and draws its nourishment from them.¹

II.—ANALYSIS OF A TYPICAL SENSATION

§ 1. THE SENSATION CONSIDERED ABSTRACTLY

Let us now attend carefully to what the mind is conscious of when we smell a rose or a lily ; and, since our language affords no other name for this sensation, we shall call it a *smell* or *odour*, carefully excluding from the meaning of those names everything but the sensation itself, at least till we have examined it.

Suppose a person who never had this sense before, to receive it all at once, and to smell a rose—can he perceive any similitude or agreement between the smell and the rose ? or indeed between it and any other object whatsoever ? Certainly he cannot. He finds himself affected in a new way,

¹ *Ibid.*, p. 101.

he knows not why or from what cause. Like a man that feels some pain or pleasure formerly unknown to him, he is conscious that he is not the cause of it himself ; but cannot, from the nature of the thing, determine whether it is caused by body or spirit, by something near, or by something at a distance. It has no similitude to anything else, so as to admit of a comparison ; and, therefore, he can conclude nothing from it, unless, perhaps, that there must be some unknown cause of it.

It is evidently ridiculous to ascribe to it figure, colour, extension, or any other quality of bodies. He cannot give it a place, any more than he can give a place to melancholy or joy ; nor can he conceive it to have any existence, but when it is smelled. So that it appears to be a simple and original affection or feeling of the mind, altogether inexplicable and unaccountable. It is, indeed, impossible that it can be in any body : it is a sensation, and a sensation can only be in a sentient thing.

The various odours have each their different degrees of strength or weakness. Most of them are agreeable or disagreeable ; and frequently those that are agreeable when weak, are disagreeable when stronger. When we compare different smells together, we can perceive very few resemblances or contrarieties, or, indeed, relations of any kind between them. They are all so simple in themselves, and so different from each other, that it is

hardly possible to divide them into *genera* and *species*. Most of the names we give them are particular ; as the smell of a *rose*, of a *jessamine*, and the like. Yet there are some general names—as *sweet*, *stinking*, *musty*, *putrid*, *cadaverous*, *aromatic*. Some of them seem to refresh and animate the mind, others to deaden and depress it.

§ 2. SENSATION AND REMEMBRANCE, NATURAL PRINCIPLES OF BELIEF

So far we have considered this sensation abstractly. Let us next compare it with other things to which it bears some relation. And first I shall compare this sensation with the remembrance, and the imagination of it.

I can think of the smell of a rose when I do not smell it ; and it is possible that when I think of it, there is neither rose nor smell anywhere existing. But when I smell it, I am necessarily determined to believe that the sensation really exists. This is common to all sensations, that, as they cannot exist but in being perceived, so they cannot be perceived but they must exist. I could as easily doubt of my own existence, as of the existence of my sensations. Even those profound philosophers who have endeavoured to disprove their own existence, have yet left their sensations to stand upon their own bottom, script of a subject, rather than call in question the reality of their existence.

Here, then, a sensation, a smell for instance, may be presented to the mind three different ways : it may be smelled, it may be remembered, it may be imagined or thought of. In the first case, it is necessarily accompanied with a belief of its present existence ; in the second, it is necessarily accompanied with a belief of its past existence ; and in the last, it is not accompanied with belief at all, but is what the logicians call *a simple apprehension*.

Why sensation should compel our belief of the present existence of the thing, memory a belief of its past existence, and imagination no belief at all, I believe no philosopher can give a shadow of reason, but that such is the nature of these operations : they are all simple and original, and therefore inexplicable acts of the mind.

Suppose that once, and only once, I smelled a tuberose in a certain room, where it grew in a pot, and gave a very grateful perfume. Next day I relate what I saw and smelled. When I attend as carefully as I can to what passes in my mind in this case, it appears evident that the very thing I saw yesterday, and the fragrance I smelled, are now the immediate objects of my mind, when I remember it. Further, I can imagine this pot and flower transported to the room where I now sit, and yielding the same perfume. Here likewise it appears, that the individual thing which I saw and smelled, is the object of my imagination.

Philosophers indeed tell me, that the immediate object of my memory and imagination in this case, is not the past sensation, but an idea of it, an image, phantasm, or species, of the odour I smelted : that this idea now exists in my mind, or in my sensorium ; and the mind, contemplating this present idea, finds it a representation of what is past, or of what may exist ; and accordingly calls it memory, or imagination. This is the doctrine of the ideal philosophy ; which we shall not now examine, that we may not interrupt the thread of the present investigation. Upon the strictest attention, memory appears to me to have things that are past, and not present ideas, for its object. We shall afterwards examine this system of ideas, and endeavour to make it appear, that no solid proof has ever been advanced of the existence of ideas ; that they are a mere fiction and hypothesis, contrived to solve the phænomena of the human understanding ; that they do not at all answer this end ; and that this hypothesis of ideas or images of things in the mind, or in the sensorium, is the parent of those many paradoxes so shocking to common sense, and of that scepticism which disgrace our philosophy of the mind, and have brought upon it the ridicule and contempt of sensible men.

In the meantime, I beg leave to think, with the vulgar, that, when I remember the smell of the tuberose, that very sensation which I had yesterday,

and which has now no more any existence, is the immediate object of my memory; and when I imagine it present, the sensation itself, and not any idea of it, is the object of my imagination. But, though the object of my sensation, memory, and imagination, be in this case the same, yet these acts or operations of the mind are as different, and as easily distinguishable, as smell, taste, and sound. I am conscious of a difference in kind between sensation and memory, and between both and imagination. I find this also, that the sensation compels my belief of the present existence of the smell, and memory my belief of its past existence. There is a smell, is the immediate testimony of sense; there was a smell, is the immediate testimony of memory. If you ask me, why I believe that the smell exists, I can give no other reason, nor shall ever be able to give any other, than that I smell it. If you ask, why I believe that it existed yesterday, I can give no other reason but that I remember it.

Sensation and memory, therefore, are simple, original, and perfectly distinct operations of the mind, and both of them are original principles of belief. Imagination is distinct from both, but is no principle of belief. Sensation implies the present existence of its object, memory its past existence, but imagination views its object naked, and without any belief of its existence or non-existence, and is therefore what the schools call *Simple Apprehension*.

