# Book 1: Of the understanding


- Part I: Of ideas, their origin, composition, connexion, abstraction, etc.
- Part II: Of the ideas of space and time
- Part III: Of knowledge and probability
- Part IV: Of the sceptical and other systems of philosophy

# Part I: Of ideas, their origin, composition, connexion, abstraction, etc.

## Section I. Of the origin of our ideas

All the perceptions of the human mind resolve themselves into two distinct kinds, which I shall call Impressions and Ideas. The difference betwixt these consists in the degrees of force and liveliness with which they strike upon the mind, and make their way into our thought or consciousness. Those perceptions, which enter with most force and violence, we may name *impressions*; and under this name I comprehend all our sensations, passions and emotions, as they make their first appearance in the soul. By *ideas* I mean the faint images of these in thinking and reasoning; such as, for instance, are all the perceptions excited by the present discourse, excepting only, those which arise from the sight and touch, and excepting the immediate pleasure or uneasiness it may occasion. I believe it will not be very necessary to employ many words in explaining this distinction. Every one of himself will readily perceive the difference betwixt feeling and thinking. The common degrees of these are easily distinguished; tho' it is not impossible but in particular instances they may very nearly approach to each other. Thus in sleep, in a fever, in madness, or in any very violent emotions of soul, our ideas may approach to our impressions: As on the other hand it sometimes happens, that our impressions are so faint and low, that we cannot distinguish them from our ideas. But notwithstanding this near resemblance in a few instances, they are in general so very different, that no-one can make a scruple to rank them under distinct heads, and assign to each a peculiar name to mark the difference[1] .

There is another division of our perceptions, which it will be convenient to observe, and which extends itself both to our impressions and ideas. This division is into Simple and Complex. Simple perceptions or impressions and ideas are such as admit of no distinction nor separation. The complex are the contrary to these, and may be distinguished into parts. Tho' a particular colour, taste, and smell are qualities all united together in this apple, 'tis easy to perceive they are not the same, but are at least distinguishable from each other.

Having by these divisions given an order and arrangement to our objects, we may now apply ourselves to consider with the more accuracy their qualities and relations. The first circumstance, that strikes my eye, is the great resemblance betwixt our impressions and ideas in every other particular, except their degree of force and vivacity. The one seem to be in a manner the reflexion of the other; so that all the perceptions of the mind are double, and appear both as impressions and ideas. When I shut my eyes and think of my chamber, the ideas I form are exact representations of the impressions I felt; nor is there any circumstance of the one, which is not to be found in the other. In running over my other perceptions, I find still the same resemblance and representation. Ideas and impressions appear always to correspond to each other. This circumstance seems to me remarkable, and engages my attention for a moment.

Upon a more accurate survey I find I have been carried away too far by the first appearance, and that I must make use of the distinction of perceptions into *simple and complex*, to limit this general decision, *that all our ideas and impressions are resembling*. I observe, that many of our complex ideas never had impressions, that corresponded to them, and that many of our complex impressions never are

exactly copied in ideas. I can imagine to myself such a city as the *New Jerusalem*, whose pavement is gold and walls are rubies, tho' I never saw any such. I have seen *Paris*; but shall I affirm I can form such an idea of that city, as will perfectly represent all its streets and houses in their real and just proportions?

I perceive, therefore, that tho' there is in general a great resemblance betwixt our *complex* impressions and ideas, yet the rule is not universally true, that they are exact copies of each other. We may next consider how the case stands with our *simple* perceptions. After the most accurate examination, of which I am capable, I venture to affirm, that the rule here holds without any exception, and that every simple idea has a simple impression, which resembles it; and every simple impression a correspondent idea. That idea of red, which we form in the dark, and that impression, which strikes our eyes in sun-shine, differ only in degree, not in nature. That the case is the same with all our simple impressions and ideas, 'tis impossible to prove by a particular enumeration of them. Every one may satisfy himself in this point by running over as many as he pleases. But if any one should deny this universal resemblance, I know no way of convincing him, but by desiring him to shew a simple impression, that has not a correspondent idea, or a simple idea, that has not a correspondent impression. If he does not answer this challenge, as 'tis certain he cannot, we may from his silence and our own observation establish our conclusion.

Thus we find, that all simple ideas and impressions resemble each other; and as the complex are formed from them, we may affirm in general, that these two species of perception are exactly correspondent. Having discover'd this relation, which requires no farther examination, I am curious to find some other of their qualities. Let us consider how they stand with regard to their existence, and which of the impressions and ideas are causes, and which effects.

The *full* examination of this question is the subject of the present treatise; and therefore we shall here content ourselves with establishing one general proposition, *That all our simple ideas in their first appearance are deriv'd from simple impressions, which are correspondent to them, and which they exactly represent.*

In seeking for phænomena to prove this proposition, I find only those of two kinds; but in each kind the phænomena are obvious, numerous, and conclusive. I first make myself certain, by a new review, of what I have already asserted, that every simple impression is attended with a correspondent idea, and every simple idea with a correspondent impression. From this constant conjunction of resembling perceptions I immediately conclude, that there is a great connexion betwixt our correspondent impressions and ideas, and that the existence of the one has a considerable influence upon that of the other. Such a constant conjunction, in such an infinite number of instances, can never arise from chance; but clearly proves a dependence of the impressions on the ideas, or of the ideas on the impressions. That I may know on which side this dependence lies, I consider the order of their *first appearance*; and find by constant experience, that the simple impressions always take the precedence of their correspondent ideas, but never appear in the contrary order. To give a child an idea of scarlet or orange, of sweet or bitter, I present the objects, or in other words, convey to him these impressions; but proceed not so absurdly, as to endeavour to produce the impressions by exciting the ideas. Our ideas upon their appearance produce not their correspondent impressions, nor do we perceive any colour, or feel any sensation merely upon thinking of them. On the other hand we find, that any impressions either of the mind or body is constantly followed by an idea, which resembles it, and is only different in the degrees of force and liveliness. The constant conjunction of our resembling perceptions, is a convincing proof, that the one are the causes of the other; and this priority of the

impressions is an equal proof, that our impressions are the causes of our ideas, not our ideas of our impressions.

To confirm this I consider another plain and convincing phænomenon; which is, that where-ever by any accident the faculties, which give rise to any impressions, are obstructed in their operations, as when one is born blind or deaf; not only the impressions are lost, but also their correspondent ideas; so that there never appear in the mind the least traces of either of them. Nor is this only true, where the organs of sensation are entirely destroy'd, but likewise where they have never been put in action to produce a particular impression. We cannot form to ourselves a just idea of the taste of a pine-apple, without having actually tasted it.

There is however one contradictory phænomenon, which may prove, that 'tis not absolutely impossible for ideas to go before their correspondent impressions. I believe it will readily be allow'd, that the several distinct ideas of colours, which enter by the eyes, or those of sounds, which are convey'd by the hearing, are really different from each other, tho' at the same time resembling. Now if this be true of different colours, it must be no less so of the different shades of the same colour, that each of them produces a distinct idea, independent of the rest. For if this shou'd be deny'd, 'tis possible, by the continual gradation of shades, to run a colour insensibly into what is most remote from it; and if you will not allow any of the means to be different, you cannot without absurdity deny the extremes to be the same. Suppose therefore a person to have enjoyed his sight for thirty years, and to have become perfectly well acquainted with colours of all kinds, excepting one particular shade of blue, for instance, which it never has been his fortune to meet with. Let all the different shades of that colour, except that single one, be plac'd before him, descending gradually from the deepest to the lightest; 'tis plain, that he will perceive a blank, where that shade is wanting, and will be sensible, that there is a greater distance in that place betwixt the continguous colours, than in any other. Now I ask, whether 'tis possible for him, from his own imagination, to supply this deficiency, and raise up to himself the idea of that particular shade, tho' it had never been conveyed to him by his senses? I believe there are few but will be of opinion that he can; and this may serve as a proof, that the simple ideas are not always derived from the correspondent impressions; tho' the instance is so particular and singular, that 'tis scarce worth our observing, and does not merit that for it alone we should alter our general maxim.

But besides this exception, it may not be amiss to remark on this head, that the principle of the priority of impressions to ideas must be understood with another limitation, *viz*. that as our ideas are images of our impressions, so we can form secondary ideas, which are images of the primary; as appears from this very reasoning concerning them. This is not, properly speaking, an exception to the rule so much as an explanation of it. Ideas produce the images of themselves in new ideas; but as the first ideas are supposed to be derived from impressions, it still remains true, that all our simple ideas proceed either mediately or immediately from their correspondent impressions.

This then is the first principle I establish in the science of human nature; nor ought we to despise it because of the simplicity of its appearance. For 'tis remarkable, that the present question concerning the precedency of our impressions or ideas, is the same with what has made so much noise in other terms, when it has been disputed whether there be any *innate ideas*, or whether all ideas be derived from sensation and reflexion. We may observe, that in order to prove the ideas of extension and colour not to be innate, philosophers do nothing but shew, that they are conveyed by our senses. To prove the ideas of passion and desire not to be innate, they observe that we have a preceding experience of these emotions in ourselves. Now if we carefully examine these arguments, we shall find that they prove nothing but that ideas are preceded by other more lively perceptions, from which they are derived, and

which they represent. I hope this clear stating of the question will remove all disputes concerning it, and will render this principle of more use in our reasonings, than it seems hitherto to have been.

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1. I here make use of these terms, *impression and idea*, in a sense different from what is usual, and I hope this liberty will be allowed me. Perhaps I rather restore the word, idea, to its original sense, from which Mr. *Locke* had perverted it, in making it stand for all our perceptions. By the term of impression I would not be understood to express the manner, in which our lively perceptions are produced in the soul, but merely the perceptions themselves; for which there is no particular name either in the *English* or any other language, that I know of.

# Section II. Division of the subject

Since it appears, that our simple impressions are prior to their correspondent ideas, and that the exceptions are very rare, method seems to require we should examine our impressions, before we consider our ideas. Impressions may be divided into two kinds, those of Sensation and those of Reflexion. The first kind arises in the soul originally, from unknown causes. The second is derived in a great measure from our ideas, and that in the following order. An impression first strikes upon the senses, and makes us perceive heat or cold, thirst or hunger, pleasure or pain of some kind or other. Of this impression there is a copy taken by the mind, which remains after the impression ceases; and this we call an idea. This idea of pleasure or pain, when it returns upon the soul, produces the new impressions of desire and aversion, hope and fear, which may properly be called impressions of reflexion, because derived from it. These again are copied by the memory and imagination, and become ideas; which perhaps in their turn give rise to other impressions and ideas. So that the impressions of reflexion are only antecedent to their correspondent ideas; but posterior to those of sensation, and deriv'd from them. The examination of our sensations belongs more to anatomists and natural philosophers than to moral; and therefore shall not at present be enter'd upon. And as the impressions of reflexion, *viz.* passions, desires, and emotions, which principally deserve our attention, arise mostly from ideas, 'twill be necessary to reverse that method, which at first sight seems most natural; and in order to explain the nature and principles of the human mind, give a particular account of ideas, before we proceed to impressions. For this reason I have here chosen to begin with ideas.

# Section III. Of the ideas of the memory and imagination

We find by experience, that when any impression has been present with the mind, it again makes its appearance there as an idea; and this it may do after two different ways: either when in its new appearance it retains a considerable degree of its first vivacity, and is somewhat intermediate betwixt an impression and an idea; or when it entirely loses that vivacity, and is a perfect idea. The faculty, by which we repeat our impressions in the first manner, is called the Memory, and the other the Imagination. 'Tis evident at first sight, that the ideas of the memory are much more lively and strong than those of the imagination, and that the former faculty paints its objects in more distinct colours, than any which are employ'd by the latter. When we remember any past event, the idea of it flows in upon the mind in a forcible manner; whereas in the imagination the perception is faint and languid, and cannot without difficulty be preserv'd by the mind steddy and uniform for any considerable time. Here

then is a sensible difference betwixt one species of ideas and another. But of this more fully hereafter[1].

There is another difference betwixt these two kinds of ideas, which is no less evident, namely that tho' neither the ideas of the memory nor imagination, neither the lively nor faint ideas can make their appearance in the mind, unless their correspondent impressions have gone before to prepare the way for them, yet the imagination is not restrain'd to the same order and form with the original impressions; while the memory is in a manner ty'd down in that respect, without any power of variation.

'Tis evident, that the memory preserves the original form, in which its objects were presented, and that where-ever we depart from it in recollecting any thing, it proceeds from some defect or imperfection in that faculty. An historian may, perhaps, for the more convenient carrying on of his narration, relate an event before another, to which it was in fact posterior; but then he takes notice of this disorder, if he be exact; and by that means replaces the idea in its due position. 'Tis the same case in our recollection of those places and persons, with which we were formerly acquainted. The chief exercise of the memory is not to preserve the simple ideas, but their order and position. In short, this principle is supported by such a number of common and vulgar phænomena, that we may spare ourselves the trouble of insisting on it any farther. The same evidence follows us in our second principle, *of the liberty of the imagination to transpose and change its ideas.* The fables we meet with in poems and romances put this entirely out of question. Nature there is totally confounded, and nothing mentioned but winged horses, fiery dragons, and monstrous giants. Nor will this liberty of the fancy appear strange, when we consider, that all our ideas are copy'd from our impressions, and that there are not any two impressions which are perfectly inseparable. Not to mention, that this is an evident consequence of the division of ideas into simple and complex. Where-ever the imagination perceives a difference among ideas, it can easily produce a separation.

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1. Part III. sect. 5.

# Section IV. Of the connexion or association of ideas

As all simple ideas may be separated by the imagination, and may be united again in what form it pleases, nothing wou'd be more unaccountable than the operations of that faculty, were it not guided by some universal principles, which render it, in some measure, uniform with itself in all times and places. Were ideas entirely loose and unconnected, chance alone wou'd join them; and 'tis impossible the same simple ideas should fall regularly into complex ones (as they commonly do) without some bond of union among them, some associating quality, by which one idea naturally introduces another. This uniting principle among ideas is not to be consider'd as an inseparable connexion; for that has been already excluded from the imagination: Nor yet are we to conclude, that without it the mind cannot join two ideas; for nothing is more free than that faculty: but we are only to regard it as a gentle force, which commonly prevails, and is the cause why, among other things, languages so nearly correspond to each other; nature in a manner pointing out to every one those simple ideas, which are most proper to be united into a complex one. The qualities, from which this association arises, and by which the mind is after this manner convey'd from one idea to another, are three, *viz.* Resemblance,

Contiguity in time or place, and Cause and Effect.

I believe it will not be very necessary to prove, that these qualities produce an association among ideas, and upon the appearance of one idea naturally introduce another. ’Tis plain, that in the course of our thinking, and in the constant revolution of our ideas, our imagination runs easily from one idea to any other that *resembles* it, and that this quality alone is to the fancy a sufficient bond and association. ’Tis likewise evident, that as the senses, in changing their objects, are necessitated to change them regularly, and take them as they lie *contiguous* to each other, the imagination must by long custom acquire the same method of thinking, and run along the parts of space and time in conceiving its objects. As to the connexion, that is made by the relation of *cause and effect*, we shall have occasion afterwards to examine it to the bottom, and therefore shall not at present insist upon it. ’Tis sufficient to observe, that there is no relation, which produces a stronger connexion in the fancy, and makes one idea more readily recall another, than the relation of cause and effect betwixt their objects.

That we may understand the full extent of these relations, we must consider, that two objects are connected together in the imagination, not only when the one is immediately resembling, contiguous to, or the cause of the other, but also when there is interposed betwixt them a third object, which bears to both of them any of these relations. This may be carried on to a great length; tho’ at the same time we may observe, that each remove considerably weakens the relation. Cousins in the fourth degree are connected by *causation*, if I may be allowed to use that term; but not so closely as brothers, much less as child and parent. In general we may observe, that all the relations of blood depend upon cause and effect, and are esteemed near or remote, according to the number of connecting causes interpos’d betwixt the persons.

Of the three relations above-mention’d this of causation is the most extensive. Two objects may be consider’d as plac’d in this relation, as well when one is the cause of any of the actions or motions of the other, as when the former is the cause of the existence of the latter. For as that action or motion is nothing but the object itself, consider’d in a certain light, and as the object continues the same in all its different situations, ’tis easy to imagine how such an influence of objects upon one another may connect them in the imagination.

We may carry this farther, and remark, not only that two objects are connected by the relation of cause and effect, when the one produces a motion or any action in the other, but also when it has a power of producing it. And this we may observe to be the source of all the relations of interest and duty, by which men influence each other in society, and are plac’d in the ties of government and subordination. A master is such-a-one as by his situation, arising either from force or agreement, has a power of directing in certain particulars the actions of another, whom we call servant. A judge is one, who in all disputed cases can fix by his opinion the possession or property of any thing betwixt any members of the society. When a person is possess’d of any power, there is no more required to convert it into action, but the exertion of the will; and *that* in every case is consider’d as possible, and in many as probable; especially in the case of authority, where the obedience of the subject is a pleasure and advantage to the superior.

These are therefore the principles of union or cohesion among our simple ideas, and in the imagination supply the place of that inseparable connexion, by which they are united in our memory. Here is a kind of Attraction, which in the mental world will be found to have as extraordinary effects as in the natural, and to shew itself in as many and as various forms. Its effects are every where conspicuous; but as to its causes, they are mostly unknown, and must be resolv’d into *original* qualities of human

nature, which I pretend not to explain. Nothing is more requisite for a true philosopher, than to restrain the intemperate desire of searching into causes, and having establish'd any doctrine upon a sufficient number of experiments, rest contented with that, when he sees a farther examination would lead him into obscure and uncertain speculations. In that case his enquiry wou'd be much better employ'd in examining the effects than the causes of his principle.

Amongst the effects of this union or association of ideas, there are none more remarkable, than those complex ideas, which are the common subjects of our thoughts and reasoning, and generally arise from some principle of union among our simple ideas. These complex ideas may be divided into *Relations*, *Modes*, and *Substances*. We shall briefly examine each of these in order, and shall subjoin some considerations concerning our *general* and *particular* ideas, before we leave the present subject, which may be consider'd as the elements of this philosophy.

# Section V. Of relations

The word Relation is commonly used in two senses considerably different from each other. Either for that quality, by which two ideas are connected together in the imagination, and the one naturally introduces the other, after the manner above-explained; or for that particular circumstance, in which, even upon the arbitrary union of two ideas in the fancy, we may think proper to compare them. In common language the former is always the sense, in which we use the word, relation; and 'tis only in philosophy, that we extend it to mean any particular subject of comparison, without a connecting principle. Thus distance will be allowed by philosophers to be a true relation, because we acquire an idea of it by the comparing of objects: But in a common way we say, *that nothing can be more distant than such or such things from each other, nothing can have less relation*; as if distance and relation were incompatible.

It may perhaps be esteemed an endless task to enumerate all those qualities, which make objects admit of comparison, and by which the ideas of *philosophical* relation are produced. But if we diligently consider them, we shall find that without difficulty they may be compriz'd under seven general heads, which may be considered as the sources of all *philosophical* relation.

1. The first is *resemblance*: And this is a relation, without which no philosophical relation can exist; since no objects will admit of comparison, but what have some degree of resemblance. But tho' resemblance be necessary to all philosophical relation, it does not follow, that it always produces a connexion or association of ideas. When a quality becomes very general, and is common to a great many individuals, it leads not the mind directly to any one of them; but by presenting at once too great a choice, does thereby prevent the imagination from fixing on any single object.

2. *Identity* may be esteem'd a second species of relation. This relation I here consider as apply'd in its strictest sense to constant and unchangeable objects; without examining the nature and foundation of personal identity, which shall find its place afterwards. Of all relations the most universal is that of identity, being common to every being, whose existence has any duration.

3. After identity the most universal and comprehensive relations are those of *Space* and *Time*, which are the sources of an infinite number of comparisons, such as *distant, contiguous, above, below, before, after*, &c.

4. All those objects, which admit of *quantity*, or *number*, may be compar'd in that particular; which is another very fertile source of relation.

5. When any two objects possess the same *quality* in common, the *degrees*, in which they possess it, form a fifth species of relation. Thus of two objects, which are both heavy, the one may be either of greater, or less weight than with the other. Two colours, that are of the same kind, may yet be of different shades, and in that respect admit of comparison.

6. The relation of *contrariety* may at first sight be regarded as an exception to the rule, *that no relation of any kind can subsist without some degree of resemblance*. But let us consider, that no two ideas are in themselves contrary, except those of existence and non-existence, which are plainly resembling, as implying both of them an idea of the object; tho' the latter excludes the object from all times and places, in which it is supposed not to exist.

7. All other objects, such as fire and water, heat, and cold, are only found to be contrary from experience, and from the contrariety of their *causes* or *effects*; which relation of cause and effect is a seventh philosophical relation, as well as a natural one. The resemblance implied in this relation, shall be explain'd afterwards.

It might naturally be expected, that I should join *difference* to the other relations. But that I consider rather as a negation of relation, than as any thing real or positive. Difference is of two kinds as oppos'd either to identity or resemblance. The first is called a difference of *number*; the other of *kind*.