§ 3. JUDGMENT AND BELIEF IN SOME CASES PRECEDE SIMPLE APPREHENSION

But here, again, the ideal system comes in our way : it teaches us that the first operation of the mind about its ideas, is simple apprehension—that is, the bare conception of a thing without any belief about it : and that, after we have got simple apprehensions, by comparing them together, we perceive agreements or disagreements between them ; and that this perception of the agreement or disagreement of ideas is all that we call belief, judgment, or knowledge. Now, this appears to me to be all fiction, without any foundation in nature ; for it is acknowledged by all, that sensation must go before memory and imagination ; and hence it necessarily follows, that apprehension, accompanied with belief and knowledge, must go before simple apprehension, at least in the matters we are now speaking of. So that here, instead of saying that the belief or knowledge is got by putting together and comparing the simple apprehensions, we ought rather to say that the simple apprehension is performed by resolving and analysing a natural and original judgment. And it is with the operations of the mind, in this case, as with natural bodies, which are, indeed, compounded of simple principles or elements. Nature does not exhibit these elements separate, to be compounded by us ;

she exhibits them mixed and compounded in concrete bodies, and it is only by art and chemical analysis that they can be separated.

§ 4. TWO THEORIES OF THE NATURE OF BELIEF REFUTED—CONCLUSIONS FROM WHAT HATH BEEN SAID

But what is this belief or knowledge which accompanies sensation and memory ? Every man knows what it is, but no man can define it. Does any man pretend to define sensation, or to define consciousness ? It is happy, indeed, that no man does. And if no philosopher had endeavoured to define and explain belief, some paradoxes in philosophy, more incredible than ever were brought forth by the most abject superstition or the most frantic enthusiasm, had never seen the light. Of this kind surely is that modern discovery of the ideal philosophy, that sensation, memory, belief, and imagination, when they have the same object, are only different degrees of strength and vivacity in the idea. Suppose the idea to be that of a future state after death : one man believes it firmly—this means no more than that he hath a strong and lively idea of it ; another neither believes nor disbelieves—that is, he has a weak and faint idea. Suppose, now, a third person believes firmly that there is no such thing, I am at a loss to know whether his idea be faint or lively : if it is faint, then there may be a

firm belief where the idea is faint ; if the idea is lively, then the belief of a future state and the belief of no future state must be one and the same. The same arguments that are used to prove that belief implies only a stronger idea of the object than simple apprehension, might as well be used to prove that love implies only a stronger idea of the object than indifference. And then what shall we say of hatred, which must upon this hypothesis be a degree of love, or a degree of indifference ? If it should be said, that in love there is something more than an idea—to wit, an affection of the mind—may it not be said with equal reason, that in belief there is something more than an idea—to wit, an assent or persuasion of the mind ?

But perhaps it may be thought as ridiculous to argue against this strange opinion, as to maintain it. Indeed, if a man should maintain that a circle, a square, and a triangle differ only in magnitude, and not in figure, I believe he would find nobody disposed either to believe him or to argue against him ; and yet I do not think it less shocking to common sense, to maintain that sensation, memory, and imagination differ only in degree, and not in kind. I know it is said, that, in a delirium, or in dreaming, men are apt to mistake one for the other. But does it follow from this, that men who are neither dreaming nor in a delirium cannot distinguish them ? But how does a man know that he is not in a delirium ?

I cannot tell : neither can I tell how a man knows that he exists. But, if any man seriously doubts whether he is in a delirium, I think it highly probable that he is, and that it is time to seek for a cure, which I am persuaded he will not find in the whole system of logic.

I mentioned before Locke's notion of belief or knowledge ; he holds that it consists in a perception of the agreement or disagreement of ideas ; and this he values himself upon as a very important discovery.

We shall have occasion afterwards to examine more particularly this grand principle of Locke's philosophy, and to shew that it is one of the main pillars of modern scepticism, although he had no intention to make that use of it. At present let us only consider how it agrees with the instances of belief now under consideration ; and whether it gives any light to them. I believe that the sensation I have exists ; and that the sensation I remember does not now exist, but did exist yesterday. Here, according to Locke's system, I compare the idea of a sensation with the ideas of past and present existence : at one time I perceive that this idea agrees with that of present existence, but disagrees with that of past existence ; but, at another time, it agrees with the idea of past existence, and disagrees with that of present existence. Truly these ideas seem to be very capri-

cious in their agreements and disagreements. Besides, I cannot, for my heart, conceive what is meant by either. I say a sensation exists, and I think I understand clearly what I mean. But you want to make the thing clearer, and for that end tell me, that there is an agreement between the idea of that sensation and the idea of existence. To speak freely, this conveys to me no light, but darkness ; I can conceive no otherwise of it, than as an odd and obscure circumlocution. I conclude, then, that the belief which accompanies sensation and memory, is a simple act of the mind, which cannot be defined. It is, in this respect, like seeing and hearing, which can never be so defined as to be understood by those who have not these faculties ; and to such as have them, no definition can make these operations more clear than they are already. In like manner, every man that has any belief —and he must be a curiosity that has none—knows perfectly what belief is, but can never define or explain it. I conclude, also, that sensation, memory, and imagination, even where they have the same object, are operations of a quite different nature, and perfectly distinguishable by those who are sound and sober. A man that is in danger of confounding them, is indeed to be pitied ; but whatever relief he may find from another art, he can find none from logic or metaphysic. I conclude further, that it is no less a part of the human

constitution, to believe the present existence of our sensations, and to believe the past existence of what we remember, than it is to believe that twice two make four. The evidence of sense, the evidence of memory, and the evidence of the necessary relations of things, are all distinct and original kinds of evidence, equally grounded on our constitution: none of them depends upon, or can be resolved into another. To reason against any of these kinds of evidence is absurd; nay, to reason for them is absurd. They are first principles; and such fall not within the province of reason, but of common sense.

§ 5. APOLOGY FOR METAPHYSICAL ABSURDITIES—

SENSATION WITHOUT A SENTIENT, A CONSEQUENCE OF THE THEORY OF IDEAS—CONSEQUENCES OF THIS STRANGE OPINION

Having considered the relation which the sensation of smelling bears to the remembrance and imagination of it, I proceed to consider what relation it bears to a mind, or sentient principle. It is certain, no man can conceive or believe smelling to exist of itself, without a mind, or something that has the power of smelling, of which it is called a sensation, an operation, or feeling. Yet, if any man should demand a proof that sensation cannot be without a mind or sentient being, I confess that I can give none; and that to pretend to prove it, seems to me almost as absurd as to deny it.

This might have been said without any apology before the *Treatise of Human Nature* appeared in the world. For till that time, no man, as far as I know, ever thought either of calling in question that principle, or of giving a reason for his belief of it. Whether thinking beings were of an ethereal or igneous nature, whether material or immaterial, was variously disputed ; but that thinking is an operation of some kind of being or other, was always taken for granted, as a principle that could not possibly admit of doubt.

However, since the author above mentioned, who is undoubtedly one of the most acute metaphysicians that this or any other age hath produced, hath treated it as a vulgar prejudice, and maintained that the mind is only a succession of ideas and impressions without any subject ; his opinion, however contrary to the common apprehensions of mankind, deserves respect. I beg therefore, once for all, that no offence may be taken at charging this or other metaphysical notions with absurdity, or with being contrary to the common sense of mankind. No disparagement is meant to the understandings of the authors or maintainers of such opinions. Indeed, they commonly proceed, not from defect of understanding, but from an excess of refinement ; the reasoning that leads to them often gives new light to the subject, and shews real genius and deep penetration in the author ;

and the premises do more than atone for the conclusion.

If there are certain principles, as I think there are, which the constitution of our nature leads us to believe, and of which we are under a necessity to take for granted in the common concerns of life, without being able to give a reason for them—these are what we call the principles of common sense ; and what is manifestly contrary to them, is what we call absurd.

Indeed, if it is true, and to be received as a principle of philosophy, that sensation and thought may be without a thinking being, it must be acknowledged to be the most wonderful discovery that this or any other age hath produced. The received doctrine of ideas is the principle from which it is deduced, and of which indeed it seems to be a just and natural consequence. And it is probable, that it would not have been so late a discovery, but that it is so shocking and repugnant to the common apprehensions of mankind, that it required an uncommon degree of philosophical intrepidity to usher it into the world. It is a fundamental principle of the ideal system, that every object of thought must be an impression or an idea—that is, a faint copy of some preceding impression. This is a principle so commonly received, that the author above mentioned, although his whole system is built upon it, never offers the least proof of it. It is upon this

principle, as a fixed point, that he erects his metaphysical engines, to overturn heaven and earth, body and spirit. And, indeed, in my apprehension, it is altogether sufficient for the purpose. For, if impressions and ideas are the only objects of thought, then heaven and earth, and body and spirit, and everything you please, must signify only impressions and ideas, or they must be words without any meaning. It seems, therefore, that this notion, however strange, is closely connected with the received doctrine of ideas, and we must either admit the conclusion, or call in question the premises.

Ideas seem to have something in their nature unfriendly to other existences. They were first introduced into philosophy, in the humble character of images or representatives of things ; and in this character they seemed not only to be inoffensive, but to serve admirably well for explaining the operations of the human understanding. But, since men began to reason clearly and distinctly about them, they have by degrees supplanted their constituents, and undermined the existence of everything but themselves. First, they discarded all secondary qualities of bodies ; and it was found out by their means, that fire is not hot, nor snow cold, nor honey sweet ; and, in a word, that heat and cold, sound, colour, taste, and smell, are nothing but ideas or impressions. Bishop Berkeley ad-

vanced them a step higher, and found out, by just reasoning from the same principles, that extension, solidity, space, figure, and body, are ideas, and that there is nothing in nature but ideas and spirits. But the triumph of ideas was completed by the *Treatise of Human Nature*, which discards spirits also, and leaves ideas and impressions as the sole existences in the universe. What if, at last, having nothing else to contend with, they should fall foul of one another, and leave no existence in nature at all ? This would surely bring philosophy into danger ; for what should we have left to talk or to dispute about ?

However, hitherto these philosophers acknowledge the existence of impressions and ideas ; they acknowledge certain laws of attraction, or rules of precedence, according to which, ideas and impressions range themselves in various forms, and succeed one another : but that they should belong to a mind, as its proper goods and chattels, this they have found to be a vulgar error. These ideas are as free and independent as the birds of the air, or as Epicurus's atoms when they pursued their journey in the vast inane. Shall we conceive them like the films of things in the Epicurean system ?

Principio hoc dico, rerum simulacra vagari,
Multæ modis multis, in cunctas undique parteis
Tenuia, quæ facile inter se junguntur in auris,
Obvia cum veniunt.—LUCR.

Or do they rather resemble Aristotle's intelligible species, after they are shot forth from the object, and before they have yet struck upon the passive intellect? But why should we seek to compare them with anything, since there is nothing in nature but themselves? They make up the whole furniture of the universe; starting into existence, or out of it, without any cause; combining into parcels, which the vulgar call *minds*; and succeeding one another by fixed laws, without time, place, or author of those laws.

Yet, after all, these self-existent and independent ideas look pitifully naked and destitute, when left thus alone in the universe, and seem, upon the whole, to be in a worse condition than they were before. Des Cartes, Malebranche, and Locke, as they made much use of ideas, treated them handsomely, and provided them in decent accommodation; lodging them either in the pineal gland, or in the pure intellect, or even in the divine mind. They moreover clothed them with a commission, and made them representatives of things, which gave them some dignity and character. But the *Treatise of Human Nature*, though no less indebted to them, seems to have made but a bad return, by bestowing upon them this independent existence; since thereby they are turned out of house and home, and set adrift in the world, without friend or connection, without a rag to cover their nakedness; and who

knows but the whole system of ideas may perish by the indiscreet zeal of their friends to exalt them ?

However this may be, it is certainly a most amazing discovery that thought and ideas may be without any thinking being—a discovery big with consequences which cannot easily be traced by those deluded mortals who think and reason in the common track. We were always apt to imagine, that thought supposed a thinker, and love a lover, and treason a traitor : but this, it seems, was all a mistake ; and it is found out that there may be treason without a traitor, and love without a lover, laws without a legislator, and punishment without a sufferer, succession without time, and motion without anything moved, or space in which it may move : or if, in these cases, ideas are the lover, the sufferer, the traitor, it were to be wished that the author of this discovery had farther condescended to acquaint us whether ideas can converse together, and be under obligations of duty or gratitude to each other ; whether they can make promises and enter into leagues and covenants, and fulfil or break them, and be punished for the breach. If one set of ideas makes a covenant, another breaks it, and a third is punished for it, there is reason to think that justice is no natural virtue in this system.