# Section VI. Of modes and substances

I wou'd fain ask those philosophers, who found so much of their reasonings on the distinction of substance and accident, and imagine we have clear ideas of each, whether the idea of *substance* be deriv'd from the impressions of sensation or reflexion? If it be convey'd to us by our senses, I ask, which of them; and after what manner? If it be perceiv'd by the eyes, it must be a colour; if by the ears, a sound; if by the palate, a taste; and so of the other senses. But I believe none will assert, that substance is either a colour, or sound, or a taste. The idea of substance must therefore be deriv'd from an impression or reflexion, if it really exist. But the impressions of reflexion resolve themselves into our passions and emotions; none of which can possibly represent a substance. We have therefore no idea of substance, distinct from that of a collection of particular qualities, nor have we any other meaning when we either talk or reason concerning it.

The idea of a substance as well as that of a mode, is nothing but a collection of simple ideas, that are united by the imagination, and have a particular name assigned them, by which we are able to recall, either to ourselves or others, that collection. But the difference betwixt these ideas consists in this, that the particular qualities, which form a substance, are commonly refer'd to an unknown *something*, in which they are supposed to inhere; or granting this fiction should not take place, are at least supposed to be closely and inseparably connected by the relations of contiguity and causation. The effect of this is, that whatever new simple quality we discover to have the same connexion with the rest, we immediately comprehend it among them, even tho' it did not enter into the first conception of the substance. Thus our idea of gold may at first be a yellow colour, weight, malleableness, fusibility; but upon the discovery of its dissolubility in *aqua regia*, we join that to the other qualities, and suppose it to belong to the substance as much as if its idea had from the beginning made a part of the compound

one. The principle of union being regarded as the chief part of the complex idea, gives entrance to whatever quality afterwards occurs, and is equally comprehended by it, as are the others, which first presented themselves.

That this cannot take place in modes, is evident from considering their nature. The simple ideas of which modes are formed, either represent qualities, which are not united by contiguity and causation, but are dispers'd in different subjects; or if they be all united together, the uniting principle is not regarded as the foundation of the complex idea. The idea of a dance is an instance of the first kind of modes; that of beauty of the second. The reason is obvious, why such complex ideas cannot receive any new idea, without changing the name, which distinguishes the mode.

# Section VII. Of abstract ideas

A very material question has been started concerning *abstract* or *general* ideas, *whether they be general or particular in the mind's conception of them*. A [1] great philosopher has disputed the receiv'd opinion in this particular, and has asserted, that all general ideas are nothing but particular ones, annexed to a certain term, which gives them a more extensive signification, and makes them recall upon occasion other individuals, which are similar to them. As I look upon this to be one of the greatest and most valuable discoveries that has been made of late years in the republic of letters, I shall here endeavour to confirm it by some arguments, which I hope will put it beyond all doubt and controversy.

'Tis evident, that in forming most of our general ideas, if not all of them, we abstract from every particular degree of quantity and quality, and that an object ceases not to be of any particular species on account of every small alteration in its extension, duration and other properties. It may therefore be thought, that here is a plain dilemma, that decides concerning the nature of those abstract ideas, which have afforded so much speculation to philosophers. The abstract idea of a man represents men of all sizes and all qualities; which 'tis concluded it cannot do, but either by representing at once all possible sizes and all possible qualities, or by representing no particular one at all. Now it having been esteemed absurd to defend the former proposition, as implying an infinite capacity in the mind, it has been commonly infer'd in favour of the latter; and our abstract ideas have been suppos'd to represent no particular degree either of quantity or quality. But that this inference is erroneous, I shall endeavour to make appear, *first*, by proving, that 'tis utterly impossible to conceive any quantity or quality, without forming a precise notion of its degrees: And *secondly* by showing, that tho' the capacity of the mind be not infinite, yet we can at once form a notion of all possible degrees of quantity and quality, in such a manner at least, as, however imperfect, may serve all the purposes of reflexion and conversation.

To begin with the first proposition, *that the mind cannot form any notion of quantity or quality without forming a precise notion of degrees of each*; we may prove this by the three following arguments. First, We have observ'd, that whatever objects are different are distinguishable, and that whatever objects are distinguishable are separable by the thought and imagination. And we may here add, that these propositions are equally true in the *inverse*, and that whatever objects are separable are also distinguishable, and that whatever objects are distinguishable are also different. For how is it possible we can separate what is not distinguishable, or distinguish what is not different? In order therefore to know, whether abstraction implies a separation, we need only consider it in this view, and examine, whether all the circumstances, which we abstract from in our general ideas, be such as are

distinguishable and different from those, which we retain as essential parts of them. But ’tis evident at first sight, that the precise length of a line is not different nor distinguishable from the line itself; nor the precise degree of any quality from the quality. These ideas, therefore, admit no more of separation than they do of distinction and difference. They are consequently conjoined with each other in the conception; and the general idea of a line, notwithstanding all our abstractions and refinements, has in its appearance in the mind a precise degree of quantity and quality; however it may be made to represent others, which have different degrees of both.

Secondly, ’tis confest, that no object can appear to the senses; or in other words, that no impression can become present to the mind, without being determin’d in its degrees both of quantity and quality. The confusion, in which impressions are sometimes involv’d, proceeds only from their faintness and unsteadiness, not from any capacity in the mind to receive any impression, which in its real existence has no particular degree nor proportion. That is a contradiction in terms; and even implies the flattest of all contradictions, *viz*. that ’tis possible for the same thing both to be and not to be.

Now since all ideas are deriv’d from impressions, and are nothing but copies and representations of them, whatever is true of the one must be acknowledg’d concerning the other. Impressions and ideas differ only in their strength and vivacity. The foregoing conclusion is not founded on any particular degree of vivacity. It cannot therefore be affected by any variation in that particular. An idea is a weaker impression; and as a strong impression must necessarily have a determinate quantity and quality, the case must be the same with its copy or representative.

Thirdly, ’tis a principle generally receiv’d in philosophy, that every thing in nature is individual, and that ’tis utterly absurd to suppose a triangle really existent, which has no precise proportion of sides and angles. If this therefore be absurd in *fact and reality*, it must also be absurd *in idea*; since nothing of which we can form a clear and distinct idea is absurd and impossible. But to form the idea of an object, and to form an idea simply is the same thing; the reference of the idea to an object being an extraneous denomination, of which in itself it bears no mark or character. Now as ’tis impossible to form an idea of an object, that is possest of quantity and quality, and yet is possest of no precise degree of either; it follows, that there is an equal impossibility of forming an idea, that is not limited and confin’d in both these particulars. Abstract ideas are therefore in themselves individual, however they may become general in their representation. The image in the mind is only that of a particular object, tho’ the application of it in our reasoning be the same, as if it were universal.

This application of ideas beyond their nature proceeds from our collecting all their possible degrees of quantity and quality in such an imperfect manner as may serve the purposes of life, which is the second proposition I propos’d to explain. When we have found a resemblance among several objects, that often occur to us, we apply the same name to all of them, whatever differences we may observe in the degrees of their quantity and quality, and whatever other differences may appear among them. After we have acquired a custom of this kind, the hearing of that name revives the idea of one of these objects, and makes the imagination conceive it with all its particular circumstances and proportions. But as the same word is suppos’d to have been frequently applied to other individuals, that are different in many respects from that idea, which is immediately present to the mind; the word not being able to revive the idea of all these individuals, only touches the soul, if I may be allow’d so to speak, and revives that custom, which we have acquir’d by surveying them. They are not really and in fact present to the mind, but only in power; nor do we draw them all out distinctly in the imagination, but keep ourselves in a readiness to survey any of them, as we may be prompted by a present design or necessity. The word raises up an individual idea, along with a certain custom; and that custom

produces any other individual one, for which we may have occasion. But as the production of all the ideas, to which the name may be apply'd, is in most cases impossible, we abridge that work by a more partial consideration, and find but few inconveniences to arise in our reasoning from that abridgment.

For this is one of the most extraordinary circumstances in the present affair, that after the mind has produc'd an individual idea, upon which we reason, the attendant custom, reviv'd by the general or abstract term, readily suggests any other individual, if by chance we form any reasoning, that agrees not with it. Thus shou'd we mention the word, triangle, and form the idea of a particular equilateral one to correspond to it, and shou'd we afterwards assert, *that the three angles of a triangle are equal to each other*, the other individuals of a scalenum and isoceles, which we overlook'd at first, immediately crowd in upon us, and make us perceive the falshood of this proposition, tho' it be true with relation to that idea, which we had form'd. If the mind suggests not always these ideas upon occasion, it proceeds from some imperfection in its faculties; and such a one as is often the source of false reasoning and sophistry. But this is principally the case with those ideas which are abstruse and compounded. On other occasions the custom is more entire, and 'tis seldom we run into such errors.

Nay so entire is the custom, that the very same idea may be annext to several different words, and may be employ'd in different reasonings, without any danger of mistake. Thus the idea of an equilateral triangle of an inch perpendicular may serve us in talking of a figure, of a rectilineal figure, of a regular figure, of a triangle, and of an equilateral triangle. All these terms, therefore, are in this case attended with the same idea; but as they are wont to be apply'd in a greater or lesser compass, they excite their particular habits, and thereby keep the mind in a readiness to observe, that no conclusion be form'd contrary to any ideas, which are usually compriz'd under them.

Before those habits have become entirely perfect, perhaps the mind may not be content with forming the idea of only one individual, but may run over several, in order to make itself comprehend its own meaning, and the compass of that collection, which it intends to express by the general term. That we may fix the meaning of the word, figure, we may revolve in our mind the ideas of circles, squares, parallelograms, triangles of different sizes and proportions, and may not rest on one image or idea. However this may be, 'tis certain *that* we form the idea of individuals, whenever we use any general term; *that* we seldom or never can exhaust these individuals; and *that*those, which remain, are only represented by means of that habit, by which we recall them, whenever any present occasion requires it. This then is the nature of our abstract ideas and general terms; and 'tis after this manner we account for the foregoing paradox, *that some ideas are particular in their nature, but general in their representation.* A particular idea becomes general by being annex'd to a general term; that is, to a term, which from a customary conjunction has a relation to many other particular ideas, and readily recalls them in the imagination.

The only difficulty, that can remain on this subject, must be with regard to that custom, which so readily recalls every particular idea, for which we may have occasion, and is excited by any word or sound, to which we commonly annex it. The most proper method, in my opinion, of giving a satisfactory explication of this act of the mind, is by producing other instances, which are analogous to it, and other principles, which facilitate its operation. To explain the ultimate causes of our mental actions is impossible. 'Tis sufficient, if we can give any satisfactory account of them from experience and analogy.

First then I observe, that when we mention any great number, such as a thousand, the mind has generally no adequate idea of it, but only a power of producing such an idea, by its adequate idea of

the decimals, under which the number is comprehended. This imperfection, however in our ideas, is never felt in our reasonings; which seems to be an instance parallel to the present one of universal ideas.

Secondly, we have several instances of habits, which may be reviv'd by one single word; as when a person, who has by rote any periods of a discourse, or any number of verses, will be put in remembrance of the whole, which he is at a loss to recollect, by that single word or expression, with which they begin.

Thirdly, I believe every one, who examines the situation of his mind in reasoning, will agree with me, that we do not annex distinct and compleat ideas to every term we make use of, and that in talking of *government, church, negotiation, conquest*, we seldom spread out in our minds all the simple ideas, of which these complex ones are compos'd. 'Tis however observable, that notwithstanding this imperfection we may avoid talking nonsense on these subjects, and may perceive any repugnance among the ideas, as well as if we had a full comprehension of them. Thus if instead of saying, *that in war the weaker have always recourse to negotiation*, we shou'd say, *that they have always recourse to conquest*, the custom, which we have acquir'd of attributing certain relations to ideas, still follows the words, and makes us immediately perceive the absurdity of that proposition; in the same manner as one particular idea may serve us in reasoning concerning other ideas, however different from it in several circumstances.

Fourthly, As the individuals are collected together, and plac'd under a general term with a view to that resemblance, which they bear to each other, this relation must facilitate their entrance in the imagination, and make them be suggested more readily upon occasion. And indeed if we consider the common progress of the thought, either in reflexion or conversation, we shall find great reason to be satisfy'd in this particular. Nothing is more admirable, than the readiness, with which the imagination suggests its ideas, and presents them at the very instant, in which they become necessary or useful. The fancy runs from one end of the universe to the other in collecting those ideas, which belong to any subject. One would think the whole intellectual world of ideas was at once subjected to our view, and that we did nothing but pick out such as were most proper for our purpose. There may not, however, be any present, beside those very ideas, that are thus collected by a kind of magical faculty in the soul, which, tho' it be always most perfect in the greatest geniuses, and is properly what we call a genius, is however inexplicable by the utmost efforts of human understanding.

Perhaps these four reflexions may help to remove all difficulties to the hypothesis I have propos'd concerning abstract ideas, so contrary to that, which has hitherto prevail'd in philosophy. But to tell the truth I place my chief confidence in what I have already prov'd concerning the impossibility of general ideas, according to the common method of explaining them. We must certainly seek some new system on this head, and there plainly is none beside what I have propos'd. If ideas be particular in their nature, and at the same time finite in their number, 'tis only by custom they can become general in their representation, and contain an infinite number of other ideas under them.

Before I leave this subject I shall employ the same principles to explain that *distinction of reason*, which is so much talk'd of, and is so little understood, in the schools. Of this kind is the distinction betwixt figure and the body figur'd; motion and the body mov'd. The difficulty of explaining this distinction arises from the principle above explain'd, *that all ideas, which are different, are separable.* For it follows from thence, that if the figure be different from the body, their ideas must be separable as well as distinguishable; if they be not different, their ideas can neither be separable nor

distinguishable. What then is meant by a distinction of reason, since it implies neither a difference nor separation?

To remove this difficulty we must have recourse to the foregoing explication of abstract ideas. ’Tis certain that the mind wou’d never have dream’d of distinguishing a figure from the body figur’d, as being in reality neither distinguishable, nor different, nor separable; did it not observe, that even in this simplicity there might be contain’d many different resemblances and relations. Thus when a globe of white marble is presented, we receive only the impression of a white colour dispos’d in a certain form, nor are we able to separate and distinguish the colour from the form. But observing afterwards a globe of black marble and a cube of white, and comparing them with our former object, we find two separate resemblances, in what formerly seem’d, and really is, perfectly inseparable. After a little more practice of this kind, we begin to distinguish the figure from the colour by a *distinction of reason*; that is, we consider the figure and colour together, since they are in effect the same and undistinguishable; but still view them in different aspects, according to the resemblances, of which they are susceptible. When we wou’d consider only the figure of the globe of white marble, we form in reality an idea both of the figure and colour, but tacitly carry our eye to its resemblance with the globe of black marble: And in the same manner, when we wou’d consider its colour only, we turn our view to its resemblance with the cube of white marble. By this means we accompany our ideas with a kind of reflexion, of which custom renders us, in a great measure, insensible. A person, who desires us to consider the figure of a globe of white marble without thinking on its colour, desires an impossibility; but his meaning is, that we shou’d consider the colour and figure together, but still keep in our eye the resemblance to the globe of black marble, or that to any other globe of whatever colour or substance.

# Part II: Of the ideas of space and time

## Section I. Of the infinite divisibility of our idea of space and time

Whatever has the air of a paradox, and is contrary to the first and most unprejudic'd notions of mankind is often greedily embrac'd by philosophers, as shewing the superiority of their science, which cou'd discover opinions so remote from vulgar conception. On the other hand, any thing propos'd to us, which causes surprize and admiration, gives such a satisfaction to the mind, that it indulges itself in those agreeable emotions, and will never be persuaded that its pleasure is entirely without foundation. From these dispositions in philosophers and their disciples arises that mutual complaisance betwixt them; while the former furnish such plenty of strange and unaccountable opinions, and the latter so readily believe them. Of this mutual complaisance I cannot give a more evident instance than in the doctrine of infinite divisibility, with the examination of which I shall begin this subject of the ideas of space and time.

'Tis universally allow'd, that the capacity of the mind is limited, and can never attain a full and adequate conception of infinity: And tho' it were not allow'd, 'twou'd be sufficiently evident from the plainest observation and experience. 'Tis also obvious, that whatever is capable of being divided *in infinitum*, must consist of an infinite number of parts, and that 'tis impossible to set any bounds to the number of parts, without setting bounds at the same time to the division. It requires scarce any induction to conclude from hence, that the *idea*, which we form of any finite quality, is not infinitely divisible, but that by proper distinctions and separations we may run up this idea to inferior ones, which will be perfectly simple and indivisible. In rejecting the infinite capacity of the mind, we suppose it may arrive at an end in the division of its ideas; nor are there any possible means of evading the evidence of this conclusion.

'Tis therefore certain, that the imagination reaches a *minimum*, and may raise up to itself an idea, of which it cannot conceive any sub-division, and which cannot be diminished without a total annihilation. When you tell me of the thousandth and ten thousandth part of a grain of sand, I have a distinct idea of these numbers and of their different proportions; but the images, which I form in my mind to represent the things themselves, are nothing different from each other, nor inferior to that image, by which I represent the grain of sand itself, which is suppos'd so vastly to exceed them. What consists of parts is distinguishable into them, and what is distinguishable is separable. But whatever we may imagine of the thing, the idea of a grain of sand is not distinguishable, nor separable into twenty, much less into a thousand, ten thousand, or an infinite number of different ideas.

'Tis the same case with the impressions of the senses as with the ideas of the imagination. Put a spot of ink upon paper, fix your eye upon that spot, and retire to such a distance, that at last you lose sight of it; 'tis plain, that the moment before it vanish'd the image or impression was perfectly indivisible. 'Tis not for want of rays of light striking on our eyes, that the minute parts of distant bodies convey not any sensible impression; but because they are remov'd beyond that distance, at which their impressions were reduc'd to a *minimum*, and were incapable of any farther diminution. A microscope or telescope, which renders them visible, produces not any new rays of light, but only spreads those, which always

flow'd from them; and by that means both gives parts to impressions, which to the naked eye appear simple and uncompounded, and advances to a *minimum*, what was formerly imperceptible.

We may hence discover the error of the common opinion, that the capacity of the mind is limited on both sides, and that 'tis impossible for the imagination to form an adequate idea, of what goes beyond a certain degree of minuteness as well as of greatness. Nothing can be more minute, than some ideas, which we form in the fancy; and images, which appear to the senses; since there are ideas and images perfectly simple and indivisible. The only defect of our senses is, that they give us disproportion'd images of things, and represent as minute and uncompounded what is really great and compos'd of a vast number of parts. This mistake we are not sensible of; but taking the impressions of those minute objects, which appear to the senses, to be equal or nearly equal to the objects, and finding by reason, that there are other objects vastly more minute, we too hastily conclude, that these are inferior to any idea of our imagination or impression of our senses. This however is certain, that we can form ideas, which shall be no greater than the smallest atom of the animal spirits of an insect a thousand times less than a mite: And we ought rather to conclude, that the difficulty lies in enlarging our conceptions so much as to form a just notion of a mite, or even of an insect a thousand times less than a mite. For in order to form a just notion of these animals, we must have a distinct idea representing every part of them; which, according to the system of infinite divisibility, is utterly impossible, and according to that of indivisible parts or atoms, is extremely difficult, by reason of the vast number and multiplicity of these parts.

# Section II. Of the infinite divisibility of space and time

Wherever ideas are adequate representations of objects, the relations, contradictions and agreements of the ideas are all applicable to the objects; and this we may in general observe to be the foundation of all human knowledge. But our ideas are adequate representations of the most minute parts of extension; and thro' whatever divisions and subdivisions we may suppose these parts to be arriv'd at, they can never become inferior to some ideas, which we form. The plain consequence is, that whatever *appears* impossible and contradictory upon the comparison of these ideas, must be *really* impossible and contradictory, without any farther excuse or evasion.