It seemed very natural to think that the *Treatise*

of Human Nature required an author, and a very ingenious one too ; but now we learn that it is only a set of ideas which came together and arranged themselves by certain associations and attractions.

After all, this curious system appears not to be fitted to the present state of human nature. How far it may suit some choice spirits, who are refined from the dregs of common sense, I cannot say. It is acknowledged, I think, that even these can enter into this system only in their most speculative hours, when they soar so high in pursuit of those self-existent ideas as to lose sight of all other things. But when they condescend to mingle again with the human race, and to converse with a friend, a companion, or a fellow-citizen, the ideal system vanishes ; common sense, like an irresistible torrent, carries them along ; and, in spite of all their reasoning and philosophy, they believe their own existence, and the existence of other things.

Indeed, it is happy they do so ; for, if they should carry their closet belief into the world, the rest of mankind would consider them as diseased, and send them to an infirmary. Therefore, as Plato required certain previous qualifications of those who entered his school, I think it would be prudent for the doctors of this ideal philosophy to do the same, and to refuse admittance to every man who is so weak as to imagine that he ought to have the same belief in solitude and in company,

or that his principles ought to have any influence upon his practice ; for this philosophy is like a hobby-horse, which a man in bad health may ride in his closet, without hurting his reputation ; but, if he should take him abroad with him to church, or to the exchange, or to the play-house, his heir would immediately call a jury, and seize his estate.

§ 6. THE CONCEPTION AND BELIEF OF A SENTIENT BEING OR MIND IS SUGGESTED BY OUR CONSTITUTION—THE NOTION OF RELATIONS NOT ALWAYS GOT BY COMPARING THE RELATED IDEAS

Leaving this philosophy, therefore, to those who have occasion for it, and can use it discreetly as a chamber exercise, we may still inquire how the rest of mankind, and even the adepts themselves, except in some solitary moments, have got so strong and irresistible a belief, that thought must have a subject, and be the act of some thinking being ; how every man believes himself to be something distinct from his ideas and impressions—something which continues the same identical self when all his ideas and impressions are changed. It is impossible to trace the origin of this opinion in history ; for all languages have it interwoven in their original construction. All nations have always believed it. The constitution of all laws and governments, as well as the common transactions of life, suppose it.

It is no less impossible for any man to recollect when he himself came by this notion ; for, as far back as we can remember, we were already in possession of it, and as fully persuaded of our own existence, and the existence of other things, as that one and one make two. It seems, therefore, that this opinion preceded all reasoning, and experience, and instruction ; and this is the more probable, because we could not get it by any of these means. It appears, then, to be an undeniable fact, that, from thought or sensation, all mankind, constantly and invariably, from the first dawning of reflection, do infer a power or faculty of thinking, and a permanent being or mind to which that faculty belongs ; and that we as invariably ascribe all the various kinds of sensation and thought we are conscious of, to one individual mind or self.

But by what rules of logic we make these inferences, it is impossible to shew ; nay, it is impossible to shew how our sensations and thoughts can give us the very notion and conception either of a mind or of a faculty. The faculty of smelling is something very different from the actual sensation of smelling ; for the faculty may remain when we have no sensation. And the mind is no less different from the faculty ; for it continues the same individual being when that faculty is lost. Yet this sensation suggests to us both a faculty and a mind ; and not only suggests the notion of them,

but creates a belief of their existence ; although it is impossible to discover, by reason, any tie or connection between one and the other.

What shall we say, then ? Either those inferences which we draw from our sensations—namely, the existence of a mind, and of powers or faculties belonging to it—are prejudices of philosophy or education, mere fictions of the mind, which a wise man should throw off as he does the belief of fairies ; or they are judgments of nature—judgments not got by comparing ideas, and perceiving agreements and disagreements, but immediately inspired by our constitution.

If this last is the case, as I apprehend it is, it will be impossible to shake off those opinions, and we must yield to them at last, though we struggle hard to get rid of them. And if we could, by a determined obstinacy, shake off the principles of our nature, this is not to act the philosopher, but the fool or the madman. It is incumbent upon those who think that these are not natural principles, to shew, in the first place, how we can otherwise get the notion of a mind and its faculties ; and then to shew how we come to deceive ourselves into the opinion that sensation cannot be without a sentient being.

It is the received doctrine of philosophers, that our notions of relations can only be got by comparing the related ideas : but, in the present case,

there seems to be an instance to the contrary. It is not by having first the notions of mind and sensation, and then comparing them together, that we perceive the one to have the relation of a subject or substratum, and the other that of an act or operation : on the contrary, one of the related things —to wit, sensation—suggests to us both the correlate and the relation.

I beg leave to make use of the word *suggestion*, because I know not one more proper, to express a power of the mind, which seems entirely to have escaped the notice of philosophers, and to which we owe many of our simple notions which are neither impressions nor ideas, as well as many original principles of belief. I shall endeavour to illustrate, by an example, what I understand by this word. We all know, that a certain kind of sound suggests immediately to the mind, a coach passing in the street ; and not only produces the imagination, but the belief, that a coach is passing. Yet there is here no comparing of ideas, no perception of agreements or disagreements, to produce this belief ; nor is there the least similitude between the sound we hear and the coach we imagine and believe to be passing.

It is true that this suggestion is not natural and original ; it is the result of experience and habit. But I think it appears, from what hath been said, that there are natural suggestions particularly,

that sensation suggests the notion of present existence, and the belief that what we perceive or feel does now exist; that memory suggests the notion of past existence, and the belief that what we remember did exist in time past; and that our sensations and thoughts do also suggest the notion of a mind, and the belief of its existence, and of its relation to our thoughts. By a like natural principle it is, that a beginning of existence, or any change in nature, suggests to us the notion of a cause and compels our belief of its existence. And, in like manner, as shall be shewn when we come to the sense of touch, certain sensations of touch, by the constitution of our nature, suggest to us extension, solidity, and motion, which are nowise like to sensations, although they have been hitherto confounded with them.

§ 7. THERE IS A QUALITY OR VIRTUE IN BODIES, WHICH WE CALL THEIR SMELL—HOW THIS IS CONNECTED IN THE IMAGINATION WITH THE SENSATION

We have considered smell as signifying a sensation, feeling, or impression upon the mind; and in this sense, it can only be in a mind, or sentient being: but it is evident that mankind give the name of *smell* much more frequently to something which they conceive to be external, and to be a quality of body: they understand something by it which

does not at all infer a mind ; and have not the least difficulty in conceiving the air perfumed with aromatic odours in the deserts of Arabia, or in some uninhabited island, where the human foot never trod. Every sensible day-labourer hath as clear a notion of this, and as full a conviction of the possibility of it, as he hath of his own existence ; and can no more doubt of the one than of the other.