Every thing capable of being infinitely divided contains an infinite number of parts; otherwise the division would be stopt short by the indivisible parts, which we should immediately arrive at. If therefore any finite extension be infinitely divisible, it can be no contradiction to suppose, that a finite extension contains an infinite number of parts: And *vice versa*, if it be a contradiction to suppose, that a finite extension contains an infinite number of parts, no finite extension can be infinitely divisible. But that this latter supposition is absurd, I easily convince myself by the consideration of my clear ideas. I first take the least idea I can form of a part of extension, and being certain that there is nothing more minute than this idea, I conclude, that whatever I discover by its means must be a real quality of extension. I then repeat this idea once, twice, thrice, *&c.* and find the compound idea of extension, arising from its repetition, always to augment, and become double, triple, quadruple, *&c.* till at last it swells up to a considerable bulk, greater or smaller, in proportion as I repeat more or less the same idea. When I stop in the addition of parts, the idea of extension ceases to augment; and were I to carry on the addition *in infinitum*, I clearly perceive, that the idea of extension must also become infinite. Upon the whole, I conclude, that the idea of an infinite number of parts is individually the same idea

with that of an infinite extension; that no finite extension is capable of containing an infinite number of parts; and consequently that no finite extension is infinitely divisible.[1] I may subjoin another argument propos'd by a noted author[2] , which seems to me very strong and beautiful. 'Tis evident, that existence in itself belongs only to unity, and is never applicable to number, but on account of the unites, of which the number is compos'd. Twenty men may be said to exist; but 'tis only because one, two, three, four, *&c.* are existent; and if you deny the existence of the latter, that of the former falls of course. 'Tis therefore utterly absurd to suppose any number to exist, and yet deny the existence of unites; and as extension is always a number, according to the common sentiment of metaphysicians, and never resolves itself into any unite or indivisible quantity, it follows, that extension can never at all exist. 'Tis in vain to reply, that any determinate quantity of extension is an unite; but such-a-one as admits of an infinite number of fractions, and is inexhaustible in its sub-divisions. For by the same rule these twenty men *may be consider'd as an unite.* The whole globe of the earth, nay the whole universe *may be consider'd as an unite.* That term of unity is merely a fictitious denomination, which the mind may apply to any quantity of objects it collects together; nor can such an unity any more exist alone than number can, as being in reality a true number. But the unity, which can exist alone, and whose existence is necessary to that of all number, is of another kind, and must be perfectly indivisible, and incapable of being resolved into any lesser unity.

All this reasoning takes place with regard to time; along with an additional argument, which it may be proper to take notice of. 'Tis a property inseparable from time, and which in a manner constitutes its essence, that each of its parts succeeds another, and that none of them, however contiguous, can ever be co-existent. For the same reason, that, the year 1737 cannot concur with the present year 1738, every moment must be distinct from, and posterior or antecedent to another. 'Tis certain then, that time, as it exists, must be compos'd of indivisible moments. For if in time we could never arrive at an end of division, and if each moment, as it succeeds another, were not perfectly single and indivisible, there would be an infinite number of coexistent moments, or parts of time; which I believe will be allow'd to be an arrant contradiction.

The infinite divisibility of space implies that of time, as is evident from the nature of motion. If the latter, therefore, be impossible, the former must be equally so.

I doubt not but it will readily be allow'd by the most obstinate defender of the doctrine of infinite divisibility, that these arguments are difficulties, and that 'tis impossible to give any answer to them which will be perfectly clear and satisfactory. But here we may observe, that nothing can be more absurd, than this custom of calling a *difficulty* what pretends to be a *demonstration,* and endeavouring by that means to elude its force and evidence. 'Tis not in demonstrations as in probabilities, that difficulties can take place, and one argument counter-ballance another, and diminish its authority. A demonstration, if just, admits of no opposite difficulty; and if not just, 'tis a mere sophism, and consequently can never be a difficulty. 'Tis either irresistible, or has no manner of force. To talk therefore of objections and replies, and balancing of arguments in such a question as this, is to confess, either that human reason is nothing but a play of words, or that the person himself, who talks so, has not a capacity equal to such subjects. Demonstrations may be difficult to be comprehended, because of the abstractedness of the subject; but can never have any such difficulties as will weaken their authority, when once they are comprehended.

'Tis true, mathematicians are wont to say, that there are here equally strong arguments on the other side of the question, and that the doctrine of indivisible points is also liable to unanswerable objections. Before I examine these arguments and objections in detail, I will here take them in a body, and

endeavour by a short and decisive reason to prove at once, that 'tis utterly impossible they can have any just foundation.

'Tis an establish'd maxim in metaphysics, *That whatever the mind clearly conceives includes the idea of possible existence*, or in other words, *that nothing we imagine is absolutely impossible.* We can form the idea of a golden mountain, and from thence conclude that such a mountain may actually exist. We can form no idea of a mountain without a valley, and therefore regard it as impossible.

Now 'tis certain we have an idea of extension; for otherwise why do we talk and reason concerning it? 'Tis likewise certain, that this idea, as conceiv'd by the imagination, tho' divisible into parts or inferior ideas, is not infinitely divisible, nor consists of an infinite number of parts: For that exceeds the comprehension of our limited capacities. Here then is an idea of extension, which consists of parts or inferior ideas, that are perfectly indivisible: consequently this idea implies no contradiction: consequently 'tis possible for extension really to exist conformable to it: and consequently all the arguments employ'd against the possibility of mathematical points are mere scholastic quibbles, and unworthy of our attention.

These consequences we may carry one step farther, and conclude that all the pretended demonstrations for the infinite divisibility of extension are equally sophistical; since 'tis certain these demonstrations cannot be just without proving the impossibility of mathematical points; which 'tis an evident absurdity to pretend to.

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1. It has been objected to me, that infinite divisibility supposes only an infinite number of *proportional* not of *aliquot* parts, and that an infinite number of proportional parts does not form an infinite extension. But this distinction is entirely frivolous. Whether these parts be call'd *aliquot* or *proportional*, they cannot be inferior to those minute parts we conceive; and therefore cannot form a less extension by their conjunction.
2. Mons. *Malesieu*.

# Section III. Of the other qualities of our ideas of space and time

No discovery cou'd have been made more happily for deciding all controversies concerning ideas, than that above mention'd, that impressions always take the precedence of them, and that every idea, with which the imagination is furnish'd, first makes its appearance in a correspondent impression. These latter perceptions are all so clear and evident, that they admit of no controversy; tho' many of our ideas are so obscure, that 'tis almost impossible even for the mind, which forms them, to tell exactly their nature and composition. Let us apply this principle, in order to discover farther the nature of our ideas of space and time.

Upon opening my eyes, and turning them to the surrounding objects, I perceive many visible bodies; and upon shutting them again, and considering the distance betwixt these bodies, I acquire the idea of extension. As every idea is deriv'd from some impression, which is exactly similar to it, the impressions similar to this idea of extension, must either be some sensations deriv'd from the sight, or some internal impressions arising from these sensations.

Our internal impressions are our passions, emotions, desires and aversions; none of which, I believe, will ever be asserted to be the model, from which the idea of space is deriv'd. There remains therefore nothing but the senses, which can convey to us this original impression. Now what impression do our senses here convey to us? This is the principal question, and decides without appeal concerning the nature of the idea.

The table before me is alone sufficient by its view to give me the idea of extension. This idea, then, is borrow' d from, and represents some impression, which this moment appears to the senses. But my senses convey to me only the impressions of colour'd points, dispos'd in a certain manner. If the eye is sensible of any thing farther, I desire it may be pointed out to me. But if it be impossible to shew any thing farther, we may conclude with certainty, that the idea of extension is nothing but a copy of these colour'd points, and of the manner of their appearance.

Suppose that in the extended object, or composition of colour'd points, from which we first receiv'd the idea of extension, the points were of a purple colour; it follows, that in every repetition of that idea we wou'd not only place the points in the same order with respect to each other, but also bestow on them that precise colour, with which alone we are acquainted. But afterwards having experience of the other colours of violet, green, red, white, black, and of all the different compositions of these, and finding a resemblance in the disposition of colour'd points, of which they are compos'd, we omit the peculiarities of colour, as far as possible, and found an abstract idea merely on that disposition of points, or manner of appearance, in which they agree. Nay even when the resemblance is carry'd beyond the objects of one sense, and the impressions of touch are found to be similar to those of sight in the disposition of their parts; this does not hinder the abstract idea from representing both, upon account of their resemblance. All abstract ideas are really nothing but particular ones, consider'd in a certain light; but being annexed to general terms, they are able to represent a vast variety, and to comprehend objects, which, as they are alike in some particulars, are in others vastly wide of each other.

The idea of time, being deriv'd from the succession of our perceptions of every kind, ideas as well as impressions, and impressions of reflection as well as of sensation, will afford us an instance of an abstract idea, which comprehends a still greater variety than that of space, and yet is represented in fancy by some particular individual idea of a determinate quantity and quality.

As 'tis from the disposition of visible and tangible objects we receive the idea of space, so from the succession of ideas and impressions we form the idea of time, nor is it possible for time alone ever to make its appearance, or be taken notice of by the mind. A man in a sound sleep, or strongly occupy'd with one thought, is insensible of time; and according as his perceptions succeed each other with greater or less rapidity, the same duration appears longer or shorter to his imagination. It has been remark'd by a [1] great philosopher, that our perceptions have certain bounds in this particular, which are fix'd by the original nature and constitution of the mind, and beyond which no influence of external objects on the senses is ever able to hasten or retard our thought. If you wheel about a burning coal with rapidity, it will present to the senses an image of a circle of fire; nor will there seem to be any interval of time betwixt its revolutions; meerly because 'tis impossible for our perceptions to succeed each other with the same rapidity, that motion may be communicated to external objects. Wherever we have no successive perceptions, we have no notion of time, even tho' there be a real succession in the objects. From these phænomena, as well as from many others, we may conclude, that time cannot make its appearance to the mind, either alone, or attended with a steady unchangeable object, but is always discover'd by some *perceivable* succession of changeable objects.

To confirm this we may add the following argument, which to me seems perfectly decisive and convincing. 'Tis evident, that time or duration consists of different parts: For otherwise we cou'd not conceive a longer or shorter duration. 'Tis also evident, that these parts are not co-existent: For that quality of the co-existence of parts belongs to extension, and is what distinguishes it from duration. Now as time is compos'd of parts, that are not co-existent; an unchangeable object, since it produces none but co-existent impressions, produces none that can give us the idea of time; and consequently that idea must be deriv'd from a succession of changeable objects, and time in its first appearance can never be sever'd from such a succession.

Having therefore found, that time in its first appearance to the mind is always conjoin'd with a succession of changeable objects, and that otherwise it can never fall under our notice, we must now examine whether it can be *conceiv'd* without our conceiving any succession of objects, and whether it can alone form a distinct idea in the imagination.

In order to know whether any objects, which are join'd in impression, be separable in idea, we need only consider, if they be different from each other; in which case, 'tis plain they may be conceiv'd apart. Every thing, that is different, is distinguishable; and every thing, that is distinguishable, may be separated, according to the maxims above-explain'd. If on the contrary they be not different, they are not distinguishable; and if they be not distinguishable, they cannot be separated. But this is precisely the case with respect to time, compar'd with our successive perceptions. The idea of time is not deriv'd from a particular impression mix'd up with others, and plainly distinguishable from them; but arises altogether from the manner, in which impressions appear to the mind, without making one of the number. Five notes play'd on a flute give us the impression and idea of time; tho' time be not a sixth impression, which presents itself to the hearing or any other of the senses. Nor is it a sixth impression, which the mind by reflection finds in itself. These five sounds making their appearance in this particular manner, excite no emotion in the mind, nor produce an affection of any kind, which being observ'd by it can give rise to a new idea. For *that* is necessary to produce a new idea of reflection, nor can the mind, by revolving over a thousand times all its ideas of sensation, ever extract from them any new original idea, unless nature has so fram'd its faculties, that it feels some new original impression arise from such a contemplation. But here it only takes notice of the *manner*, in which the different sounds make their appearance; and that it may afterwards consider without considering these particular sounds, but may conjoin it with any other objects. The ideas of some objects it certainly must have, nor is it possible for it without these ideas ever to arrive at any conception of time; which since it appears not as any primary distinct impression, can plainly be nothing but different ideas, or impressions, or objects dispos'd in a certain manner, that is, succeeding each other.

I know there are some who pretend, that the idea of duration is applicable in a proper sense to objects, which are perfectly unchangeable; and this I take to be the common opinion of philosophers as well as of the vulgar. But to be convinc'd of its falsehood we need but reflect on the foregoing conclusion, that the idea of duration is always deriv'd from a succession of changeable objects, and can never be convey'd to the mind by any thing stedfast and unchangeable. For it inevitably follows from thence, that since the idea of duration cannot be deriv'd from such an object, it can never in any propriety or exactness be apply'd to it, nor can any thing unchangeable be ever said to have duration. Ideas always represent the objects or impressions, from which they are deriv'd, and can never without a fiction represent or be apply'd to any other. By what fiction we apply the idea of time, even to what is unchangeable, and suppose, as is common, that duration is a measure of rest as well as of motion, we shall consider [2] afterwards.

There is another very decisive argument, which establishes the present doctrine concerning our ideas of space and time, and is founded only on that simple principle, *that our ideas of them are compounded of parts, which are indivisible.* This argument may be worth the examining.

Every idea, that is distinguishable, being also separable, let us take one of those simple indivisible ideas, of which the compound one of *extension* is form'd, and separating it from all others, and considering it apart, let us form a judgment of its nature and qualities.

'Tis plain it is not the idea of extension. For the idea of extension consists of parts; and this idea, according to the supposition, is perfectly simple and indivisible. Is it therefore nothing? That is absolutely impossible. For as the compound idea of extension, which is real, is compos'd of such ideas; were these so many non-entities, there wou'd be a real existence compos'd of non-entities; which is absurd. Here therefore I must ask, *What is our idea of a simple and invisible point?* No wonder if my answer appear somewhat new, since the question itself has scarce ever yet been thought of. We are wont to dispute concerning the nature of mathematical points, but seldom concerning the nature of their ideas.

The idea of space is convey'd to the mind by two senses, the sight and touch; nor does any thing ever appear extended, that is not either visible or tangible. That compound impression, which represents. extension, consists of several lesser impressions, that are indivisible to the eye or feeling, and may be call'd impressions of atoms or corpuscles endow'd with colour and solidity. But this is not all. 'Tis not only requisite, that these atoms shou'd be colour'd or tangible, in order to discover themselves to our senses; 'tis also necessary we shou'd preserve the idea of their colour or tangibility in order to comprehend them by our imagination. There is nothing but the idea of their colour or tangibility, which can render them conceivable by the mind. Upon the removal of the ideas of these sensible qualities, they are utterly annihilated to the thought or imagination.

Now such as the parts are, such is the whole. If a point be not consider'd as colour'd or tangible, it can convey to us no idea; and consequently the idea of extension, which is compos'd of the ideas of these points, can never possibly exist. But if the idea of extension really can exist, as we are conscious it does, its parts must also exist; and in order to that, must be consider'd as colour'd or tangible. We have therefore no idea of space or extension, but when we regard it as an object either of our sight or feeling.

The same reasoning will prove, that the indivisible moments of time must be fill'd with some real object or existence, whose succession forms the duration, and makes it be conceivable by the mind.

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1. Mr. *Locke.*
2. Sect. v (p. 65).

# Section IV. Objections answer'd

Our system concerning space and time consists of two parts, which are intimately connected together. The first depends on this chain of reasoning. The capacity of the mind is not infinite; consequently no idea of extension or duration consists of an infinite number of parts or inferior ideas, but of a finite number, and these simple and indivisible: 'Tis therefore possible for space and time to exist

conformable to this idea: And if it be possible, 'tis certain they actually do exist conformable to it; since their infinite divisibility is utterly impossible and contradictory.

The other part of our system is a consequence of this. The parts, into which the ideas of space and time resolve themselves, become at last indivisible; and these indivisible parts, being nothing in themselves, are inconceivable when not fill'd with something real and existent. The ideas of space and time are therefore no separate or distinct ideas, but merely those of the manner or order, in which objects exist: Or, in other words, 'tis impossible to conceive either a vacuum and extension without matter, or a time, when there was no succession or change in any real existence. The intimate connexion betwixt these parts of our system is the reason why we shall examine together the objections, which have been urg'd against both of them, beginning with those against the finite divisibility of extension.

I. The first of these objections, which I shall take notice of, is more proper to prove this connexion and dependence of the one part upon the other, than to destroy either of them. It has often been maintain'd in the schools, that extension must be divisible, *in infinitum*, because the system of mathematical points is absurd; and that system is absurd, because a mathematical point is a non-entity, and consequently can never by its conjunction with others form a real existence. This wou'd be perfectly decisive, were there no medium betwixt the infinite divisibility of matter, and the non-entity of mathematical points. But there is evidently a medium, *viz.* the bestowing a colour or solidity on these points; and the absurdity of both the extremes is a demonstration of the truth and reality of this medium. The system of *physical* points, which is another medium, is too absurd to need a refutation. A real extension, such as a physical point is suppos'd to be, can never exist without parts, different from each other; and wherever objects are different, they are distinguishable and separable by the imagination.

II. The second objection is deriv'd from the necessity there wou'd be of *penetration*, if extension consisted of mathematical points. A simple and indivisible atom, that touches another, must necessarily penetrate it; for 'tis impossible it can touch it by its external parts, from the very supposition of its perfect simplicity, which excludes all parts. It must therefore touch it intimately, and in its whole essence, *secundum se, tota, & totaliter*; which is the very definition of penetration. But penetration is impossible: Mathematical points are of consequence equally impossible.

I answer this objection by substituting a juster idea of penetration. Suppose two bodies containing no void within their circumference, to approach each other, and to unite in such a manner that the body, which results from their union, is no more extended than either of them; 'tis this we must mean when we talk of penetration. But 'tis evident this penetration is nothing but the annihilation of one of these bodies, and the preservation of the other, without our being able to distinguish particularly which is preserv'd and which annihilated. Before the approach we have the idea of two bodies. After it we have the idea only of one. 'Tis impossible for the mind to preserve any notion of difference betwixt two bodies of the same nature existing in the same place at the same time.

Taking then penetration in this sense, for the annihilation of one body upon its approach to another, I ask any one, if he sees a necessity, that a colour'd or tangible point shou'd be annihilated upon the approach of another colour'd or tangible point? On the contrary, does he not evidently perceive, that from the union of these points there results an object, which is compounded and divisible, and may be distinguish'd into two parts, of which each preserves its existence distinct and separate, notwithstanding its contiguity to the other? Let him aid his fancy by conceiving these points to be of different colours, the better to prevent their coalition and confusion. A blue and a red point may surely

lie contiguous without any penetration or annihilation. For if they cannot, what possibly can become of them? Whether shall the red or the blue be annihilated? Or if these colours unite into one, what new colour will they produce by their union?

What chiefly gives rise to these objections, and at the same time renders it so difficult to give a satisfactory answer to them, is the natural infirmity and unsteadiness both of our imagination and senses, when employ'd on such minute objects. Put a spot of ink upon paper, and retire to such a distance, that the spot becomes altogether invisible; you will find, that upon your return and nearer approach the spot first becomes visible by short intervals; and afterwards becomes always visible; and afterwards acquires only a new force in its colouring without augmenting its bulk; and afterwards, when it has encreas'd to such a degree as to be really extended, 'tis still difficult for the imagination to break it into its component parts, because of the uneasiness it finds in the conception of such a minute object as a single point. This infirmity affects most of our reasonings on the present subject, and makes it almost impossible to answer in an intelligible manner, and in proper expressions, many questions which may arise concerning it.

III. There have been many objections drawn from the *mathematics* against the indivisibility of the parts of extension; tho' at first sight that science seems rather favourable to the present doctrine; and if it be contrary in its *demonstrations*, 'tis perfectly conformable in its *definitions*. My present business then must be to defend the definitions, and refute the demonstrations.

A surface is *defin'd* to be length and breadth without depth: A line to be length without breadth or depth: A point to be what has neither length, breadth nor depth. 'Tis evident that all this is perfectly unintelligible upon any other supposition than that of the composition of extension by indivisible points or atoms. How else cou'd any thing exist without length, without breadth, or without depth? Two different answers, I find, have been made to this argument; neither of which is in my opinion satisfactory. The first is, that the objects of geometry, those surfaces, lines and points, whose proportions and positions it examines, are mere ideas in the mind; and not only never did, but never can exist in nature. They never did exist; for no one will pretend to draw a line or make a surface entirely conformable to the definition: They never can exist; for we may produce demonstrations from these very ideas to prove that they are impossible.

But can any thing be imagin'd more absurd and contradictory than this reasoning? Whatever can he conceiv'd by a clear and distinct idea necessarily implies the possibility of existence; and he who pretends to prove the impossibility of its existence by any argument deriv'd from the clear idea, in reality asserts, that we have no clear idea of it, because we have a clear idea. 'Tis in vain to search for a contradiction in any thing that is distinctly conceiv'd by the mind. Did it imply any contradiction, 'tis impossible it cou'd ever be conceiv'd.

There is therefore no medium betwixt allowing at least the possibility of indivisible points, and denying their idea; and 'tis on this latter principle, that the second answer to the foregoing argument is founded. It has been[1] pretended, that tho' it be impossible to conceive a length without any breadth, yet by an abstraction without a separation, we can consider the one without regarding the other; in the same manner as we may think of the length of the way betwixt two towns, and overlook its breadth. The length is inseparable from the breadth both in nature and in our minds; but this excludes not a partial consideration, and a *distinction of reason*, after the manner above explain'd.

In refuting this answer I shall not insist on the argument, which I have already sufficiently explain'd, that if it be impossible for the mind to arrive at a *minimum* in its ideas, its capacity must be infinite, in order to comprehend the infinite number of parts, of which its idea of any extension wou'd be compos'd. I shall here endeavour to find some new absurdities in this reasoning.