Suppose that such a man meets with a modern philosopher, and wants to be informed what smell in plants is. The philosopher tells him, that there is no smell in plants, nor in anything but in the mind ; that it is impossible there can be smell but in a mind ; and that all this hath been demonstrated by modern philosophy. The plain man will, no doubt, be apt to think him merry : but, if he finds that he is serious, his next conclusion will be that he is mad ; or that philosophy, like magic, puts men into a new world, and gives them different faculties from common men. And thus philosophy and common sense are set at variance. But who is to blame for it ? In my opinion the philosopher is to blame. For if he means by smell, what the rest of mankind most commonly mean, he is certainly mad. But if he puts a different meaning upon the word, without observing it himself, or giving warning to others, he abuses language and disgraces philosophy, without doing any service to truth : as if a man should exchange the meaning

of the words *daughter* and *cow*, and then endeavour to prove to his plain neighbour, that his cow is his daughter, and his daughter his cow.

I believe there is not much more wisdom in many of those paradoxes of the ideal philosophy, which to plain sensible men appear to be palpable absurdities, but with the adepts pass for profound discoveries. I resolve, for my own part, always to pay a great regard to the dictates of common sense, and not to depart from them without absolute necessity : and, therefore, I am apt to think that there is really something in the rose or lily, which is by the vulgar called *smell*, and which continues to exist when it is not smelted : and shall proceed to inquire what this is ; how we come by the notion of it ; and what relation this quality or virtue of smell hath to the sensation which we have been obliged to call by the same name, for want of another.

Let us therefore suppose, as before, a person beginning to exercise the sense of smelling ; a little experience will discover to him, that the nose is the organ of this sense, and that the air, or something in the air, is a medium of it. And finding, by farther experience, that, when a rose is near, he has a certain sensation, when it is removed, the sensation is gone, he finds a connection in nature betwixt the rose and this sensation. The rose is considered as a cause, occasion, or antecedent of the sensation ; the sensation as an effect or consequence of the

presence of the rose ; they are associated in the mind, and constantly found conjoined in the imagination.

But here it deserves our notice, that, although the sensation may seem more closely related to the mind its subject, or to the nose its organ, yet neither of these connections operate so powerfully upon the imagination as its connection with the rose its concomitant. The reason of this seems to be, that its connection with the mind is more general, and noway distinguisheth it from other smells, or even from tastes, sounds, and other kinds of sensations. The relation it hath to the organ is likewise general, and doth not distinguish it from other smells ; but the connection it hath with the rose is special and constant ; by which means they become almost inseparable in the imagination, in like manner as thunder and lightning, freezing and cold.

**§ 8. THAT THERE IS A PRINCIPLE IN HUMAN NATURE,
FROM WHICH THE NOTION OF THIS, AS WELL
AS ALL OTHER NATURAL VIRTUES OR CAUSES,
IS DERIVED**

In order to illustrate further how we come to conceive a quality or virtue in the rose which we call *smell*, and what this smell is, it is proper to observe, that the mind begins very early to thirst after principles which may direct it in the exertion

of its powers. The smell of a rose is a certain affection or feeling of the mind ; and, as it is not constant, but comes and goes, we want to know when and where we may expect it ; and are uneasy till we find something which, being present, brings this feeling along with it, and, being removed, removes it. This, when found, we call the cause of it ; not in a strict and philosophical sense, as if the feeling were really effected or produced by that cause, but in a popular sense ; for the mind is satisfied if there is a constant conjunction between them ; and such causes are in reality nothing else but laws of nature. Having found the smell thus constantly conjoined with the rose, the mind is at rest, without inquiring whether this conjunction is owing to a real efficiency or not ; that being a philosophical inquiry, which does not concern human life. But every discovery of such a constant conjunction is of real importance in life, and makes a strong impression upon the mind.

So ardently do we desire to find everything that happens within our observation thus connected with something else as its cause or occasion, that we are apt to fancy connections upon the slightest grounds ; and this weakness is most remarkable in the ignorant, who know least of the real connections established in nature. A man meets with an unlucky accident on a certain day of the year, and, knowing no other cause of his misfortune, he is apt

to conceive something unlucky in that day of the calendar ; and, if he finds the same connection hold a second time, is strongly confirmed in his superstition. I remember, many years ago, a white ox was brought into this country, of so enormous a size that people came many miles to see him. There happened, some months after, an uncommon fatality among women in child-bearing. Two such uncommon events, following one another, gave a suspicion of their connection, and occasioned a common opinion among the country-people that the white ox was the cause of this fatality.

However silly and ridiculous this opinion was, it sprung from the same root in human nature on which all natural philosophy grows—namely, an eager desire to find out connections in things, and a natural, original, and unaccountable propensity to believe that the connections which we have observed in time past will continue in time to come. Omens, portents, good and bad luck, palmistry, astrology, all the numerous arts of divination and of interpreting dreams, false hypotheses and systems, and true principles in the philosophy of nature, are all built upon the same foundation in the human constitution, and are distinguished only according as we conclude rashly from too few instances, or cautiously from a sufficient induction.

As it is experience only that discovers these connections between natural causes and their effects ;

without inquiring further, we attribute to the cause some vague and indistinct notion of power or virtue to produce the effect. And, in many cases, the purposes of life do not make it necessary to give distinct names to the cause and the effect. Whence it happens, that, being closely connected in the imagination, although very unlike to each other, one name serves for both ; and, in common discourse, is most frequently applied to that which, of the two, is most the object of our attention. This occasions an ambiguity in many words, which, having the same causes in all languages, is common to all, and is apt to be overlooked even by philosophers. Some instances will serve both to illustrate and confirm what we have said.

Magnetism signifies both the tendency of the iron towards the magnet, and the power of the magnet to produce that tendency ; and, if it was asked, whether it is a quality of the iron or of the magnet, one would perhaps be puzzled at first ; but a little attention would discover, that we conceive a power or virtue in the magnet as the cause, and a motion in the iron as the effect ; and, although these are things quite unlike, they are so united in the imagination, that we give the common name of *magnetism* to both. The same thing may be said of *gravitation*, which sometimes signifies the tendency of bodies towards the earth, sometimes the attractive power of the earth, which we conceive

as the cause of that tendency. We may observe the same ambiguity in some of Sir Isaac Newton's definitions; and that even in words of his own making. In three of his definitions, he explains very distinctly what he understands by the *absolute* quantity, what by the *accelerative* quantity, and what by the *motive* quantity, of a centripetal force. In the first of these three definitions, centripetal force is put for the cause, which we conceive to be some power or virtue in the centre or central body; in the last two, the same word is put for the effect of this cause, in producing velocity, or in producing motion towards that centre.

Heat signifies a sensation, and *cold* a contrary one; but *heat* likewise signifies a quality or state of bodies, which hath no contrary, but different degrees. When a man feels the same water hot to one hand and cold to the other, this gives him occasion to distinguish between the feeling and the heat of the body; and, although he knows that the sensations are contrary, he does not imagine that the body can have contrary qualities at the same time. And when he finds a different taste in the same body in sickness and in health, he is easily convinced that the quality in the body called *taste* is the same as before, although the sensations he has from it are perhaps opposite.

The vulgar are commonly charged by philosophers, with the absurdity of imagining the smell

in the rose to be something like to the sensation of smelling ; but I think unjustly ; for they neither give the same epithets to both, nor do they reason in the same manner from them. What is smell in the rose ? It is a quality or virtue of the rose, or of something proceeding from it, which we perceive by the sense of smelling ; and this is all we know of the matter. But what is smelling ? It is an act of the mind, but is never imagined to be a quality of the mind. Again, the sensation of smelling is conceived to infer necessarily a mind or sentient being ; but smell in the rose infers no such thing. We say, this body smells sweet, that stinks ; but we do not say, this mind smells sweet and that stinks. Therefore, smell in the rose, and the sensation which it causes, are not conceived, even by the vulgar, to be things of the same kind, although they have the same name.

From what hath been said, we may learn that the smell of a rose signifies two things : *First*, a sensation, which can have no existence but when it is perceived, and can only be in a sentient being or mind ; *Secondly*, it signifies some power, quality, or virtue, in the rose, or in effluvia proceeding from it, which hath a permanent existence, independent of the mind, and which, by the constitution of nature, produces the sensation in us. By the original constitution of our nature, we are both led to believe that there is a permanent cause of the

sensation, and prompted to seek after it; and experience determines us to place it in the rose. The names of all smells, tastes, sounds, as well as heat and cold, have a like ambiguity in all languages; but it deserves our attention, that these names are but rarely, in common language, used to signify the sensations; for the most part, they signify the external qualities which are indicated by the sensations—the cause of which phænomenon I take to be this. Our sensations have very different degrees of strength. Some of them are so quick and lively as to give us a great deal either of pleasure or of uneasiness. When this is the case, we are compelled to attend to the sensation itself, and to make it an object of thought and discourse; we give it a name, which signifies nothing but the sensation; and in this case we readily acknowledge that the thing meant by that name is in the mind only, and not in anything external. Such are the various kinds of pain, sickness, and the sensations of hunger and other appetites. But, where the sensation is not so interesting as to require to be made an object of thought, our constitution leads us to consider it as a sign of something external, which hath a constant conjunction with it; and, having found what it indicates, we give a name to that: the sensation, having no proper name, falls in as an accessory to the thing signified by it, and is confounded under the same name. So that the

name may, indeed, be applied to the sensation, but most properly and commonly is applied to the thing indicated by that sensation. The sensations of smell, taste, sound, and colour, are of infinitely more importance as signs or indications, than they are upon their own account; like the words of a language, wherein we do not attend to the sound but to the sense.

§ 9. WHETHER IN SENSATION THE MIND IS ACTIVE OR PASSIVE?

There is one inquiry remains, Whether, in smelling, and in other sensations, the mind is active or passive? This possibly may seem to be a question about words, or, at least, of very small importance; however, if it leads us to attend more accurately to the operations of our minds than we are accustomed to do, it is, upon that very account, not altogether unprofitable. I think the opinion of modern philosophers is, that in sensation the mind is altogether passive. And this undoubtedly is so far true, that we cannot raise any sensation in our minds by willing it; and, on the other hand, it seems hardly possible to avoid having the sensation when the object is presented. Yet it seems likewise to be true, that, in proportion as the attention is more or less turned to a sensation or diverted from it, that sensation is more or less perceived and remembered. Every one knows that very intense

pain may be diverted by a surprise, or by anything that entirely occupies the mind. When we are engaged in earnest conversation, the clock may strike by us without being heard ; at least, we remember not, the next moment, that we did hear it. The noise and tumult of a great trading city is not heard by them who have lived in it all their days ; but it stuns those strangers who have lived in the peaceful retirement of the country. Whether, therefore, there can be any sensation where the mind is purely passive, I will not say ; but I think we are conscious of having given some attention to every sensation which we remember, though ever so recent.

No doubt, where the impulse is strong and uncommon, it is as difficult to withhold attention as it is to forbear crying out in racking pain, or starting in a sudden fright. But how far both might be attained by strong resolution and practice, is not easy to determine. So that, although the Peripatetics had no good reason to suppose an active and a passive intellect, since attention may be well enough accounted an act of the will, yet I think they came nearer to the truth, in holding the mind to be in sensation partly passive and partly active, than the moderns, in affirming it to be purely passive. Sensation, imagination, memory, and judgment, have, by the vulgar in all ages, been considered as acts of the mind. The manner in

which they are expressed in all languages shews this. When the mind is much employed in them, we say it is very active ; whereas, if they were impressions only, as the ideal philosophy would lead us to conceive, we ought, in such a case, rather to say, that the mind is very passive ; for, I suppose, no man would attribute great activity to the paper I write upon, because it receives variety of characters.

The relation which the sensation of smell bears to the memory and imagination of it, and to a mind or subject, is common to all our sensations, and, indeed, to all the operations of the mind ; the relation it bears to the will is common to it with all the powers of understanding ; and the relation it bears to that quality or virtue of bodies which it indicates, is common to it with the sensations of taste, hearing, colour, heat, and cold—so that what hath been said of this sense, may easily be applied to several of our senses, and to other operations of the mind ; and this, I hope, will apologize for our insisting so long upon it.¹

III.—KNOWLEDGE AND REALITY

§ I. OF HARDNESS

Hardness of bodies is a thing that we conceive as distinctly, and believe as firmly, as anything in

¹ *Ibid.*, pp. 105–115.