A surface terminates a solid; a line terminates a surface; a point terminates a line; but I assert, that if the *ideas* of a point, line or surface were not indivisible, 'tis impossible we shou'd ever conceive these terminations. For let these ideas be suppos'd infinitely divisible; and then let the fancy endeavour to fix itself on the idea of the last surface, line or point; it immediately finds this idea to break into parts; and upon its seizing the last of these parts, it loses its hold by a new division, and so on *in infinitum*, without any possibility of its arriving at a concluding idea. The number of fractions bring it no nearer the last division, than the first idea it form'd. Every particle eludes the grasp by a new fraction, like quicksilver, when we endeavour to seize it. But as in fact there must be something, which terminates the idea of every finite quantity; and as this terminating idea cannot itself consist of parts or inferior ideas; otherwise it wou'd be the last of its parts, which finish'd the idea, and so on; this is a clear proof that the ideas of surfaces, lines and points admit not of any division; those of surfaces in depth; of lines in breadth and depth; and of points in any dimension.

The *schoolmen* were so sensible of the force of this argument, that some of them maintain'd, that nature has mix'd among those particles of matter, which are divisible *in infinitum*, a number of mathematical points, in order to give a termination to bodies; and others eluded the force of this reasoning by a heap of unintelligible cavils and distinctions. Both these adversaries equally yield the victory. A man who hides himself; confesses as evidently the superiority of his enemy, as another, who fairly delivers his arms. Thus it appears, that the definitions of mathematics destroy the pretended demonstrations; and that if we have the idea of indivisible points, lines and surfaces conformable to the definition, their existence is certainly possible: but if we have no such idea, 'tis impossible we can ever conceive the termination of any figure; without which conception there can be no geometrical demonstration.

But I go farther, and maintain, that none of these demonstrations can have sufficient weight to establish such a principle, as this of infinite divisibility; and that because with regard to such minute objects, they are not properly demonstrations, being built on ideas, which are not exact, and maxims, which are not precisely true. When geometry decides any thing concerning the proportions of quantity, we ought not to look for the utmost *precision* and exactness. None of its proofs extend so far. It takes the dimensions and proportions of figures justly; but roughly, and with some liberty. Its errors are never considerable; nor wou'd it err at all, did it not aspire to such an absolute perfection.

I first ask mathematicians, what they mean when they say one line or surface is equal to, or greater, or less than another? Let any of them give an answer, to whatever sect he belongs, and whether he maintains the composition of extension by indivisible points, or by quantities divisible *in infititum*. This question will embarrass both of them.

There are few or no mathematicians who defend the hypothesis of indivisible points; and yet these have the readiest and justest answer to the present question. They need only reply, that lines or surfaces are equal, when the numbers of points in each are equal; and that as the proportion of the numbers varies, the proportion of the lines and surfaces is also vary'd. But tho' this answer be *just*, as well as obvious; yet I may affirm, that this standard of equality is entirely *useless*, and that it never is from such a comparison we determine objects to be equal or unequal with respect to each other. For as

the points, which enter into the composition of any line or surface, whether perceiv'd by the sight or touch, are so minute and so confounded with each other, that 'tis utterly impossible for the mind to compute their number, such a computation will never afford us a standard, by which we may judge of proportions. No one will ever be able to determine by an exact numeration, that an inch has fewer points than a foot, or a foot fewer than an ell or any greater measure; for which reason we seldom or never consider this as the standard of equality or inequality.

As to those, who imagine, that extension is divisible *in infinitum*, 'tis impossible they can make use of this answer, or fix the equality of any line or surface by a numeration of its component parts. For since, according to their hypothesis, the least as well as greatest figures contain an infinite number of parts; and since infinite numbers, properly speaking, can neither be equal nor unequal with respect to each other; the equality or inequality of any portions of space can never depend on any proportion in the number of their parts. 'Tis true, it may be said, that the inequality of an ell and a yard consists in the different numbers of the feet, of which they are compos'd; and that of a foot and a yard in the number of the inches. But as that quantity we call an inch in the one is suppos'd equal to what we call an inch in the other, and as 'tis impossible for the mind to find this equality by proceeding *in infinitum* with these references to inferior quantities; 'tis evident, that at last we must fix some standard of equality different from an enumeration of the parts.

There are some[2] , who pretend, that equality is best defin'd by *congruity*, and that any two figures are equal, when upon the placing of one upon the other, all their parts correspond to and touch each other. In order to judge of this definition let us consider, that since equality is a relation, it is not, strictly speaking, a property in the figures themselves, but arises merely from the comparison, which the mind makes betwixt them. If it consists, therefore, in this imaginary application and mutual contact of parts, we must at least have a distinct notion of these parts, and must conceive their contact. Now 'tis plain, that in this conception we wou'd run up these parts to the greatest minuteness, which can possibly be conceiv'd; since the contact of large parts wou'd never render the figures equal. But the minutest parts we can conceive are mathematical points; and consequently this standard of equality is the same with that deriv'd from the equality of the number of points; which we have already determin'd to be a just but an useless standard. We must therefore look to some other quarter for a solution of the present difficulty.

'Tis evident, that the eye, or rather the mind is often able at one view to determine the proportions of bodies, and pronounce them equal to, or greater or less than each other, without examining or comparing the number of their minute parts. Such judgments are not only common, but in many cases certain and infallible. When the measure of a yard and that of a foot are presented, the mind can no more question, that the first is longer than the second, than it can doubt of those principles, which are the most clear and self-evident.

There are therefore three proportions, which the mind distinguishes in the general appearance of its objects, and calls by the names of *greater*, *less* and *equal*. But tho' its decisions concerning these proportions be sometimes infallible, they are not always so; nor are our judgments of this kind more exempt from doubt and error, than those on any other subject. We frequently correct our first opinion by a review and reflection; and pronounce those objects to be equal, which at first we esteem'd unequal; and regard an object as less, tho' before it appear'd greater than another. Nor is this the only correction, which these judgments of our senses undergo; but we often discover our error by a juxta-position of the objects; or where that is impracticable, by the use of some common and invariable measure, which being successively apply'd to each, informs us of their different proportions. And even

this correction is susceptible of a new correction, and of different degrees of exactness, according to the nature of the instrument by which we measure the bodies, and the care which we employ in the comparison.

When therefore the mind is accustom'd to these judgments and their corrections, and finds that the same proportion which makes two figures have in the eye that appearance, which we call *equality*, makes them also correspond to each other, and to any common measure, with which they are compar'd, we form a mix'd notion of equality deriv'd both from the looser and stricter methods of comparison. But we are not content with this. For as sound reason convinces us that there are bodies *vastly* more minute than those, which appear to the senses; and as a false reason wou'd perswade us, that there are bodies *infinitely* more minute; we clearly perceive, that we are not possess'd of any instrument or art of measuring, which can secure us from all error and uncertainty. We are sensible, that the addition or removal of one of these minute parts, is not discernible either in the appearance or measuring; and 'as we imagine, that two figures, which were equal before, cannot be equal after this removal or addition, we therefore suppose some imaginary standard of equality, by which the appearances and measuring are exactly corrected, and the figures reduc'd entirely to that proportion. This standard is plainly imaginary. For as the very idea of equality is that of such a particular appearance corrected by juxta-position or a common measure, the notion of any correction beyond what we have instruments and art to make, is a mere fiction of the mind, and useless as well as incomprehensible. But tho' this standard be only imaginary, the fiction however is very natural; nor is any thing more usual, than for the mind to proceed after this manner with any action, even after the reason has ceas'd, which first determin'd it to begin. This appears very conspicuously with regard to time; where tho' 'tis evident we have no exact method of determining the proportions of parts, not even so exact as in extension, yet the various corrections of our measures, and their different degrees of exactness, have given us an obscure and implicit notion of a perfect and entire equality. The case is the same in many other subjects. A musician finding his ear become every day more delicate, and correcting himself by reflection and attention, proceeds with the same act of the mind, even when the subject fails him, and entertains a notion of a compleat *tierce* or *octave*, without being able to tell whence he derives his standard. A painter forms the same fiction with regard to colours. A mechanic with regard to motion. To the one *light* and *shade*; to the other *swift* and *slow* are imagin'd to be capable of an exact comparison and equality beyond the judgments of the senses.

We may apply the same reasoning to curve and right lines. Nothing is more apparent to the senses, than the distinction betwixt a curve and a right line; nor are there any ideas we more easily form than the ideas of these objects. But however easily we may form these ideas, 'tis impossible to produce any definition of them, which will fix the precise boundaries betwixt them. When we draw lines upon paper or any continu'd surface, there is a certain order, by which the lines run along from one point to another, that they may produce the entire impression of a curve or right line; but this order is perfectly unknown, and nothing is observ'd but the united appearance. Thus even upon the system of indivisible points, we can only form a distant notion of some unknown standard to these objects. Upon that of infinite divisibility we cannot go even this length; but are reduc'd meerly to the general appearance, as the rule by which we determine lines to be either curve or right ones. But tho' we can give no perfect definition of these lines, nor produce any very exact method of distinguishing the one from the other; yet this hinders us not from correcting the first appearance by a more accurate consideration, and by a comparison with some rule, of whose rectitude from repeated trials we have a greater assurance. And 'tis from these corrections, and by carrying on the same action of the mind, even when its reason fails us, that we form the loose idea of a perfect standard to these figures, without being able to explain or comprehend it.

'Tis true, mathematicians pretend they give an exact definition of a right line, when they say, *it is the shortest way betwixt two points.* But in the first place I observe, that this is more properly the discovery of one of the properties of a right line, than a just definition of it. For I ask any one, if upon mention of a right line he thinks not' immediately on such a particular appearance, and if 'tis not by accident only that he considers this property? A right line can be comprehended alone; but this definition is unintelligible without a comparison with other lines, which we conceive to be more extended. In common life 'tis establish'd as a maxim, that the straightest way is always the shortest; which wou'd be as absurd as to say, the shortest way is always the shortest, if our idea of a right line was not different from that of the shortest way betwixt two points.

Secondly, I repeat what I have already establish'd, that we have no precise idea of equality and inequality, shorter and longer, more than of a right line or a curve; and consequently that the one can never afford us a perfect standard for the other. An exact idea can never be built on such as are loose and indeterminate.

The idea of a *plain surface* is as little susceptible of a precise standard as that of a right line; nor have we any other means of distinguishing such a surface, than its general appearance. 'Tis in vain, that mathematicians represent a plain surface as produc'd by the flowing of a right line. 'Twill immediately be objected, that our idea of a surface is as independent of this method of forming a surface, as our idea of an ellipse is of that of a cone; that the idea of a right line is no more precise than that of a plain surface; that a right line may flow irregularly, and by that means form a figure quite different from a plane; and that therefore we must suppose it to Bow along two right lines, parallel to each other, and on the same plane; which is a description, that explains a thing by itself, and returns in a circle.

It appears, then, that the ideas which are most essential to geometry, *viz.* those of equality and inequality, of a right line and a plain surface, are far from being exact and determinate, according to our common method of conceiving them. Not only we are incapable of telling, if the case be in any degree doubtful, when such particular figures are equal; when such a line is a right one, and such a surface a plain one; but we can form no idea of that proportion, or of these figures, which is firm and invariable. Our appeal is still to the weak and fallible judgment, which we make from the appearance of the objects, and correct by a compass or common measure; and if we join the supposition of any farther correction, 'tis of such-a-one as is either useless or imaginary. In vain shou'd we have recourse to the common topic, and employ the supposition of a deity, whose omnipotence may enable him to form a perfect geometrical figure, and describe a right line without any curve or inflexion. As the ultimate standard of these figures is deriv'd from nothing but the senses and imagination, 'tis absurd to talk of any perfection beyond what these faculties can judge of; since the true perfection of any thing consists in its conformity to its standard.

Now since these ideas are so loose and uncertain, I wou'd fain ask any mathematician what infallible assurance he has, not only of the more intricate and obscure propositions of his science, but of the most vulgar and obvious principles? How can he prove to me, for instance, that two right lines cannot have one common segment? Or that 'tis impossible to draw more than one right line betwixt any two points? Shou'd he tell me, that these opinions are obviously absurd, and repugnant to our clear ideas; I wou'd answer, that I do not deny, where two right lines incline upon each other with a sensible angle, but 'tis absurd to imagine them to have a common segment. But supposing these two lines to approach at the rate of an inch in twenty leagues, I perceive no absurdity in asserting, that upon their contact they become one. For, I beseech you, by what rule or standard do you judge, when you assert, that the line, in which I have suppos'd them to concur, cannot make the same right line with those two, that form so

small an angle betwixt them? You must surely have some idea of a right line, to which this line does not agree. Do you therefore mean, that it takes not the points in the same order and by the same rule. as is peculiar and essential to a right line? If so, I must inform you, that besides that in judging after this manner you allow, that extension is compos'd of indivisible points (which, perhaps, is more than you intend) besides this, I say, I must inform you, that neither is this the standard from which we form the idea of a right line; nor, if it were, is there any such firmness in our senses or imagination, as to determine when such an order is violated or preserv'd. The original standard of a right line is in reality nothing but a certain general appearance; and 'tis evident right lines may be made to concur with each other, and yet correspond to this standard, tho' corrected by all the means either practicable or imaginable.

This may open our eyes a little, and let us see, that no geometrical demonstration for the infinite divisibility of extension can have so much force as what we naturally attribute to every argument, which is supported by such magnificent pretensions. At the same time we may learn the reason, why geometry fails of evidence in this single point, while all its other reasonings command our fullest assent and approbation. And indeed it seems more requisite to give the reason of this exception, than to shew, that we really must make such an exception, and regard all the mathematical arguments for infinite divisibility as utterly sophistical. For 'tis evident, that as no idea of quantity is infinitely divisible, there cannot be imagin'd a more glaring absurdity, than to endeavour to prove, that quantity itself admits of such a division; and to prove this by means of ideas, which are directly opposite in that particular. And as this absurdity is very glaring in itself, so there is no argument founded on it, which is not attended with a new absurdity, and involves not an evident contradiction.

I might give as instances those arguments for infinite divisibility, which are deriv'd from the *point of contact*. I know there is no mathematician, who will not refuse to be judg'd by the diagrams he describes upon paper, these being loose draughts, as he will tell us, and serving only to convey with greater facility certain ideas, which are the true foundation of all our reasoning. This I am satisfy'd with, and am willing to rest the controversy merely upon these ideas. I desire therefore our mathematician to form, as accurately as possible, the ideas of a circle and a right line; and I then ask, if upon the conception of their contact he can conceive them as touching in a mathematical point, or if he must necessarily imagine them to concur for some space. Whichever side he chuses, he runs himself into equal difficulties. If he affirms, that in tracing these figures in his imagination, he can imagine them to touch only in a point, he allows the possibility of that idea, and consequently of the thing. If he says, that in his conception of the contact of those lines he must make them concur, he thereby acknowledges the fallacy of geometrical demonstrations, when carry'd beyond a certain degree of minuteness; since 'tis certain he has such demonstrations against the concurrence of a circle and a right line; that is, in other words, he can prove an idea, *viz.* that of concurrence, to be *incompatible* with two other ideas, *viz.* those of a circle and right line; tho' at the same time he acknowledges these ideas to be *inseparable*.

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1. *L'Art de penser.*
2. See Dr. *Barrow's* mathematical lectures.

# Section V. The same subject continu'd

If the second part of my system be true, *that the idea of space or extension is nothing but the idea of visible or tangible points distributed in a certain order*; it follows, that we can form no idea of a

vacuum, or space, where there is nothing visible or tangible, This gives rise to three objections, which I shall examine together, because the answer I shall give to one is a consequence of that which I shall make use of for the others.

First, It may be said, that men have disputed for many ages concerning a vacuum and a plenum, without being able to bring the affair to a final decision; and philosophers, even at this day, think themselves at liberty to take party on either side, as their fancy leads them. But whatever foundation there may be for a controversy concerning the things themselves, it may be pretended, that the very dispute is decisive concerning the idea, and that 'tis impossible men cou'd so long reason about a vacuum, and either refute or defend it, without having a notion of what they refuted or defended.

Secondly, If this argument shou'd be contested, the reality or at least possibility of *idea* of a vacuum may be prov'd by the following reasoning. Every idea is possible, which is a necessary and infallible consequence of such as are possible. Now tho' we allow the world to be at present a plenum, we may easily conceive it to be depriv'd of motion; and this idea will certainly be allow'd possible. It must also be allow'd possible, to conceive the annihilation of any part of matter by the omnipotence of the deity, while the other parts remain at rest. For as every idea, that is distinguishable, is separable by the imagination; and as every idea, that is separable by the imagination, may be conceiv'd to be separately existent; 'tis evident, that the existence of one particle of matter, no more implies the existence of another, than a square figure in one body implies a square figure in every one. This being granted, I now demand what results from the commence of these two possible ideas of *rest* and *annihilation*, and what must we conceive to follow upon the annihilation of all the air and subtile matter in the chamber, supposing the walls to remain the same, without any motion or alteration? There are some metaphysicians, who answer, that since matter and extension are the same, the annihilation of one necessarily implies that of the other; and there being now no distance betwixt the walls of the chamber, they touch each other; in the same manner as my hand touches the paper, which is immediately before me. But tho' this answer be very common, I defy these metaphysicians to conceive the matter according to their hypothesis, or imagine the floor and root, with all the opposite sides of the chamber, to touch each other, while they continue in rest, and preserve the same position. For how can the two walls, that run from south to north, touch each other, while they touch the opposite ends of two walls, that run from east to west? And how can the door and roof ever meet, while they are separated by the four walls, that lie in a contrary position? If you change their position, you suppose a motion. If you conceive any thing betwixt them, you suppose a new creation. But keeping strictly to the two ideas of *rest* and *annihilation*, 'tis evident, that the idea, which results from them, is not that of a contact of parts, but something else; which is concluded to be the idea of a vacuum.

The third objection carries the matter still farther, and not only asserts, that the idea of a vacuum is real and possible, but also necessary and unavoidable. This assertion is founded on the motion we observe in bodies, which, 'tis maintain'd, wou'd be impossible and inconceivable without a vacuum, into which one body must move in order to make way for another. I shall not enlarge upon this objection, because it principally belongs to natural philosophy, which lies without our present sphere. In order to answer these objections, we must take the matter pretty deep, and consider the nature and origin of several ideas, lest we dispute without understanding perfectly the subject of the controversy. 'Tis evident the idea of darkness is no positive idea, but merely the negation of light, or more properly speaking, of colour'd and visible objects. A man, who enjoys his sight, receives no other perception from turning his eyes on every side, when entirely depriv'd of light, than what is common to him with one born blind; and 'tis certain such-a-one has no idea either of light or darkness. The consequence of this is, that 'tis not from the mere removal of visible objects we receive the impression of extension without

matter; and that the idea of utter darkness can never be the same with that of vacuum.

Suppose again a man to be supported in the air, and to be softly convey'd along by some invisible power; 'tis evident he is sensible of nothing, and never receives the idea of extension, nor indeed any idea, from this invariable motion. Even supposing he moves his limbs to and fro, this cannot convey to him that idea. He feels in that case a certain sensation or impression, the parts of which are successive to each other, and may give him the idea of time: But certainly are not dispos'd in such a manner, as is necessary to convey the idea of space or extension.

Since then it appears, that darkness and motion, with the utter removal of every thing visible and tangible, can never give us the idea of extension without matter, or of a vacuum; the next question is, whether they can convey this idea, when mix'd with something visible and tangible?

'Tis commonly allow'd by philosophers, that all bodies, which discover themselves to the eye, appear as if painted on a plain surface, and that their different degrees of remoteness from ourselves are discover'd more by reason than by the senses. When I hold up my hand before me, and spread my fingers, they are separated as perfectly by the blue colour of the firmament, as they cou'd be by any visible object, which I cou'd place betwixt them. In order, therefore, to know whether the sight can convey the impression and idea of a vacuum, we must suppose, that amidst an entire darkness, there are luminous bodies presented to us, whose light discovers only these bodies themselves, without giving us any impression of the surrounding objects.

We must form a parallel supposition concerning the objects of our feeling. 'Tis not proper to suppose a perfect removal of all tangible objects: we must allow something to be perceiv'd by the feeling; and after an interval and motion of the hand or other organ of sensation, another object of the touch to be met with; and upon leaving that, another; and so on, as often as we please. The question is, whether these intervals do not afford us the idea of extension without body?

To begin with the first case; 'tis evident, that when only two luminous bodies appear to the eye, we can perceive, whether they be conjoin'd or separate; whether they be separated by a great or small distance; and if this distance varies, we can perceive its increase or diminution, with the motion of the bodies. But as the distance is not in this case any thing colour'd or visible, it may be thought that there is here a vacuum or pure extension, not only intelligible to the mind, but obvious to the very senses.

This is our natural and most familiar way of thinking; but which we shall learn to correct by a little reflection. We may observe, that when two bodies present themselves, where there was formerly an entire darkness, the only change, that is discoverable, is in the appearance of these two objects, and that all the rest continues to be as before, a perfect negation of light, and of every colour'd or visible object. This is not only true of what may be said to be remote from these bodies, but also of the very distance; which is interpos'd betwixt them; *that* being nothing but darkness, or the negation of light; without parts, without composition, invariable and indivisible. Now since this distance causes no perception different from what a blind man receives from his eyes, or what is convey'd to us in the darkest night, it must partake of the same properties: And as blindness and darkness afford us no ideas of extension, 'tis impossible that the dark and indistinguishable distance betwixt two bodies can ever produce that idea.