The difficulty of attending to the visible figure of bodies, and making it an object of thought, appears so similar to that which we find in attending to our sensations, that both have probably like causes. Nature intended the visible figure as a sign of the tangible figure and situation of bodies, and hath taught us, by a kind of instinct, to put it always to this use. Hence it happens, that the mind passes over it with a rapid motion, to attend to the things signified by it. It is as unnatural to the mind to stop at the visible figure, and attend to it, as it is to a spherical body to stop upon an inclined plane. There is an inward principle, which constantly carries it forward, and which cannot be overcome but by a contrary force.¹

§ 5. OF PERCEPTION IN GENERAL

Sensation, and the perception of external objects by the senses, though very different in their nature, have commonly been considered as one and the same thing. The purposes of common life do not make it necessary to distinguish them, and the received opinions of philosophers tend rather to confound them ; but, without attending carefully to this distinction, it is impossible to have any just conception of the operations of our senses. The most simple operations of the mind, admit not of a logical definition : all we can do is to describe

¹ *Ibid.*, p. 146.

them, so as to lead those who are conscious of them in themselves, to attend to them, and reflect upon them ; and it is often very difficult to describe them so as to answer this intention.

The same mode of expression is used to denote sensation and perception ; and, therefore, we are apt to look upon them as things of the same nature. Thus, *I feel a pain* ; *I see a tree* : the first denoteth a sensation, the last a perception. The grammatical analysis of both expressions is the same : for both consist of an active verb and an object. But, if we attend to the things signified by these expressions, we shall find that, in the first, the distinction between the act and the object is not real but grammatical ; in the second, the distinction is not only grammatical but real.

The form of the expression, *I feel pain*, might seem to imply that the feeling is something distinct from the pain felt ; yet, in reality, there is no distinction. As *thinking a thought* is an expression which could signify no more than *thinking*, so *feeling a pain* signifies no more than *being pained*. What we have said of pain is applicable to every other mere sensation. It is difficult to give instances, very few of our sensations having names ; and, where they have, the name being common to the sensation, and to something else which is associated with it. But, when we attend to the sensation by itself, and separate it from other

things which are conjoined with it in the imagination, it appears to be something which can have no existence but in a sentient mind, no distinction from the act of the mind by which it is felt.

Perception, as we here understand it, hath always an object distinct from the act by which it is perceived; an object which may exist whether it be perceived or not. I perceive a tree that grows before my window; there is here an object which is perceived, and an act of the mind by which it is perceived; and these two are not only distinguishable, but they are extremely unlike in their natures. The object is made up of a trunk, branches, and leaves; but the act of the mind by which it is perceived hath neither trunk, branches, nor leaves. I am conscious of this act of my mind, and I can reflect upon it; but it is too simple to admit of an analysis, and I cannot find proper words to describe it. I find nothing that resembles it so much as the remembrance of the tree, or the imagination of it. Yet both these differ essentially from perception; they differ likewise one from another. It is in vain that a philosopher assures me, that the imagination of the tree, the remembrance of it, and the perception of it, are all one, and differ only in degree of vivacity. I know the contrary; for I am as well acquainted with all the three as I am with the apartments of my own house. I know this also, that the perception of an object implies

both a conception of its form, and a belief of its present existence. I know, moreover, that this belief is not the effect of argumentation and reasoning ; it is the immediate effect of my constitution.

I am aware that this belief which I have in perception stands exposed to the strongest batteries of scepticism. But they make no great impression upon it. The sceptic asks me, Why do you believe the existence of the external object which you perceive ? This belief, sir, is none of my manufacture ; it came from the mint of Nature ; it bears her image and superscription ; and, if it is not right, the fault is not mine : I even took it upon trust, and without suspicion. Reason, says the sceptic, is the only judge of truth, and you ought to throw off every opinion and every belief that is not grounded on reason. Why, sir, should I believe the faculty of reason more than that of perception ? —they came both out of the same shop, and were made by the same artist ; and if he puts one piece of false ware into my hands, what should hinder him from putting another ?¹

Our perceptions are of two kinds : some are natural and original ; others acquired, and the fruit of experience. When I perceive that this is the taste of cyder, that of brandy ; that this is the smell of an apple, that of an orange ; that this is the noise of thunder, that the ringing of bells ; this

¹ *Ibid.*, pp. 182–183.

the sound of a coach passing, that the voice of such a friend : these perceptions, and others of the same kind, are not original—they are acquired. But the perception which I have, by touch, of the hardness and softness of bodies, of their extension, figure, and motion, is not acquired—it is original.

In all our senses, the acquired perceptions are many more than the original, especially in sight. By this sense we perceive originally the visible figure and colour of bodies only, and their visible place : but we learn to perceive by the eye almost everything which we can perceive by touch. The original perceptions of this sense serve only as signs to introduce the acquired.

The signs by which objects are presented to us in perception, are the language of Nature to man ; and as, in many respects, it hath great affinity with the language of man to man, so particularly in this, that both are partly natural and original, partly acquired by custom. Our original or natural perceptions are analogous to the natural language of man to man, of which we took notice in the fourth chapter ; and our acquired perceptions are analogous to artificial language, which, in our mother-tongue, is got very much in the same manner with our acquired perceptions—as we shall afterwards more fully explain.

Not only men, but children, idiots, and brutes, acquire by habit many perceptions which they had

not originally. Almost every employment in life hath perceptions of this kind that are peculiar to it. The shepherd knows every sheep of his flock, as we do our acquaintance, and can pick them out of another flock one by one. The butcher knows by sight the weight and quality of his beeves and sheep before they are killed. The farmer perceives by his eye, very nearly, the quantity of hay in a rick, or of corn in a heap. The sailor sees the burthen, the build, and the distance of a ship at sea, while she is a great way off. Every man accustomed to writing, distinguishes his acquaintance by their handwriting, as he does by their faces. And the painter distinguishes, in the works of his art, the style of all the great masters. In a word, acquired perception is very different in different persons, according to the diversity of objects about which they are employed, and the application they bestow in observing them.