The sole difference betwixt an absolute darkness and the appearance of two or more visible luminous objects consists, as I said, in the objects themselves, and in the manner they affect our senses. The angles, which the rays of light flowing from them, form with each other; the motion that is requir'd in the eye, in its passage from one to the other; and the different parts of the organs, which are affected by them; these produce the only perceptions, from which we can judge of the distance. But as these perceptions are each of them simple and indivisible, they can never give us the idea of extension.

We may illustrate this by considering the sense of feeling, and the imaginary distance or interval interpos'd betwixt tangible or solid objects. I suppose two cases, *viz.* that of a man supported in the air, and moving his limbs to and fro, without meeting any thing tangible; and that of a man, who feeling something tangible, leaves it, and after a motion, of which he is sensible, perceives another tangible object; and I then ask, wherein consists the difference betwixt these two cases? No one will make any scruple to affirm, that it consists meerly in the perceiving those objects, and that the sensation, which arises from the motion, is in both cases the same: And as that sensation is not capable of conveying to us an idea of extension, when unaccompany'd with some other perception, it can no more give us that idea, when mix'd with the impressions of tangible objects; since that mixture produces no alteration upon it.

But tho' motion and darkness, either alone, or attended with tangible and visible objects, convey no idea of a vacuum or extension without matter, yet they are the causes why we falsly imagine we can form such an idea. For there is a close relation betwixt that motion and darkness, and a real extension, or composition of visible and tangible objects. First, We may observe, that two visible objects appearing in the midst of utter darkness, affect the senses in the same manner, and form the same angle by the rays, which flow from them, and meet in the eye, as if the distance betwixt them were fill'd with visible objects, that give us a true idea of extension. The sensation of motion is likewise the same, when there is mating tangible interpos'd betwixt two bodies, as when we feel a compounded body, whose different parts are plac'd beyond each other.

Secondly, We find by experience, that two bodies, which are so plac'd as to affect the senses in the same manner with two others, that have a certain extent of visible objects interpos'd betwixt them, are capable of receiving the same extent, without any sensible impulse or penetration, and without any change on that angle, under which they appear to the senses. In like manner, where there is one object, which we cannot feel after another without an interval, and the perceiving of that sensation we call motion in our hand or organ of sensation; experience shews us, that 'tis possible the same object may be felt with the same sensation of motion, along with the interpos'd impression of solid and tangible objects, attending the sensation. That is, in other words, an invisible and intangible distance may be converted into a visible and tangible one, without any change on the distant objects.

Thirdly, We may observe, as another relation betwixt these two kinds of distance, that they have nearly the same effects on every natural phænomenon. For as all qualities, such as heat, cold, light, attraction, &c. diminish in proportion to the distance; there is but little difference observ'd, whether this distance be mark'd out by compounded and sensible objects, or be known only by the manner, in which the distant objects affect the senses.

Here then are three relations betwixt that distance, which conveys the idea of extension, and that other, which is not fill'd with any colour'd or solid object. The distant objects affect the senses in the same manner, whether separated by the one distance or the other; the second species of distance is found capable of receiving the first; and they both equally diminish the force of every quality.

These relations betwixt the two kinds of distance will afford us an easy reason, why the one has so often been taken for the other, and why we imagine we have an idea of extension without the idea of any object either of the sight or feeling. For we may establish it as a general maxim in this science of human nature, that wherever there is a close relation betwixt two ideas, the mind is very apt to mistake them, and in all its discourses and reasonings to use the one for the other. This phænomenon occurs on so many occasions, and is of such consequence, that I cannot forbear stopping a moment to examine its causes. I shall only premise, that we must distinguish exactly betwixt the phænomenon itself, and the causes, which I shall assign for it; and must not imagine from any uncertainty in the latter, that the former is also uncertain. The phænomenon may be real, tho' my explication be chimerical. The falshood of the one is no consequence of that of the other; tho' at the same time we may observe, that 'tis very natural for us to draw such a consequence; which is an evident instance of that very principle, which I endeavour to explain.

When I receiv'd the relations of *resemblance*, *contiguity* and *causation*, as principles of union among ideas, without examining into their causes, 'twas more in prosecution of my first maxim, that we must in the end rest contented with experience, than for want of something specious and plausible, which I might have display'd on that subject. 'Twou'd have been easy to have made an imaginary dissection of the brain, and have shewn, why upon our conception of any idea, the animal spirits run into all the contiguous traces, and rouze up the other ideas, that are related to it. But tho' I have neglected any advantage, which I might have drawn from this topic in explaining the relations of ideas, I am afraid I must here have recourse to it, in order to account for the mistakes that arise from these relations. I shall therefore observe, that as the mind is endow'd with a power of exciting any idea it pleases; whenever it dispatches the spirits into that region of the brain, in which the idea is plac'd; these spirits always excite the idea, when they run into the proper traces, and rummage that cell, which belongs to the idea. But as their motion is seldom direct, and naturally turns a little to the one side or the other; for this reason the animal spirits, falling into the contiguous traces, present other related ideas in lieu of that, which the mind desir'd at first to survey. This change we are not always sensible of; but continuing still the same train of thought, make use of the related idea, which is presented to us, and employ it in our reasoning, as if it were the same with what we demanded. This is the cause of many mistakes and sophisms in philosophy; as will naturally be imagin'd, and as it wou'd be easy to show, if there was occasion.

Of the three relations above-mention'd that of resemblance is the most fertile source of error; and indeed there are few mistakes in reasoning, which do not borrow largely from that origin. Resembling ideas are not only related together, but the actions of the mind, which we employ in considering them, are so little different, that we are not able to distinguish them. This last circumstance is of great consequence; and we may in general observe, that wherever the actions of the mind in forming any two ideas are the same or resembling, we are very apt to confound these ideas, and take the one for the other. Of this we shall see many instances in the progress of this treatise. But tho' resemblance be the relation, which most readily produces a mistake in ideas, yet the others of causation and contiguity may also concur in the same influence. We might produce the figures of poets and orators, as sufficient proofs of this, were it as usual, as it is reasonable, in metaphysical subjects to draw our arguments from that quarter. But lest metaphysicians shou'd esteem this below their dignity, I shall borrow a proof from an observation, which may be made on most of their own discourses, *viz.* that 'tis usual for men to use words for ideas, and to talk instead of thinking in their reasonings. We use words for ideas, because they are commonly so closely connected, that the mind easily mistakes them. And this likewise is the reason, why we substitute the idea of a distance, which is not considered either as visible or tangible, in the room of extension, which is nothing but a composition of visible or tangible

points dispos'd in a certain order. In causing this mistake there concur both the relations of *causation* and *resemblance*. As the first species of distance is found to be convertible into the second, 'tis in this respect a kind of cause; and the similarity of their manner of affecting the senses, and diminishing every quality, forms the relation of resemblance.

After this chain of reasoning and explication of my principles, I am now prepared to answer all the objections that have been offer'd, whether deriv'd from *metaphysics* or *mechanics*. The frequent disputes concerning a vacuum, or extension without matter, prove not the reality of the idea, upon which the dispute turns; there being nothing more common, than to see men deceive themselves in this particular; especially when by means of any close relation, there is another idea presented, which may be the occasion of their mistake.

We may make almost the same answer to the second objection, deriv'd from the conjunction of the ideas of rest and annihilation. When every thing is annihilated in the chamber, and the walls continue immovable, the chamber must be conceiv'd much in the same manner as at present, when the air that fills it, is not an object of the senses. This annihilation leaves to the *eye*, that fictitious distance, which is discover'd by the different parts of the organ, that are affected, and by the degrees of light and shade; and to the *feeling*, that which consists in a sensation of motion in the hand, or other member of the body. In vain shou'd we search any farther. On whichever side we turn this subject, we shall find that these are the only impressions such an object can produce after the suppos'd annihilation; and it has already been remark'd, that impressions can give rise to no ideas, but to such as resemble them.

Since a body interpos'd betwixt two others may be suppos'd to be annihilated, without producing any change upon such as lie on each hand of it, 'tis easily conceiv'd, how it, may be created anew, and yet produce as little alteration. Now the motion of a body has much the same effect as its creation. The distant bodies are no more affected in the one case, than in the other. This suffices to satisfy the imagination, and proves there is no repugnance in such a motion. Afterwards experience comes in play to persuade us that two bodies, situated in the manner above-describ'd, have really such a capacity of receiving body betwixt them, and that there is no obstacle to the conversion of the invisible and intangible distance into one that is visible and tangible. However natural that conversation may seem, we cannot be sure it is practicable, before we have had experience of it.

Thus I seem to have answer'd the three objections above mention'd; tho' at the same time I am sensible, that few will be satisfy'd with these answers, but will immediately propose new objections and difficulties. 'Twill probably he said, that my reasoning makes nothing to the matter in hand, and that I explain only the manner in which objects affect the senses, without endeavouring to account for their real nature and operations. Tho' there be nothing visible or tangible interpos'd betwixt two bodies, yet we find *by experience*, that the bodies may be plac'd in the same manner, with regard to the eye, and require the same motion of the hand in passing from one to the other, as if divided by something visible and tangible. This invisible and intangible distance is also found *by experience* to contain a capacity of receiving body, or of becoming visible and tangible. Here is the whole of my system; and in no part of it have I endeavour'd to explain the cause, which separates bodies after this manner, and gives them a capacity of receiving others betwixt them, without any impulse or penetration.

I answer this objection, by pleading guilty, and by confessing that my intention never was to penetrate into the nature of bodies, or explain the secret causes of their operations. For besides that this belongs not to my present purpose, I am afraid, that such an enterprize is beyond the reach of human understanding, and that we can never pretend to know body otherwise than by those external

properties, which discover themselves to the senses. As to those who attempt any thing farther, I cannot approve of their ambition, till I see, in some one instance at least, that they have met with success. But at present I content myself with knowing perfectly the manner in which objects affect my senses, and their connections with each other, as far as experience informs me of them. This suffices for the conduct of life; and this also suffices for my philosophy, which pretends only to explain the nature and causes of our perceptions, or impressions and ideas.

I shall conclude this subject of extension with a paradox, which will easily be explain'd from the foregoing reasoning. This paradox is, that if you are pleas'd to give to the invisible and intangible distance, or in other words, to the capacity of becoming visible and tangible distance, the name of a vacuum, extension and matter are the same, and yet there is a vacuum. If you will not give it that name, motion is possible in a plenum, without any impulse *in infinitum*, without retuming in a circle, and without penetration. But however we may express ourselves, we must always confess, that we have no idea of any real extension without filling it with sensible objects, and conceiving its parts as visible or tangible.

As to the doctrine, that time is nothing but the manner, in which some real objects exist; we may observe, that 'tis liable to the same objections as the similar doctrine with regard to extension. If it be a sufficient proof that we have the idea of a vacuum, because we dispute and reason concerning it; we must for the same reason have the idea of time without any changeable existence; since there is no subject of dispute more frequent and common. But that we really have no such idea, is certain. For whence shou'd it be deriv'd? Does it arise from an impression of sensation or of reflection? Point it out distinctly to us, that we may know its nature and qualities. But if you cannot point out *any such impression*, you may be certain you are mistaken, when you imagine you have *any such idea*.

But tho' it be impossible to shew the impression, from which the idea of time without a changeable existence is deriv'd; yet we can easily point out those appearances, which make us fancy we have that idea. For we may observe, that there is a continual succession of perceptions in our mind; so that the idea of time being for ever present with us; when we consider a stedfast object at five-a-clock, and regard the same at six; we are apt to apply to it that idea in the same manner as if every moment were distinguish'd by a different position, or an alteration of the object. The first and second appearances of the object, being compar'd with the succession of our perceptions, seem equally remov'd as if the object had really chang'd. To which we may add, what experience shews us, that the object was susceptible of such a number of changes betwixt these appearances; as also that the unchangeable or rather fictitious duration has the same effect upon every quality, by encreasing or diminishing it, as that succession, which is obvious to the senses. From these three relations we are apt to confound our ideas, and imagine we can form the idea of a time and duration, without any change or succession.

# Section VI. Of the idea of existence and of external existence

It may not be amiss, before we leave this subject, to explain the ideas of *existence* and of *external existence*; which have their difficulties, as well as the ideas of space and time. By this means we shall be the better prepar'd for the examination of knowledge and probability, when we understand perfectly all those particular ideas, which may enter into our reasoning.

There is no impression nor idea of any kind, of which we have any consciousness or memory, that is not conceiv'd as existent; and 'tis evident, that from this consciousness the most perfect idea and assurance of *being* is deriv'd. From hence we may form a dilemma, the most clear and conclusive that can be imagin'd, *viz.* that since we never remember any idea or impression without attributing existence to it, the idea of existence must either be deriv'd from a distinct impression, conjoin'd with every perception or object of our thought, or must be the very same with the idea of the perception or object.

As this dilemma is an evident consequence of the principle, that every idea arises from a similar impression, so our decision betwixt the propositions of the dilemma is no more doubtful. So far from there being any distinct impression, attending every impression and every idea, that I do not think there are any two distinct impressions, which are inseparably conjoin'd. Tho' certain sensations may at one time be united, we quickly find they admit of a separation, and may be presented apart. And thus, tho' every impression and idea we remember be consider'd as existent, the idea of existence is not deriv'd from any particular impression.

The idea of existence, then, is the very same with the idea of what we conceive to be existent. To reflect on any thing simply, and to reflect on it as existent, are nothing different from each other. That idea, when conjoin'd with the idea of any object, makes no addition to it. Whatever we conceive, we conceive to be existent. Any idea we please to form is the idea of a being; and the idea of a being is any idea we please to form.

Whoever opposes this, must necessarily point out that distinct impression, from which the idea of entity is deriv'd, and must prove, that this impression is inseparable from every perception we believe to be existent. This we may without hesitation conclude to be impossible.

Our foregoing[1] reasoning concerning the *distinction of ideas* without any real *difference* will not here serve us in any stead. That kind of distinction is founded on the different resemblances, which the same simple idea may have to several different ideas. But no object can be presented resembling some object with respect to its existence, and different from others in the same particular; since every object, that is presented, must necessarily be existent.

A like reasoning will account for the idea of *external existence.* We may observe, that 'tis universally allow'd by philosophers, and is besides pretty obvious of itself, that nothing is ever really present with the mind but its perceptions or impressions and ideas, and that external objects become known to us only by those perceptions they occasion. To hate, to love, to think, to feel, to see; all this is nothing but to perceive.

Now since nothing is ever present to the mind but perceptions, and since all ideas are deriv'd from something antecedently present to the mind; it follows, that 'tis impossible for us so much as to conceive or form an idea of any thing specifically different from ideas and impressions. Let us fix our attention out of ourselves as much as possible: Let us chace our imagination to the heavens, or to the utmost limits of the universe; we never really advance a step beyond ourselves, nor can conceive any kind of existence, but those perceptions, which have appear'd in that narrow compass. This is the universe of the imagination, nor have we any idea but what is there produc'd.

The farthest we can go towards a conception of external objects, when suppos'd *specifically* different from our perceptions, is to form a relative idea of them, without pretending to comprehend the related objects. Generally speaking we do not suppose them specifically different; but only attribute to them different relations, connections and durations. But of this more fully hereafter[2] .

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1. Part I. sect. 7.
2. Part IV. sect. 2.

# Part III: Of knowledge and probability

## Section I. Of knowledge

There are [1] seven different kinds of philosophical relation, *viz. resemblance, identity, relations of time and place, proportion in quantity or number, degrees in any quality, contrariety, and causation*. These relations may be divided into two classes; into such as depend entirely on the ideas, which we compare together, and such as may be chang'd without any change in the ideas. 'Tis from the idea of a triangle, that we discover the relation of equality, which its three angles bear to two right ones; and this relation is invariable, as long as our idea remains the same. On the contrary, the relations of *contiguity* and *distance* betwixt two objects may be chang'd merely by an alteration of their place, without any change on the objects themselves or on their ideas; and the place depends on a hundred different accidents, which cannot be foreseen by the mind. 'Tis the same case with *identity* and *causation*. Two objects, tho' perfectly resembling each other, and even appearing in the same place at different times, may be numerically different: And as the power, by which one object produces another, is never discoverable merely from their idea, 'tis evident *cause* and *effect* are relations, of which we receive information from experience, and not from any abstract reasoning or reflection. There is no single phænomenon, even the most simple, which can be accounted for from the qualities of the objects, as they appear to us; or which we cou'd foresee without the help of our memory and experience.

It appears, therefore, that of these seven philosophical relations, there remain only four, which depending solely upon ideas, can be the objects of knowledge and certainty. These four are *resemblance, contrariety, degrees of quality, and* proportions in quantity or number. *Three of these relations* are discoverable at first sight, and fall more properly under the province of intuition than demonstration. When any objects *resemble* each other, the resemblance will at first strike the eye, or rather the mind; and seldom requires a second examination. The case is the same with *contrariety*, and with the *degrees* of any *quality*. No one can once doubt but existence and non-existence destroy each other, and are perfectly incompatible and contrary. And tho' it be impossible to judge exactly of the degrees of any quality, such as colour, taste, heat, cold, when the difference betwixt them is very small; yet 'tis easy to decide, that any of them is superior or inferior to another, when their difference is considerable. And this decision we always pronounce at first sight, without any enquiry or reasoning.

We might proceed, after the same manner, in fixing the *proportions* of *quantity* or *number*, and might at one view observe a superiority or inferiority betwixt any numbers, or figures; especially where the difference is very great and remarkable. As to equality or any exact proportion, we can only guess at it from a single consideration; except in very short numbers, or very limited portions of extension; which are comprehended in an instant, and where we perceive an impossibility of falling into any considerable error. In all other cases we must settle the proportions with some liberty, or proceed in a more *artificial* manner.

I have already observ'd, that geometry, or the *art*, by which we fix the proportions of figures; tho' it much excels, both in universality and exactness, the loose judgments of the senses and imagination; yet never attains a perfect precision and exactness. Its first principles are still drawn from the general appearance of the objects; and that appearance can never afford us any security, when we examine the prodigious minuteness of which nature is susceptible. Our ideas seem to give a perfect assurance, that

no two right lines can have a common segment; but if we consider these ideas, we shall find, that they always suppose a sensible inclination of the two lines, and that where the angle they form is extremely small, we have no standard of a right line so precise as to assure us of the truth of this proposition. 'Tis the same case with most of the primary decisions of the mathematics. There remain, therefore, algebra and arithmetic as the only sciences, in which we can carry on a chain of reasoning to any degree of intricacy, and yet preserve a perfect exactness and certainty. We are possest of a precise standard, by which we can judge of the equality and proportion of numbers; and according as they correspond or not to that standard, we determine their relations, without any possibility of error. When two numbers are so combin'd, as that the one has always an unite answering to every unite of the other, we pronounce them equal; and 'tis for want of such a standard of equality in extension, that geometry can scarce be esteem'd a perfect and infallible science.

But here it may not be amiss to obviate a difficulty, which may arise from my asserting, that tho' geometry falls short of that perfect precision and certainty, which are peculiar to arithmetic and algebra, yet it excels the imperfect judgments of our senses and imagination. The reason why I impute any defect to geometry, is, because its original and fundamental principles are deriv' d merely from appearances; and it may perhaps be imagin'd, that this defect must always attend it, and keep it from ever reaching a greater exactness in the comparison of objects or ideas, than what our eye or imagination alone is able to attain. I own that this defect so far attends it, as to keep it from ever aspiring to a full certainty: But since these fundamental principles depend on the easiest and least deceitful appearances, they bestow on their consequences a degree of exactness, of which these consequences are singly incapable. 'Tis impossible for the eye to determine the angles of a chiliagon to be equal to 1996 right angles, or make any conjecture, that approaches this proportion; but when it determines, that right lines cannot concur; that we cannot draw more than one right line between two given points; its mistakes can never be of any consequence. And this is the nature and use of geometry, to run us up to such appearances, as, by reason of their simplicity, cannot lead us into any considerable error.

I shall here take occasion to propose a second observation concerning our demonstrative reasonings, which is suggested by the same subject of the mathematics. 'Tis usual with mathematicians, to pretend, that those ideas, which are their objects, are of so refin'd and spiritual a nature, that they fall not under the conception of the fancy, but must be comprehended by a pure and intellectual view, of which the superior faculties of the soul are alone capable. The same notion runs thro' most parts of philosophy, and is principally made use of to explain our abstract ideas, and to shew how we can form an idea of a triangle, for instance, which shall neither be an isoceles nor scalenurn, nor be confin'd to any particular length and proportion of sides. 'Tis easy to see, why philosophers are so fond of this notion of some spiritual and refin'd perceptions; since by that means they cover many of their absurdities, and may refuse to submit to the decisions of clear ideas, by appealing to such as are obscure and uncertain. But to destroy this artifice, we need but reflect on that principle so oft insisted on, *that all our ideas are copy'd from our impressions.* For from thence we may immediately conclude, that since all impressions are clear and precise, the ideas, which are copy'd from them, must be of the same nature, and can never, but from our fault, contain any thing so dark and intricate. An idea is by its very nature weaker and fainter than an impression; but being in every other respect the same, cannot imply any very great mystery. If its weakness render it obscure, 'tis our business to remedy that defect, as much as possible, by keeping the idea steady and precise; and till we have done so, 'tis in vain to pretend to reasoning and philosophy.