Perception ought not only to be distinguished from sensation, but likewise from that knowledge of the objects of sense which is got by reasoning. There is no reasoning in perception, as hath been observed. The belief which is implied in it, is the effect of instinct. But there are many things, with regard to sensible objects, which we can infer from what we perceive; and such conclusions of reason ought to be distinguished from what is merely perceived. When I look at the moon, I perceive

her to be sometimes circular, sometimes horned, and sometimes gibbous. This is simple perception, and is the same in the philosopher and in the clown : but from these various appearances of her enlightened part, I infer that she is really of a spherical figure. This conclusion is not obtained by simple perception, but by reasoning. Simple perception has the same relation to the conclusions of reason drawn from our perceptions, as the axioms in mathematics have to the propositions. I cannot demonstrate that two quantities which are equal to the same quantity, are equal to each other ; neither can I demonstrate that the tree which I perceive, exists. But, by the constitution of my nature, my belief is irresistibly carried along by my apprehension of the axiom ; and, by the constitution of my nature, my belief is no less irresistibly carried along by my perception of the tree. All reasoning is from principles. The first principles of mathematical reasoning are mathematical axioms and definitions ; and the first principles of all our reasoning about existences, are our perceptions. The first principles of every kind of reasoning are given us by Nature, and are of equal authority with the faculty of reason itself, which is also the gift of Nature. The conclusions of reason are all built upon first principles, and can have no other foundation. Most justly, therefore, do such principles disdain to be tried by reason, and

laugh at all the artillery of the logician, when it is directed against them.

When a long train of reasoning is necessary in demonstrating a mathematical proposition, it is easily distinguished from an axiom ; and they seem to be things of a very different nature. But there are some propositions which lie so near to axioms that it is difficult to say whether they ought to be held as axioms, or demonstrated as propositions. The same thing holds with regard to perception, and the conclusions drawn from it. Some of these conclusions follow our perceptions so easily, and are so immediately connected with them, that it is difficult to fix the limit which divides the one from the other.

Perception, whether original or acquired, implies no exercise of reason ; and is common to men, children, idiots, and brutes. The more obvious conclusions drawn from our perceptions, by reason, make what we call *common understanding* ; by which men conduct themselves in the common affairs of life, and by which they are distinguished from idiots. The more remote conclusions which are drawn from our perceptions, by reason, make what we commonly call *science* in the various parts of nature, whether in agriculture, medicine, mechanics, or in any part of natural philosophy. When I see a garden in good order, containing a great variety of things of the best kinds, and in

the most flourishing condition, I immediately conclude from these signs the skill and industry of the gardener. A farmer, when he rises in the morning, and perceives that the neighbouring brook overflows his field, concludes that a great deal of rain hath fallen in the night. Perceiving his fence broken, and his corn trodden down, he concludes that some of his own or his neighbours' cattle have broke loose. Perceiving that his stable door is broke open, and some of his horses gone, he concludes that a thief has carried them off. He traces the prints of his horses' feet in the soft ground, and by them discovers which road the thief hath taken. These are instances of common understanding, which dwells so near to perception that it is difficult to trace the line which divides the one from the other. In like manner, the science of nature dwells so near to common understanding that we cannot discern where the latter ends and the former begins. I perceive that bodies lighter than water swim in water, and that those which are heavier sink. Hence I conclude, that, if a body remains wherever it is put under water, whether at the top or bottom, it is precisely of the same weight with water. If it will rest only when part of it is above water, it is lighter than water. And the greater the part above water is, compared with the whole, the lighter is the body. If it had no gravity at all, it would make no impression upon the water,

but stand wholly above it. Thus, every man, by common understanding, has a rule by which he judges of the specific gravity of bodies which swim in water: and a step or two more leads him into the science of hydrostatics.

All that we know of nature, or of existences, may be compared to a tree, which hath its root, trunk, and branches. In this tree of knowledge, perception is the root, common understanding is the trunk, and the sciences are the branches.

§ 6. OF THE PROCESS OF NATURE IN PERCEPTION

Although there is no reasoning in perception, yet there are certain means and instruments, which, by the appointment of nature, must intervene between the object and our perception of it; and, by these, our perceptions are limited and regulated. First, If the object is not in contact with the organ of sense, there must be some medium which passes between them. Thus, in vision, the rays of light; in hearing, the vibrations of elastic air; in smelling, the effluvia of the body smelled—must pass from the object to the organ; otherwise we have no perception. Secondly, There must be some action or impression upon the organ of sense, either by the immediate application of the object, or by the medium that goes between them. Thirdly, The nerves which go from the brain to the organ must receive some impression by means

of that which was made upon the organ ; and, probably, by means of the nerves, some impression must be made upon the brain. Fourthly, The impression made upon the organ, nerves, and brain, is followed by a sensation. And, last of all, This sensation is followed by the perception of the object.

Thus, our perception of objects is the result of a train of operations ; some of which affect the body only, others affect the mind. We know very little of the nature of some of these operations ; we know not at all how they are connected together, or in what way they contribute to that perception which is the result of the whole ; but, by the laws of our constitution, we perceive objects in this, and in no other way.¹

Experience teaches us, that certain impressions upon the body are constantly followed by certain sensations of the mind ; and that, on the other hand, certain determinations of the mind are constantly followed by certain motions of the body ; but we see not the chain that ties these things together. Who knows but their connection may be arbitrary, and owing to the will of our Maker ? Perhaps the same sensations might have been connected with other impressions, or other bodily organs. Perhaps we might have been so made as to taste with our fingers, to smell with our ears, and to hear by the nose. Perhaps we might have

¹ *Ibid.*, pp. 184-186.

been so made as to have all the sensations and perceptions which we have, without any impression made upon our bodily organs at all.

However these things may be, if Nature had given us nothing more than impressions made upon the body, and sensations in our minds corresponding to them, we should, in that case, have been merely sentient, but not percipient beings. We should never have been able to form a conception of any external object, far less a belief of its existence. Our sensations have no resemblance to external objects; nor can we discover, by our reason, any necessary connection between the existence of the former, and that of the latter.¹

APPENDIX : OF CAUSE AND POWER

It is proper here to explain what is meant by the cause of a phenomenon, when that word is used in natural philosophy. The word cause is so ambiguous, that I fear many mistake its meaning, and take it to mean the efficient cause, which I think it never does in this science.

By the cause of a phenomenon, nothing is meant but the law of nature, of which that phenomenon is an instance, or a necessary consequence. The cause of a body's falling to the ground is its gravity. But gravity is not an efficient cause, but a general law, that obtains in nature, of which law the fall

¹ *Ibid.*, p. 187.