1. Part I. sect. 5.

# Section II. Of probability; and of the idea of cause and effect

This is all I think necessary to observe concerning those four relations, which are the foundation of science; but as to the other three, which depend not upon the idea, and may be absent or present even while *that* remains the same, 'twill be proper to explain them more particularly. These three relations are *identity, the situations in time and place, and causation.*

All kinds of reasoning consist in nothing but a companion, and a discovery of those relations, either constant or inconstant, which two or more objects bear to each other. This comparison we may make, either when both the objects are present to the senses, or when neither of them is present, or when only one. When both the objects are present to the senses along with the relation, we call *this* perception rather than reasoning; nor is there in this case any exercise of the thought, or any action, properly speaking, but a mere passive admission of the impressions thro' the organs of sensation. According to this way of thinking, we ought not to receive as reasoning any of the observations we may make concerning *identity*, and the *relations* of *time* and *place*; since in none of them the mind can go beyond what is immediately present to the senses, either to discover the real existence or the relations of objects. 'Tis only *causation*, which produces such a connexion, as to give us assurance from the existence or action of one object, that 'twas follow'd or preceded by any other existence or action; nor can the other two relations be ever made use of in reasoning, except so far as they either affect or are affected by it. There is nothing in any objects to perswade us, that they are either always *remote* or always *contiguous*; and when from experience and observation we discover, that their relation in this particular is invariable, we always conclude there is some secret *cause*, which separates or unites them. The same reasoning extends to *identity*. We readily suppose an object may continue individually the same, tho' several times absent from and present to the senses; and ascribe to it an identity, notwithstanding the interruption of the perception, whenever we conclude, that if we had kept our eye or hand constantly upon it, it wou'd have convey'd an invariable and uninterrupted perception. But this conclusion beyond the impressions of our senses can be founded only on the connexion of *cause and effect*; nor can we otherwise have any security, that the object is not chang'd upon us, however much the new object may resemble that which was formerly present to the senses. Whenever we discover such a perfect resemblance, we consider, whether it be common in that species of objects; whether possibly or probably any cause cou'd operate in producing the change and resemblance; and according as we determine concerning these causes and effects, we form our judgment concerning the identity of the object.

Here then it appears, that of those three relations, which depend not upon the mere ideas, the only one, that can be trac'd beyond our senses, and informs us of existences and objects, which we do not see or feel, is *causation*. This relation, therefore, we shall endeavour to explain fully before we leave the subject of the understanding.

To begin regularly, we must consider the idea of *causation*, and see from what origin it is deriv'd. 'Tis impossible to reason justly, without understanding perfectly the idea concerning which we reason; and 'tis impossible perfectly to understand any idea, without tracing it up to its origin, and examining that primary impression, from which it arises. The examination of the impression bestows a clearness on

the idea; and the examination of the idea bestows a like clearness on all our reasoning.

Let us therefore cast our eye on any two objects, which we call cause and effect, and turn them on all sides, in order to find that impression, which produces an idea of such prodigious consequence. At first sight I perceive, that I must not search for it in any of the particular qualities of the objects; since, which-ever of these qualities I pitch on, I find some object, that is not possest of it, and yet falls under the denomination of cause or effect. And indeed there is nothing existent, either externally or internally, which is not to be consider'd either as a cause or an effect; tho' 'tis plain there is no one quality, which universally belongs to all beings, and gives them a title to that denomination. The idea, then, of causation must be deriv'd from some *relation* among objects; and that relation we must now endeavour to discover. I find in the first place, that whatever objects are consider'd as causes or effects, are *contiguous*; and that nothing can operate in a time or place, which is ever so little remov'd from those of its existence. Tho' distant objects may sometimes seem productive of each other, they are commonly found upon examination to be link'd by a chain of causes, which are contiguous among themselves, and to the distant objects; and when in any particular instance we cannot discover this connexion, we still presume it to exist. We may therefore consider the relation of contiguity as essential to that of causation; at least may suppose it such, according to the general opinion, till we can find a more [1] proper occasion to clear up this matter, by examining what objects are or are not susceptible of juxta-position and conjunction.

The second relation I shall observe as essential to causes and effects, is not so universally acknowledge'd, but is liable to some controversy. 'Tis that of priority of time in the cause before the effect. Some pretend that 'tis not absolutely necessary a cause shou'd precede its effect; but that any object or action, in the very first moment of its existence, may exert its productive quality, and give rise to another object or action, perfectly co-temporary with itself. But beside that experience in most instances seems to contradict this opinion, we may establish the relation of priority by a kind of inference or reasoning. 'Tis an establish'd maxim both in natural and moral philosophy, that an object, which exists for any time in its full perfection without producing another, is not its sole cause; but is assisted by some other principle, which pushes it from its state of inactivity, and makes it exert that energy, of which it was secretly possest. Now if any cause may be perfectly co-temporary with its effect, 'tis certain, according to this maxim, that they must all of them be so; since any one of them, which retards its operation for a single moment, exerts not itself at that very individual time, in which it might have operated; and therefore is no proper cause. The consequence of this wou'd be no less than the destruction of that succession of causes, which we observe in the world; and indeed, the utter annihilation of time. For if one cause were co-temporary with its effect, and this effect with *its* effect, and so on, 'tis plain there wou'd be no such thing as succession, and all objects must be co-existent.

If this argument appear satisfactory, 'tis well. If not, I beg the reader to allow me the same liberty, which I have us'd in the preceding case, of supposing it such. For he shall find, that the affair is of no great importance.

Having thus discover'd or suppos'd the two relations of *contiguity* and *succession* to be essential to causes and effects, I find I am stopt short, and can proceed no farther in considering any single instance of cause and effect. Motion in one body is regarded upon impulse as the cause of motion in another. When we consider these objects with the utmost attention, we find only that the one body approaches the other; and that the motion of it precedes that of the other, but without any sensible interval. 'Tis in vain to rack ourselves with *farther* thought and reiiection upon this subject. We can go no *farther* in considering this particular instance.

Shou'd any one leave this instance, and pretend to define a cause, by saying it is something productive of another, 'tis evident he wou'd say nothing. For what does he mean by *production*? Can he give any definition of it, that will not be the same with that of causation? If he can; I desire it may be produc'd. If he cannot; he here runs in a circle, and gives a synonymous term instead of a definition.

Shall we then rest contented with these two relations of contiguity and succession, as affording a compleat idea of causation? By no means. An object may be contiguous and prior to another, without being consider'd as its cause. There is a necessary connexion to be taken into consideration; and that relation is of much greater importance, than any of the other two above-mention'd.

Here again I turn the object on all sides, in order to discover the nature of this necessary connexion, and find the impression, or impressions, from which its idea may be deriv'd. When I cast my eye on the *known qualities* of objects, I immediately discover that the relation of cause and effect depends not in the least on *them*. When I consider their *relations*, I can find none but those of contiguity and succession; which I have already regarded as imperfect and unsatisfactory. Shall the despair of success make me assert, that I am here possest of an idea, which is not preceded by any similar impression? This wou'd be too strong a proof of levity and inconstancy; since the contrary principle has been already so firmly establish'd, as to admit of no farther doubt; at least, till we have more fully examin'd the present difficulty.

We must, therefore, proceed like those, who being in search of any thing that lies conceal'd from them, and not finding it in the place they expected, beat about all the neighbouring fields, without any certain view or design, in hopes their good fortune will at last guide them to what they search for. 'Tis necessary for us to leave the direct survey of this question concerning the nature of that *necessary connexion*, which enters into our idea of cause and effect; and endeavour to find some other questions, the examination of which will perhaps afford a hint, that may serve to clear up the present difficulty. Of these questions there occur two, which I shall proceed to examine, *viz.*

First, For what reason we pronounce it *necessary*, that every thing whose existence has a beginning, shou'd also have a cause?

Secondly, Why we conclude, that such particular causes must *necessarily* have such particular effects; and what is the nature of that *inference* we draw from the one to the other, and of the *belief* we repose in it?

I shall only observe before I proceed any farther, that tho' the ideas of cause and effect be deriv'd from the impressions of reflection as well as from those of sensation, yet for brevity's sake, I commonly mention only the latter as the origin of these ideas; tho' I desire that whatever I say of them may also extend to the former. Passions are connected with their objects and with one another; no less than external bodies are connected together. The same relation, then, of cause and effect, which belongs to one, must be common to all of them.

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1. Part IV. sect. 5.

# Section III. Why a cause is always necessary?

To begin with the first question concerning the necessity of a cause: 'Tis a general maxim in philosophy, that *what-ever* begins to exist, must have a cause of existence. This is commonly taken for granted in all reasonings, without any proof given or demanded 'Tis suppos'd to be founded on intuition, and to be one of those maxims, which tho' they may be deny'd with the lips, 'tis impossible for men in their hearts really to doubt of. But if we examine this maxim by the idea of knowledge above—explain'd, we shall discover in it no mark of any such intuitive certainty; but on the contrary shall find, that 'tis of a nature quite foreign to that species of conviction.

All certainty arises from the comparison of ideas, and from the discovery of such relations as are unalterable, so long as the ideas continue the same. These relations are *resemblance, proportions in quantity and number, degrees of any quality, and contrariety*; none of which are imply'd in this proposition, *Whatever has a beginning has also a cause of existence*. That proposition therefore is not intuitively certain. At least any one, who wou'd assert it to be intuitively certain, must deny these to be the only infallible relations, and must find some other relation of that kind to be imply'd in it; which it will then be time enough to examine.

But here is an argument, which proves at once, that the foregoing proposition is neither intuitively nor demonstrably certain. We can never demonstrate the necessity of a cause to every new existence, or new modification of existence, without shewing at the same time the impossibility there is, that any thing can ever begin to exist without some productive principle; and where the latter proposition cannot be prov'd, we must despair of ever being able to prove the former. Now that the latter proposition is utterly incapable of a demonstrative proof, we may satisfy ourselves by considering, that as all distinct ideas are separable from each other, and as the ideas of cause and effect are evidently distinct, 'twill be easy for us to conceive any object to be non-existent this moment, and existent the next, without conjoining to it the distinct idea of a cause or productive principle. The separation, therefore, of the idea of a cause from that of a beginning of existence, is plainly possible for the imagination; and consequently the actual separation of these objects is so far possible, that it implies no contradiction nor absurdity; and is therefore incapable of being refuted by any reasoning from mere ideas; without which 'tis impossible to demonstrate the necessity of a cause.

Accordingly we shall find upon examination, that every demonstration, which has been produc'd for the necessity of a cause, is fallacious and sophistical. All the points of time and place,[1] say some philosophers, in which we can suppose any object to begin to exist, are in themselves equal; and unless there be some cause, which is peculiar to one time and to one place, and which by that means determines and fixes the existence, it must remain in eternal suspence; and the object can never begin to be, for want of something to fix its beginning. But I ask; Is there any more difficulty in supposing the time and place to be fix'd without a cause, than to suppose the existence to be determin'd in that manner? The first question that occurs on this subject is always, *whether* the object shall exist or not: The next, *when* and *where* it shall begin to exist. If the removal of a cause be intuitively absurd in the one case, it must be so in the other: And if that absurdity be not clear without a proof in the one case, it will equally require one in the other. The absurdity, then, of the one supposition can never be a proof of that of the other; since they are both upon the same footing, and must stand or fall by the same reasoning.

The second argument,[2] which I find us'd on this head, labours under an equal difficulty. Every thing, 'tis said, must have a cause; for if any thing wanted a cause, *it* wou'd produce *itself*; that is, exist before it existed; which is impossible. But this reasoning is plainly inconclusive; because it supposes, that in our denial of a cause we still grant what we expresly deny, *vis.* that there must be a cause; which

therefore is taken to be the object itself; and *that*, no doubt, is an evident contradiction. But to say that any thing is produc'd, or to express myself more properly, comes into existence, without a cause, is not to affirm, that 'tis itself its own cause; but on the contrary in excluding all external causes, excludes *a fortiori* the thing itself which is created. An object, that exists absolutely without any cause, certainly is not its own cause; and when you assert, that the one follows from the other, you suppose the very point in question, and take it for granted, that 'tis utterly impossible any thing can ever begin to exist without a cause, but that upon the exclusion of one productive principle, we must still have recourse to another.

'Tis exactly the same case with the[3] third argument, which has been employ'd to demonstrate the necessity of a cause. Whatever is produc'd without any cause, is produc'd by *nothing*; or in other words, has nothing for its cause. But nothing can never be a cause, no more than it can be something, or equal to two right angles. By the same intuition, that we perceive nothing not to be equal to two right angles, or not to be something, we perceive, that it can never be a cause; and consequently must perceive, that every object has a real cause of its existence.

I believe it will not be necessary to employ many words in shewing the weakness of this argument, after what I have said of the foregoing. They are all of them founded on the same fallacy, and are deriv'd from the same turn of thought. 'Tis sufficient only to observe, that when we exclude all causes we really do exclude them, and neither suppose nothing nor the object itself to be the causes of the existence; and consequently can draw no argument from the absurdity of these suppositions to prove the absurdity of that exclusion. If every thing must have a cause, it follows, that upon the exclusion of other causes we must accept of the object itself or of nothing as causes. But 'tis the very point in question, whether every thing must have a cause or not; and therefore, according to all just reasoning, it ought never to be taken for granted.

They are still more frivolous, who say, that every effect must have a cause, because 'tis imply'd in the very idea of effect. Every effect necessarily pre-supposes a cause; effect being a relative term, of which cause is the correlative. But this does not prove, that every being must be preceded by a cause; no more than it follows, because every husband must have a wife, that therefore every man must be marry'd. The true state of the question is, whether every object, which begins to exist, must owe its existence to a cause; and this I assert neither to be intuitively nor demonstratively certain, and hope to have prov'd it sufficiently by the foregoing arguments.

Since it is not from knowledge or any scientific reasoning, that we derive the opinion of the necessity of a cause to every new production, that opinion must necessarily arise from observation and experience. The next question, then, shou'd naturally be, *how experience gives rise to such a principle?* But as I find it will be more convenient to sink this question in the following, *Why we conclude, that such particular causes must necessarily have such particular effects, and why we form an inference from one to another?* we shall make that the subject of our future enquiry. "Twill, perhaps, be found in the end, that the same answer will serve for both questions.

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1. Mr. *Hobbes*.
2. Dr *Clarke* and others.
3. Mr. *Locke*.

# Section IV. Of the component parts of our reasonings concerning causes and effects

Tho' the mind in its reasonings from causes or effects carries its view beyond those objects, which it sees or remembers, it must never lose sight of them entirely, nor reason merely upon its own ideas, without some mixture of impressions, or at least of ideas of the memory, which are equivalent to impressions. When we infer effects from causes, we must establish the existence of these causes; which we have only two ways of doing, either by an immediate perception of our memory or senses, or by an inference from other causes; which causes again we must ascertain in the same manner, either by a present impression, or by an inference from *their* causes, and so on, till we arrive at some object, which we see or remember. 'Tis impossible for us to carry on our inferences *in infinitum*; and the only thing, that can stop them, is an impression of the memory or senses, beyond which there is no room for doubt or enquiry.

To give an instance of this, we may chuse any point of history, and consider for what reason we either believe or reject it. Thus we believe that Cæsar was kill'd in the senate-house on the *ides* of *March*; and that because this fact is establish'd on the unanimous testimony of historians, who agree to assign this precise time and place to that event. Here are certain characters and letters present either to our memory or senses; which characters we likewise remember to have been us'd as the signs of certain ideas; and these ideas were either in the minds of such as were immediately present at that action, and receiv'd the ideas directly from its existence; or they were deriv'd from the testimony of others, and that again from another testimony, by a visible gradation, till we arrive at those who were eye-witnesses and spectators of the event. 'Tis obvious all this chain of argument or connexion of causes and effects, is at first founded on those characters or letters, which are seen or remember'd, and that without the authority either of the memory or senses our whole reasoning wou'd be chimerical and without foundation. Every link of the chain wou'd in that case hang upon another; but there wou'd not be any thing fix'd to one end of it, capable of sustaining the whole; and consequently there wou'd be no belief nor evidence. And this actually is the case with all *hypothetical* arguments, or reasonings upon a supposition; there being in them, neither any present impression, nor belief of a real existence.

I need not observe, that 'tis no just objection to the present doctrine, that we can reason upon our past conclusions or principles, without having recourse to those impressions, from which they first arose. For even supposing these impressions shou'd be entirely effac'd from the memory, the conviction they produc'd may still remain; and 'tis equally true, that all reasonings concerning causes and effects are originally deriv'd from some impression; in the same manner, as the assurance of a demonstration proceeds always from a comparison of ideas, tho' it may continue after the comparison is forgot.

# Section IX. Of the effect of other relations, and other habits

However convincing the foregoing arguments may appear, we must not rest contented with them, but must turn the subject on every side, in order to find some new points of view, from which we may illustrate and confirm such extraordinary, and such fundamental principles. A scrupulous hesitation to receive any new hypothesis is so laudable a disposition in philosophers, and so necessary to the examination of truth, that it deserves to be comply'd with, and requires that every argument be

produc'd, which may tend to their satisfaction, and every objection remov'd, which may stop them in their reasoning.

I have often observ'd, that, beside cause and effect, the two relations of resemblance and contiguity, are to be consider'd as associating principles of thought, and as capable of conveying the imagination from one idea to another. I have also observ'd, that when of two objects connected together by any of these relations, one is immediately present to the memory or senses, not only the mind is convey'd to its co-relative by means of the associating principle; but likewise conceives it with an additional force and vigour, by the united operation of that principle, and of the present impression. All this I have observ'd, in order to confirm by analogy, my explication of our judgments concerning cause and effect. But this very argument may perhaps, be turn'd against me, and instead of a confirmation of my hypothesis, may become an objection to it. For it may be said, that if all the parts of that hypothesis be true, *viz. that* these three species of relation are deriv'd from the same principles; *that* their effects in in forcing and inlivening our ideas are the same; and *that* belief is nothing but a more forcible and vivid conception of an idea; it shou'd follow, that that action of the mind may not only be deriv'd from the relation of cause and effect, but also from those of contiguity and resemblance. But as we find by experience, that belief arises only from causation, and that we can draw no inference from one object to another, except they be corrected by this relation, we may conclude, that there is some error in that reasoning, which leads us into such difficulties.

This is the objection; let us now consider its solution. 'Tis evident, that whatever is present to the memory, striking upon the mind with a vivacity, which resembles an immediate impression, must become of considerable moment in all the operations of the mind, and must easily distinguish itself above the mere fictions of the imagination. Of these impressions or ideas of the memory we form a kind of system, comprehending whatever we remember to have been present, either to our internal perception or senses; and every particular of that system join'd, to the present impressions, we are pleas'd to call a *reality*. But the mind stops not here. For finding, that with this system of perceptions, there is another connected by custom, or if you will, by the relation of cause or effect, it proceeds to the consideration of their ideas; and as it feels that 'tis in a manner necessarily determin'd to view these particular ideas, and that the custom or relation, by which it is determin'd, admits not of the least change, it forms them into a new system, which it likewise dignifies with the title of *realities*. The first of these systems is the object of the memory and senses; the second of the judgment.

'Tis this latter principle which peoples the world, and brings us acquainted with such existences, as by their removal in time and place, lie beyond the reach of the senses and memory. By means of it I paint the universe in my imagination, and fix my attention on any part of it I please. I form an idea of Rome, which I neither see nor remember; but which is connected with such impressions as I remember to have received from the conversation and books of travellers and historians. This idea of *Rome* I place in a certain situation on the idea of an object, which I call the globe. I join to it the conception of a particular government, and religion, and manners. I look backward and consider its first foundation; its several revolutions, successes, and misfortunes. All this, and every thing else, which I believe, are nothing but ideas; tho' by their force and settled order, arising from custom and the relation of cause and effect, they distinguish themselves from the other ideas, which are merely the offspring of the imagination.

As to the influence of contiguity and resemblance, we may observe, that if the contiguous and resembling object be comprehended in this system of realities, there is no doubt but these two relations will assist that of cause and effect, and infix the related idea with more force in the imagination. This I

shall enlarge upon presently. Mean while I shall carry my observation a step farther, and assert, that even where the related object is but feign'd, the relation will serve to enliven the idea, and encrease its influence. A poet, no doubt, will be the better able to form a strong description of the *Elysian* fields, that he prompts his imagination by the view of a beautiful meadow or garden; as at another time he may by his fancy place himself in the midst of these fabulous regions, that by the feign'd contiguity he may enliven his imagination.

But tho' I cannot altogether exclude the relations of resemblance and contiguity from operating on the fancy in this manner, 'tis observable that, when single, their influence is very feeble and uncertain. As the relation of cause and effect is requisite to persuade us of any real existence, so is this persuasion requisite to give force to these other relations. For where upon the appearance of an impression we not only feign another object, but likewise arbitrarily, and of our mere good-will and pleasure give it a particular relation to the impression, this can have but a small effect upon the mind; nor is there any reason, why, upon the return of the same impression, we shou'd be determin'd to place the same object in the same relation to it. There is no manner of necessity for the mind to feign any resembling and contiguous objects; and if it feigns such, there is as little necessity for it always to confine itself to the same, without any difference or variation. And indeed such a fiction is founded on so little reason, that nothing but pure *caprice* can determine the mind to form it; and that principle being fluctuating and uncertain, 'tis impossible it can ever operate with any considerable degree of force and constancy. The mind forsees and anticipates the change; and even from the very first instant feels the looseness of its actions, and the weak hold it has of its objects. And as this imperfection is very sensible in every single instance, it still encreases by experience and observation, when we compare the several instances we may remember, and form a *general rule* against the reposing any assurance in those momentary glimpses of light, which arise in the imagination from a feign'd resemblance and contiguity.

The relation of cause and effect has all the opposite advantages. The objects it presents are fixt and unalterable. The impressions of the memory never change in any considerable degree; and each impression draws along with it a precise idea, which takes its place in the imagination, as something solid and real, certain and invariable. The thought is always determin'd to pass from the impression to the idea, and from that particular impression to that particular idea, without any choice or hesitation.

But not content with removing this objection, I shall endeavour to extract from it a proof of the present doctrine. Contiguity and resemblance have an effect much inferior to causation; but still have some effect, and augment the conviction of any opinion, and the vivacity of any conception. If this can be prov'd in several new instances, beside what we have already observ'd, 'twill be allow'd no inconsiderable argument, that belief is nothing but a lively idea related to a present impression.

To begin with contiguity; it has been remark'd among the *Mahometans* as well as *Christians*, that those *pilgrims*, who have seen Mecca or the Holy Land are ever after more faithful and zealous believers, than those who have not had that advantage. A man, whose memory presents him with a lively image of the *Red-Sea, and the Desert, and Jerusalem, and Galilee*, can never doubt of any miraculous events, which are related either by *Moses or the Evangelists.* The lively idea of the places passes by an easy transition to the facts, which are suppos'd to have been related to them by contiguity, and encreases the belief by encreasing the vivacity of the conception. The remembrance of these fields and rivers has the same influence on the vulgar as a new argument; and from the same causes.

We may form a like observation concerning *resemblance*. We have remark'd, that the conclusion, which we draw from a present object to its absent cause or effect, is never founded on any qualities,

which we observe in that object, consider'd in itself; or, in other words, that 'tis impossible to determine. otherwise than by experience, what will result from any phænomenon, or what has preceded it. But tho' this be so evident in itself, that it seem'd not to require any proof; yet some philosophers have imagin'd that there is an apparent cause for the communication of motion, and that a reasonable man might immediately infer the motion of one body from the impulse of another, without having recourse to any past observation. That this opinion is false will admit of an easy proof. For if such an inference may be drawn merely from the ideas of body, of motion, and of impulse, it must amount to a demonstration, and must imply the absolute impossibility of any contrary supposition. Every effect, then, beside the communication of motion, implies a formal contradiction; and 'tis impossible not only that it can exist, but also that it can be conceiv'd. But we may soon satisfy ourselves of the contrary, by forming a clear and consistent idea of one body's moving upon another, and of its rest immediately upon the contact; or of its returning back in the same line, in which it came; or of its annihilation; or circular or elliptical motion: and in short, of an infinite number of other changes, which we may suppose it to undergo. These suppositions are all consistent and natural; and the reason, why we imagine the communication of motion to be more consistent and natural not only than those suppositions, but also than any other natural effect, is founded on the relation of *resemblance* betwixt the cause and effect, which is here united to experience, and binds the objects in the closest and most intimate manner to each other, so as to make us imagine them to be absolutely inseparable. Resemblance, then, has the same or a parallel influence with experience; and as the only immediate effect of experience is to associate our ideas together, it follows, that all belief arises from the association of ideas, according to my hypothesis.

'Tis universally allow'd by the writers on optics, that the eye at all times sees an equal number of physical points, and that a man on the top of a mountain has no larger an image presented to his senses, than when he is cooped up in the narrowest court or chamber. 'Tis only by experience that he infers the greatness of the object from some peculiar qualities of the image; and this inference of the judgment he confounds with sensation, as is common on other occasions. Now 'tis evident, that the inference of the judgment is here much more lively than what is usual in our common reasonings, and that a man has a more vivid conception of the vast extent of the ocean from the image he receives by the eye, when he stands on the top of the high promontory, than merely from hearing the roaring of the waters. He feels a more sensible pleasure from its magnificence; which is a proof of a more lively idea: And he confounds his judgment with sensation; which is another proof of it. But as the inference is equally certain and immediate in both cases, this superior vivacity of our conception in one case can proceed from nothing but this, that in drawing an inference from the sight, beside the customary conjunction, there is also a resemblance betwixt the image and the object we infer; which strengthens the relation, and conveys the vivacity of the impression to the related idea with an easier and more natural movement.

No weakness of human nature is more universal and conspicuous than what we commonly call Credulity, or a too easy faith in the testimony of others; and this weakness is also very naturally accounted for from the influence of resemblance. When we receive any matter of fact upon human testimony, our faith arises from the very same origin as our inferences from causes to effects, and from effects to causes; nor is there any thing but our *experience* of the governing principles of human nature, which can give us any assurance of the veracity of men. But tho' experience be the true standard of this, as well as of all other judgments, we seldom regulate ourselves entirely by it; but have a remarkable propensity to believe whatever is reported, even concerning apparitions, enchantments, and prodigies, however contrary to daily experience and observation. The words or discourses of others have an intimate connexion with certain ideas in their mind; and these ideas have also a

connexion with the facts or objects, which they represent. This latter connexion is generally much over-rated, and commands our assent beyond what experience will justify; which can proceed from nothing beside the resemblance betwixt the ideas and the facts. Other effects only point out their causes in an oblique manner; but the testimony of men does it directly, and is to be consider'd as an image as well as an effect. No wonder, therefore, we are so rash in drawing our inferences from it, and are less guided by experience in our judgments concerning it, than in those upon any other subject.

As resemblance, when conjoin'd with causation, fortifies our reasonings; so the want of it in any very great degree is able almost entirely to destroy them. Of this there is a remarkable instance in the universal carelessness and stupidity of men with regard to a future state, where they show as obstinate an incredulity, as they do a blind credulity on other occasions. There is not indeed a more ample matter of wonder to the studious, and of regret to the pious man, than to observe the negligence of the bulk of mankind concerning their approaching condition; and 'tis with reason, that many eminent theologians have not scrupled to affirm, that tho' the vulgar have no formal principles of infidelity, yet they are really infidels in their hearts, and have nothing like what we can call a belief of the eternal duration of their souls. For let us consider on the one hand what divines have display'd with such eloquence concerning the importance of eternity; and at the same time reflect, that tho' in matters of rhetoric we ought to lay our account with some exaggeration, we must in this case allow, that the strongest figures are infinitely inferior to the subject: And after this let us view on the other hand the prodigious security of men in this particular: I ask, if these people really believe what is inculcated on them, and what they pretend to affirm; and the answer is obviously in the negative. As belief is an act of the mind arising from custom, 'tis not strange the want of resemblance shou'd overthrow what custom has establish'd, and diminish the force of the idea, as much as that latter principle encreases it. A future state is so far remov'd from our comprehension, and we have so obscure an idea of the manner, in which we shall exist after the dissolution of the body, that all the reasons we can invent, however strong in themselves, and however much assisted by education, are never able with slow imaginations to surmount this difficulty, or bestow a sufficient authority and force on the idea. I rather choose to ascribe this incredulity to the faint idea we form of our future condition, deriv'd from its want of resemblance to the present life, than to that deriv'd from its remoteness. For I observe, that men are every where concern'd about what may happen after their death, provided it regard this world; and that there are few to whom their name, their family, their friends, and their country are in any period of time entirely indifferent.

And indeed the want of resemblance in this case so entirely destroys belief, that except those few, who upon cool reflection on the importance of the subject, have taken care by repeated meditation to imprint in their minds the arguments for a future state, there scarce are any, who believe the immortality of the soul with a true and establish'd judgment; such as is deriv'd from the testimony of travellers and historians. This appears very conspicuously wherever men have occasion to compare the pleasures and pains, the rewards and punishments of this life with those of a future; even tho' the case does not concern themselves, and there is no violent passion to disturb their judgment. The *Roman Catholicks* are certainly the most zealous of any sect in the christian world; and yet you'll find few among the more sensible people of that communion, who do not blame the *Gunpowder-treason*, and the massacre of St. *Bartholomew*, as cruel and barbarous, tho' projected or executed against those very people, whom without any scruple they condemn to eternal and infinite punishments. All we can say in excuse for this inconsistency is, that they really do not believe what they affirm concerning a future state; nor is there any better proof of it than the very inconsistency.

We may add to this a remark; that in matters of religion men take a pleasure in being terrify'd, and that no preachers are so popular, as those who excite the most dismal and gloomy passions. In the common affairs of life, where we feel and are penetrated with the solidity of the subject, nothing can be more disagreeable than fear and terror; and 'tis only in dramatic performances and in religious discourses, that they ever give pleasure. In these latter cases the imagination reposes itself indolently on the idea; and the passion, being soften'd by the want of belief in the subject, has no more than the agreeable effect of enlivening the mind, and fixing the attention.

The present hypothesis will receive additional confirmation, if we examine the effects of other kinds of custom, as well as of other relations. To understand this we must consider, that custom, to which I attribute all belief and reasoning, may operate upon the mind in invigorating an idea after two several ways. For supposing that in all past experience we have found two objects to have been always conjoin'd together, 'tis evident, that upon the appearance of one of these objects in an impression, we must from custom make an easy transition to the idea of that object, which usually attends it; and by means of the present impression and easy transition must conceive that idea in a stronger and more lively manner, than we do any loose floating image of the fancy. But let us next suppose, that a mere idea alone, without any of this curious and almost artificial preparation, shou'd frequently make its appearance in the mind, this idea must by degrees acquire a facility and force; and both by its firm hold and easy introduction distinguish itself from any new and unusual idea. This is the only particular, in which these two kinds of custom agree; and if it appear, that their effects on the judgment are similar and proportion able, we may certainly conclude, that the foregoing explication of that faculty is satisfactory. But can we doubt of this agreement in their influence on the judgment, when we consider the nature and effects of education?

All those opinions and notions of things, to which we have been accustom'd from our infancy, take such deep root, that 'tis impossible for us, by all the powers of reason and experience, to eradicate them; and this habit not only approaches in its influence, but even on many occasions prevails over that which arises from the constant and inseparable union of causes and effects. Here we must not be contented with saying, that the vividness of the idea produces the belief: We must maintain that they are individually the same. The frequent repetition of any idea infixes it in the imagination; but cou'd never possibly of itself produce belief; if that act of the mind was, by the original constitution of our natures, annex'd only to a reasoning and comparison of ideas. Custom may lead us into some false comparison of ideas. This is the utmost effect we can conceive of it. But 'tis certain it cou'd never supply the place of that comparison, nor produce any act of the mind, which naturally belong'd to that principle.

A person, that has lost a leg or an arm by amputation, endeavours for a long time afterwards to serve himself with them. After the death of any one, 'tis a common remark of the whole family, but especially of the servants, that they can scarce believe him to be dead, but still imagine him to be in his chamber or in any other place, where they were accustom'd to find him. I have often heard in conversation, after talking of a person, that is any way celebrated, that one, who has no acquaintance with him, will say, *I have never seen such-a-one, but almost fancy I have; so often have I heard talk talk of him.* All these are parallel instances.

If we consider this argument from *education* in a proper light, 'twill appear very convincing; and the more so, that 'tis founded on one of the most common phænomena, that is any where to be met with. I am persuaded, that upon examination we shall find more than one half of those opinions, that prevail among mankind, to be owing to education, and that the principles, which are thus implicitly embrac'd,

over-ballance those, which are owing either to abstract reasoning or experience. As liars, by the frequent repetition of their lies, come at last to remember them; so the judgment, or rather the imagination, by the like means, may have ideas so strongly imprinted on it, and conceive them in so full a light, that they may operate upon the mind in the same manner with those, which the senses, memory or reason present to us. But as education is an artificial and not a natural cause, and as its maxims are frequently contrary to reason, and even to themselves in different times and places, it is never upon that account recogniz'd by philosophers; tho' in reality it be built almost on the same foundation of custom and repetition as our reasonings from ca ses and effects[1] .

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1. In general we may observe, that as our assent to all probable reasonings on the vivacity of ideas, it resembles many of those whimsies and prejudices, which are rejected under the opprobrious character of being the offspring of the imagination. By this expression it appears that the word, imagination, is commonly us'd in two different senses; and tho' nothing be more contrary to true philosophy, than this inaccuracy, yet in the following reasonings I have often been oblig'd to fall into it. When I oppose the imagination to the memory, I mean the faculty, by which we form our fainter ideas. When I oppose it to reason, I mean the same faculty, excluding only our demonstrative and probable reasonings. When I oppose it to neither, 'tis indifferent whether it be taken the larger or more limited sense, or at least the context will sufficiently explain the meaning.

# Section V. Of the impressions of the senses and memory

In this kind of reasoning, then, from causation, we employ materials, which are of a mix'd and heterogeneous nature, and which, however connected, are yet essentially different from each other. All our arguments concerning causes and effects consist both of an impression of the memory or senses, and of the idea of that existence, which produces the object of the impression, or is produc'd by it. Here therefore we have three things to explain, *viz. First*, The original impression. *Secondly*, The transition to the idea of the connected cause or effect. *Thirdly*, The nature and qualities of that idea.

As to those *impressions*, which arise from the senses, their ultimate cause is, in my opinion, perfectly inexplicable by human reason, and 'twill always be impossible to decide with certainty, whether they arise immediately from the object, or are produc'd by the reative power of the mind, or are deriv'd from the author of our being. Nor is such a question any way material to our present purpose. We may draw inferences from the coherence of our perceptions, whether they be true or false; whether they represent nature justly, or be mere illusions of the senses.

When we search for the characteristic, which distinguishes the *memory* from the imagination, we must immediately perceive, that it cannot lie in the simple ideas it presents to us; since both these faculties borrow their simple ideas from the impressions, and can never go beyod these original perceptions. These faculties ar as little distinguish'd from each other by the arrangement of their complex ideas. For tho' it be a peculiar property of the memory to preserve the original order and position of its ideas, while the imagination transposes and changes them, as it pleases; yet this difference is not sufficient to distinguish them in their operation, or make us know the one from the other; it being impossible to recal the past impressions, in order to compare them with our present ideas, and see whether their arrangement be exactly similar. Since therefore the memory is known, neither by the order of its *complex* ideas, nor the nature of its *simple* ones; it follows, that the difference betwixt it and the imagination lies in its superior force and vivacity. A man may indulge his fancy in feigning any past

scene of adventures; nor wou'd there be any possibility of distinguishing this from a remembrance of a like kind, were not the ideas of the imagination fainter and more obscure.

A painter, who intended to represent a passion or emotion of any kind, wou'd endeavour to get a sight of a person actuated by a like emotion, in order to enliven his ideas, and give them a force and vivacity superior to what is found in those, which are mere fictions of the imagination. The more recent this memory is, the clearer is the idea; and when after a long interval he would return to the contemplation of his object, he always finds its idea to be much decay'd, if not wholly obliterated. We are frequently in doubt concerning the ideas of the memory, as they become very weak and feeble; and are at a loss to determine whether any image proceeds from the fancy or the memory, when it is not drawn in such lively colours as distinguish that latter faculty. I think, I remember such an event, says one; but am not sure. A long tract of time has almost worn it out of my memory, and leaves me uncertain whether or not it be the pure offspring of my fancy.

And as an idea of the memory, by losing its force and vivacity, may degenerate to such a degree, as to be taken for an idea of the imagination; so on the other hand an idea of the imagination may acquire such a force and vivacity, as to pass for an idea of the memory, and counterfeit its effects on the belief and judgment. This is noted in the case of liars; who by the frequent repetition of their lies, come at last to believe and remember them, as realities; custom and habit having in this case, as in many others, the same influence on the mind as nature, and infixing the idea with equal force and vigour.

Thus it appears, that the *belief* or *assent*, which always attends the memory and senses, is nothing but the vivacity of those perceptions they present; and that this alone distinguishes them from the imagination. To believe is in this case to feel an immediate impression of the senses, or a repetition of that impression in the memory. 'Tis merely the force and liveliness of the perception, which constitutes the first act of the judgment, and lays the foundation of that reasoning, which we build upon it, when we trace the relation of cause and effect.

# Section VI. Of the inference from the impression to the idea

'Tis easy to observe, that in tracing this relation, the inference we draw from cause to effect, is not deriv'd merely from a survey of these particular objects, and from such a penetration into their essences as may discover the dependence of the one upon the other. There is no object, which implies the existence of any other if we consider these objects in themselves, and never look beyond the ideas which we form of them. Such an inference wou'd amount to knowledge, and wou'd imply the absolute contradiction and impossibility of conceiving any thing different. But as all distinct ideas are separable, 'tis evident there can be no impossibility of that kind. When we pass from a present impression to the idea of any object, we might possibly have separated the idea from the impression, and have substituted any other idea in its room.

'Tis therefore by experience only, that we can infer the existence of one object from that of another. The nature of experience is this. We remember to have had frequent instances of the existence of one species of objects; and also remember, that the individuals of another species of objects have always attended them, and have existed in a regular order of contiguity and succession with regard to them. Thus we remember to have seen that species of object we call *flame*, and to have felt that species of

sensation we call *heat*. We likewise call to mind their constant conjunction in all past instances. Without any farther ceremony, we call the one *cause* and the other *effect*, and infer the existence of the one from that of the other. In all those instances, from which we learn the conjunction of particular causes and effects, both the causes and effects have been perceiv'd by the senses, and are remember'd: But in all cases, wherein we reason concerning them, there is only one perceiv'd or remember'd, and the other is supply'd in conformity to our past experience.

Thus in advancing we have insensibly discover'd a new relation betwixt cause and effect, when we least expected it, and were entirely employ'd upon another subject. This relation is their constant conjunction. Contiguity and succession are not sufficient to make us pronounce any two objects to be cause and effect, unless we perceive, that these two relations are preserv'd in several instances. We may now see the advantage of quitting the direct survey of this relation, in order to discover the nature of that *necessary connexion*, which makes so essential a part of it. There are hopes, that by this means we may at last arrive at our propos'd end; tho' to tell the truth, this new-discover'd relation of a constant conjunction seems to advance us but very little in our way. For it implies no more than this, that like objects have always been plac'd in like relations of contiguity and succession; and it seems evident, at least at first sight, that by this means we can never discover any new idea, and can only multiply, but not enlarge the objects of our mind. It may be thought, that what we learn not from one object, we can never learn from a hundred, which are all of the same kind, and are perfectly resembling in every circumstance. As our senses shew us in one instance two bodies, or motions, or qualities in certain relations of succession and contiguity; so our memory presents us only with a multitude of instances, wherein we always find like bodies, motions, or qualities in like relations. From the mere repetition of any past impression, even to infinity, there never will arise any new original idea, such as that of a necessary connexion; and the number of impressions has in this case no more effect than if we confin'd ourselves to one only. But tho' this reasoning seems just and obvious; yet as it wou'd be folly to despair too soon, we shall continue the thread of our discourse; and having found, that after the discovery of the constant conjunction of any objects, we always draw an inference from one object to another, we shall now examine the nature of that inference, and of the transition from the impression to the idea. Perhaps 'twill appear in the end, that the necessary connexion depends on the inference, instead of the inference's depending on the necessary connexion. Since it appears, that the transition from an impression present to the memory or senses to the idea of an object, which we call cause or effect, is founded on past *experience*, and on our remembrance of their *constant conjunction*, the next question is, Whether experience produces the idea by means of the understanding or of the imagination; whether we are determin'd by reason to make the transition, or by a certain association and relation of perceptions. If reason determin'd us, it wou'd proceed upon that principle, *that instances, of which we have had no experience, must resemble those, of which we have had experience, and that the course of nature continues always uniformly the same.* In order therefore to clear up this matter, let us consider all the arguments, upon which such a proposition may be suppos'd to be founded; and as these must be deriv' d either from *knowledge* or *probability*, let us cast our eye on each of these degrees of evidence, and see whether they afford any just conclusion of this nature.

Our foregoing method of reasoning will easily convince us, that there can be no *demonstrative* arguments to prove, *that those instances, of which we have had no experience,* resemble those, of which we have had experience. *We can at* least conceive a change in the course of nature; which sufficiently proves, that such a change is not absolutely impossible. To form a clear idea of any thing, is an undeniable argument for its possibility, and is alone a refutation of any pretended demonstration against it.

Probability, as it discovers not the relations of ideas, consider'd as such, but only those of objects, must in some respects be founded on the impressions of our memory and senses, and in some respects on our ideas. Were there no mixture of any impression in our probable reasonings, the conclusion wou'd be entirely chimerical: And were there no mixture of ideas, the action of the mind, in observing the relation, wou'd, properly speaking, be sensation, not reasoning. 'Tis therefore necessary, that in all probable reasonings there be something present to the mind, either seen or remember'd; and that from this we infer something connected with it, which is not seen nor remember'd.

The only connexion or relation of objects, which can lead us beyond the immediate impressions of our memory and senses, is that of cause and effect; and that because 'tis the only one, on which we can found a just inference from one object to another. The idea of cause and effect is deriv'd from *experience*, which informs us, that such particular objects, in all past instances, have been constantly conjoin'd with each other: And as an object similar to one of these is suppos'd to be immediately present in its impression, we thence presume on the existence of one similar to its usual attendant. According to this account of things, which is, I think, in every point unquestionable, probability is founded on the presumption of a resemblance betwixt those objects, of which we have had experience, and those, of which we have had none; and therefore 'tis impossible, this presumption can arise from probability. The same principle cannot be both the cause and effect of another; and this is, perhaps, the only proposition concerning that relation, which is either intuitively or demonstratively certain.

Shou'd any one think to elude this argument; and without determining whether our reasoning on this subject be deriv'd from demonstration or probability, pretend that all conclusions from causes and effects are built on solid reasoning: I can only desire, that this reasoning may be produc'd, in order to be expos'd to our examination. It may, perhaps, be said, that after experience of the constant conjunction of certain objects, we reason in the following manner. Such an object is always found to produce another. 'Tis impossible it cou'd have this effect, if it was not endow'd with a power of production. The power necessarily implies the effect; and therefore there is a just foundation for drawing a conclusion from the existence of one object to that of its usual attendant. The past production implies a power: The power implies a new production: And the new production is what we infer from the power and the past production.

'Twere easy for me to shew the weakness of this reasoning, were I willing to make use of those observations I have already made, that the idea of *production* is the same with that of *causation*, and that no existence certainly and demonstratively implies a power in any other object; or were it proper to anticipate what I shall have occasion to remark afterwards concerning the idea we form of *power* and *efficacy*. But as such a method of proceeding may seem either to weaken my system, by resting one part of it on another, or to breed a confusion in my reasoning, I shall endeavour to maintain my present assertion without any such assistance.

It shall therefore be allow'd for a moment, that the production of one object by another in any one instance implies a power; and that this power is connected with its effect. But it having been already prov'd, that the power lies not in the sensible qualities of the cause; and there being nothing but the sensible qualities present to us; I ask, why in other instances you presume that the same power still exists, merely upon the appearance of these qualities? Your appeal to past experience decides nothing in the present case; and at the utmost can only prove, that that very object, which produc'd any other, was at that very instant endow'd with such a power; but can never prove, that the same power must continue in the same object or collection of sensible qualities; much less, that a like power is always conjoin'd with like sensible qualities. Shou'd it be said, that we have experience, that the same power

continues united with the same object, and that like objects are endow'd with like powers, I wou'd renew my question, *why from these experience we form any conclusion beyond those past instances, of which we have had experience.* If you answer this question in the same manner as the preceding, your answer gives still occasion to a new question of the same kind, even *in infinitum*; which clearly proves, that the foregoing reasoning had no just foundation.

Thus not only our reason fails us in the discovery of the *ultimate connexion* of causes and effects, but even after experience has inform'd us of their *constant conjunction*, 'tis impossible for us to satisfy ourselves by our reason, why we shou'd extend that experience beyond those particular instances, which have fallen under our observation. We suppose, but are never able to prove, that there must be a resemblance betwixt those objects, of which we have had experience, and those which lie beyond the reach of our discovery.

We have already taken notice of certain relations, which make us pass from one object to another, even tho' there be no reason to determine us to that transition; and this we may establish for a general rule, that wherever the mind constantly and uniformly makes a transition without any reason, it is influenc'd by these relations. Now this is exactly the present case. Reason can never shew us the connexion of one object with another, tho' aided by experience, and the observation of their constant conjunction in all past instances. When the mind, therefore, passes from the idea or impression of one object to the idea or belief of another, it is not determin'd by reason, but by certain principles, which associate together the ideas of these objects, and unite them in the imagination. Had ideas no more union in the fancy than objects seem to have to the understanding, we cou'd never draw any inference from causes to effects, nor repose belief in any matter of fact. The inference, therefore, depends solely on the union of ideas.

The principles of union among ideas I have reduc'd to three general ones, and have asserted, that the idea or impression of any object naturally introduces the idea of any other object, that is resembling, contiguous to, or connected with it. These principles I allow to be neither the *infallible* nor the *sole* causes of an union among ideas. They are not the infallible causes. For one may fix his attention during some time on any one object without looking farther. They are not the sole causes. For the thought has evidently a very irregular motion in running along its objects, and may leap from the heavens to the earth, from one end of the creation to the other, without any certain method or order. But tho' I allow this weakness in these three relations, and this irregularity in the imagination; yet I assert that the only *general* principles, which associate ideas, are resemblance, contiguity and causation.

There is indeed a principle of union among ideas, which at first sight may be esteem'd different from any of these, but will be found at the bottom to depend on the same origin. When ev'ry individual of any species of objects is found by experience to be constantly united with an individual of another species, the appearance of any new individual of either species naturally conveys the thought to its usual attendant. Thus because such a particular idea is commonly annex'd to such a particular word, nothing is requir'd but the hearing of that word to produce the correspondent idea; and 'twill scarce be possible for the mind, by its utmost efforts, to prevent that transition. In this case it is not absolutely necessary, that upon hearing such a particular sound, we shou'd reflect on any past experience, and consider what idea has been usually connected with the sound. The imagination of itself supplies the place of this reflection, and is so accustom'd to pass from the word to the idea, that it interposes not a moment's delay betwixt the hearing of the one, and the conception of the other.

But tho' I acknowledge this to be a true principle of association among ideas, I assert it to be the very same with that betwixt the ideas of cause and effect, and to be an essential part in all our reasonings from that relation. We have no other notion of cause and effect, but that of certain objects, which have been *always conjoin'd* together, and which in all past instances have been found inseparable. We cannot penetrate into the reason of the conjunction. We only observe the thing itself, and always find that from the constant conjunction the objects acquire an union in the imagination. When the impression of one becomes present to us, we immediately form an idea of its usual attendant; and consequently we may establish this as one part of the definition of an opinion or belief, that 'tis *an idea related to or associated with a present impression.*

Thus tho' causation be a *philosophical* relation, as implying contiguity, succession, and constant conjunction, yet 'tis only so far as it is a *natural* relation, and produces an union among our ideas, that we are able to reason upon it, or draw any inference from it.

# Section VII. Of the nature of the idea, or belief

The idea of an object is an essential part pf the belief of it, but not the whole. We conceive many things, which we do not believe. In order then to discover more fully the nature of belief, or the qualities of those ideas we assent to, let us weigh the following considerations.

'Tis evident, that all reasonings from causes or effects terminate in conclusions, concerning matter of fact; that is, concerning the existence of objects or of their qualities. 'Tis also evident, that the idea of existence is nothing different from the idea of any object, and that when after the simple conception of any thing we wou'd conceive it as existent, we in reality make no addition to or alteration on our first idea. Thus when we affirm, that God is existent, we simply form the idea of such a being, as he is represented to us; nor is the existence, which we attribute to him, conceiv'd by a particular idea, which we join to the idea of his other qualities, and can again separate and distinguish from them. But I go farther; and not content with asserting, that the conception of the existence of any object is no addition to the simple conception of it, I likewise maintain, that the belief of the existence joins no new ideas to those, which compose the idea of the object. When I think of God, when I think of him as existent, and when I believe him to be existent, my idea of him neither encreases nor diminishes. But as 'tis certain there is a great difference betwixt the simple conception of the existence of an object, and the belief of it, and as this difference lies not in the parts or composition of the idea, which we conceive; it follows, that it must lie in the manner, in which we conceive it.

Suppose a person present with me, who advances propositions, to which I do not assent, *that* Cæsar *dy'd in his bed, that silver is more fusible than lead, or mercury heavier than gold;* 'tis evident, that notwithstanding my incredulity, I clearly understand his meaning, and form all the same ideas, which he forms. My imagination is endow'd with the same powers as his; nor is it possible for him to conceive any idea, which I cannot conceive; or conjoin any, which I cannot conjoin. I therefore ask, Wherein consists the difference betwixt believing and disbelieving any proposition? The answer is easy with regard to propositions, that are prov'd by intuition or demonstration. In that case, the person, who assents, not only conceives the ideas according to the proposition, but is necessarily determin'd to conceive them in that particular manner, either immediately or by the interposition of other ideas. Whatever is absurd is unintelligible; nor is it possible for the imagination to conceive any thing contrary to a demonstration. But as in reasonings from causation, and concerning matters of fact, this absolute necessity cannot take place, and the imagination is free to conceive both sides of the question,

I still ask, *Wherein consists the difference betwixt incredulity and belief?* since in both cases the conception of the idea is equally possible and requisite.

'Twill not be a satisfactory answer to say, that a person, who does not assent to a proposition you advance; after having conceiv'd the object in the same manner with you; immediately conceives it in a different manner, and has different ideas of it. This answer is unsatisfactory; not because it contains any falsehood, but because it discovers not all the truth. 'Tis confest, that in all cases, wherein we dissent from any person, we conceive both sides of the question; but as we can believe only one, it evidently follows, that the belief must make some difference betwixt that conception to which we assent, and that from which we dissent. We may mingle, and unite, and separate, and confound, and vary our ideas in a hundred different ways; but 'till there appears some principle, which fixes one of these different situations, we have in reality no opinion: And this principle, as it plainly makes no addition to our precedent ideas, can only change the *manner* of our conceiving them.

All the perceptions of the mind are of two kinds, *viz.* impressions and ideas, which differ from each other only in their different degrees of force and vivacity. Our ideas are copy'd from our impressions, and represent them in all their parts. When you wou'd any way vary the idea of a particular object, you can only encrease or diminish its force and vivacity. If you make any other change on it, it represents a different object or impression. The case is the same as in colours. A particular shade of any colour may acquire a new degree of liveliness or brightness without any other variation. But when you produce any other variation, 'tis no longer the same shade or colour. So that as belief does nothing but vary the manner, in which we conceive any object, it can only bestow on our ideas an additional force and vivacity. An opinion, therefore, or belief may be most accurately defin'd, A lively idea related to or associated with a present impression[1] .

Here are the heads of those arguments, which lead us to this conclusion. When we infer the existence of an object from that of others, some object must always be present either to the memory or senses, in order to be the foundation of our reasoning; since the mind cannot run up with its inferences *in infinitum.* Reason can never satisfy us that the existence of any one object does ever imply that of another; so that when we pass from the impression of one to the idea or belief of another, we are not determin'd by reason, but by custom or a principle of association. But belief is somewhat more than a simple idea. 'Tis a particular manner of forming an idea: And as the same idea can only be vary'd by a variation of its degrees of force and vivacity; it follows upon the whole, that belief is a lively idea produc'd by a relation to a present impression, according to the foregoing definition.

This definition will also be found to be entirely conformable to every one's feeling and experience. Nothing is more evident, than that those ideas, to which we assent, are more strong, firm and vivid, than the loose reveries of a castle builder. If one person sits down to read a book as a romance, and another as a true history, they plainly receive

the same ideas, and in the same order; nor does the incredulity of the one, and the belief of the other hinder them from putting the very same sense upon their author. His words produce the same ideas in both; tho' his testimony has not the same influence on them. The latter has a more lively conception of all the incidents. He enters deeper into the concerns of the persons: represents to himself their actions, and characters, and friendships, and enmities: He even goes so far as to form a notion of their features, and air, and person. While the former, who gives no credit to the testimony of the author, has a more faint and languid conception of all these particulars; and except on account of the style and ingenuity of the composition, can receive little entertainment from it.

1. We may here take occasion to observe a very remarkable error, which being frequently inculcated in the schools, has become a kind of establish'd maxim, and is universally received by all logicians. This error consists in the vulgar division of the acts of the understanding, into *conception*, *judgment* and *reasoning*, and in the definitions we give of them. Conception is defin'd to be the simple survey of one or more ideas: Judgment to be the separating or uniting of different ideas: Reasoning to be the separating or uniting of different ideas by the interposition of others, which show the relation they bear to each other. But these distinctions and definitions are faulty in very considerable articles. For *first*, 'tis far from being true, that in every judgment, which we form, we unite two different ideas; since in that proposition, *God is*, or indeed any other, which regards existence, the idea of existence is no distinct idea, which we unite with that of the object, and which is capable of forming a compound idea by the union. *Secondly*, As we can thus form a proposition, which contains only one idea, so we may exert our reason without employing more than two ideas, and without having recourse to a third to serve as a medium betwixt them. We infer a cause immediately from its effect; and this inference is not only a true species of reasoning, but the strongest of all others, and more convincing than when we interpose another idea to connect the two extremes. What we may in general affirm concerning these three acts of the understanding is, that taking them in a proper light, they all resolve themselves into the first, and are nothing but particular ways of conceiving our objects. Whether we consider a single object, or several; whether we dwell on these objects, or run from them to others; and in whatever form or order we survey them, the act of the mind exceeds not a simple conception; and the only remarkable difference, which occurs on this occasion, is, when we join belief to the conception, and are perswaded of the truth of what we conceive. This act of the mind has never yet been explain'd by any philosopher; and therefore I am at liberty to propose my hypothesis concerning it; which is, that 'tis only a strong and steady conception of any idea, and such as approaches in some measure to an immediate impression.

# Section VIII. Of the causes of belief

Having thus explain'd the nature of belief; and shewn that it consists in a lively idea related to a present impression; let us now proceed to examine from what principles it is deriv'd, and what bestows the vivacity on the idea.

I wou'd willingly establish it as a general maxim in the science of human nature, *that when any impression becomes present to us, it not only transports the mind to such ideas as are related to it, but likewise communicates to them a share of its force and vivacity.* All the operations of the mind depend in a great measure on its disposition, when it performs them; and according as the spirits are more or less elevated, and the attention more or less fix'd, the action will always have more or less vigour and vivacity. When therefore any object is presented, which elevates and enlivens the thought, every action, to which the mind applies itself, will be more strong and vivid, as long as that disposition continues. Now 'tis evident the continuance of the disposition depends entirelyon the objects, about which the mind is employ'd; and that any new object naturally gives a new direction to the spirits, and changes the disposition; as on the contrary, when the mind fixes constantly on the same object, or passes easily and insensibly along related objects, the disposition has a much longer duration. Hence it happens, that when the mind is once inliven'd by a present impression, it proceeds to form a more lively idea of the related objects, by a natural transition of the disposition from the one to the other. The change of the objects is so easy, that the mind is scarce sensible of it, but applies itself to the conception of the related idea with all the force and vivacity it acquir'd from the present impression.

If in considering the nature of relation, and that facility of transition, which is essential to it, we can satisfy ourselves concerning the reality of this phænomenon, 'tis well: But I must confess I place my chief confidence in experience to prove so material a principle. We may, therefore, observe, as the first experiment to our present purpose, that upon the appearance of the picture of an absent friend, our idea

of him is evidently inliven'd by the *resemblance*, and that every passion, which that idea occasions, whether of joy or sorrow, acquires new force and vigour. In producing this effect there concur both a relation and a present impression. Where the picture bears him no resemblance, or at least was not intended for him, it never so much as conveys our thought to him: And where it is absent, as well as the person; tho' the mind may pass from the thought of the one to that of the other; it feels its idea to be rather weaken'd than inliven'd by that transition. We take a pleasure in viewing the picture of a friend, when 'tis set before us; but when 'tis remov'd, rather choose to consider him directly, than by reflexion in an image, which is equally distant and obscure.

The ceremonies of the *Roman Catholic* religion may be consider'd as experiments of the same nature. The devotees of that strange superstition usually plead in excuse of the mummeries, with which they are upbraided, that they feel the good effect of those external motions, and postures, and actions, in inlivening their devotion, and quickening their fervour, which otherwise wou'd decay away, if directed entirely to distant and immaterial objects. We shadow out the objects of our faith, say they, in sensible types and images, and render them more present to us by the immediate presence of these types, than 'tis possible for us to do, merely by an intellectual view and contemplation. Sensible objects have always a greater influence on the fancy than any other; and this influence they readily convey to those ideas, to which they are related, and which they resemble. I shall only infer from these practices, and this reasoning, that the effect of resemblance in inlivening the idea is very common; and as in every case a resemblance and a present impression must concur, we are abundantly supply'd with experiments to prove the reality of the foregoing principle.

We may add force to these experiments by others of a different kind, in considering the effects of *contiguity*, as well as of *resemblance*. 'Tis certain, that distance diminishes the force of every idea, and that upon our approach to any object; tho' it does not discover itself to our senses; it operates upon the mind with an influence that imitates an immediate impression. The thinking on any object readily transports the mind to what is contiguous; but 'tis only the actual presence of an object that transports it with a superior vivacity. When I am a few miles from home, whatever relates to it touches me more nearly than when I am two hundred leagues distant; tho' even at that distance the reflecting on any thing in the neighbourhood of my friends and family naturally produces an idea of them. But as in this latter case, both the objects of the mind are ideas; notwithstanding there is an easy transition betwixt them; that transition alone is not able to give a superior vivacity to any of the ideas, for want of some immediate impression.

No one can doubt but causation has the same influence as the other two relations of resemblance and contiguity. Superstitious people are fond of the relicts of saints and holy men for the same reason that they seek after types and images, in order to inliven their devotion, and give them a more intimate and strong conception of those exemplary lives, which they desire to imitate. Now 'tis evident, one of the best relicks a devotee cou'd procure, wou'd be the handy work of a saint; and if his cloaths and furniture are ever to be consider'd in this light, 'tis because they were once at his disposal, and were mov'd and affected by him; in which respect they are to be consider'd as imperfect effects, and as connected with him by a shorter chain of consequences than any of those, from which we learn the reality of his existence. This phænomenon clearly proves, that a present impression with a relation of causation may enliven any idea, and consequently produce belief or assent, according to the precedent definition of it.

But why need we seek for other arguments to prove, that a present impression with a relation or transition of the fancy may inliven any idea, when this very instance of our reasonings from cause and

effect will alone suffice to that purpose? 'Tis certain we must have an idea of every matter of fact, which we believe. 'Tis certain, that this idea arises only from a relation to a present impression. 'Tis certain, that the belief super-adds nothing to the idea, but only changes our manner of conceiving it, and renders it more strong and lively. The present conclusion concerning the influence of relation is the immediate consequence of all these steps; and every step appears to me sure and infallible. There enters nothing into this operation of the mind but a present impression, a lively idea, and a relation or association in the fancy betwixt the impression and idea; so that there can be no suspicion of mistake.

In order to put this whole affair in a fuller light, let us consider it as a question in natural philosophy, which we must determine by experience and observation. I suppose there is an object presented, from which I draw a certain conclusion, and form to myself ideas, which I am said to believe or assent to. Here 'tis evident, that however that object, which is present to my senses, and that other, whose existence I infer by reasoning, may be thought to influence each other by their particular powers or qualities; yet as the phænomenon of belief, which we at present examine, is merely internal, these powers and qualities, being entirely unknown, can have no hand in producing it. 'Tis the present impression, which is to be consider'd as the true and real cause of the idea, and of the belief which attends it. We must therefore endeavour to discover by experiments the particular qualities, by which 'tis enabled to produce so extraordinary an effect.

First then I observe, that the present impression has not this effect by its own proper power and efficacy, and when consider'd alone, as a single perception, limited to the present moment. I find, that an impression, from which, on its first appearance, I can draw no conclusion, may afterwards become the foundation of belief, when I have had experience of its usual consequences. We must in every case have observ'd the same impression in past instances, and have found it to be constantly conjoin'd with some other impression. This is confirm'd by such a multitude of experiments, that it admits not of the smallest doubt.

From a second observation I conclude, that the belief which attends the present impression, and is produc'd by a number of past impressions and conjunctions; that this belief, I say, arises immediately, without any new operation of the reason or imagination. Of this I can be certain, because I never am conscious of any such operation, and find nothing in the subject, on which it can be founded. Now as we call every thing custom, which proceeds from a past repetition, without any new reasoning or conclusion, we may establish it as a certain truth, that all the belief, which follows upon any present impression, is deriv'd solely from that origin. When we are accustom'd to see two impressions conjoin'd together, the appearance or idea of the one immediately carries us to the idea of the other.

Being fully satisfy'd on this head, I make a third set of experiments, in order to know, whether any thing be requisite, beside the customary transition, towards the production of this phænomenon of belief. I therefore change the first impression into an idea; and observe, that tho' the customary transition to the correlative idea still remains, yet there is in reality no belief nor persuasion. A present impression, then, is absolutely requisite to this whole operation; and when after this I compare an impression with an idea, and find that their only difference consists in their different degrees of force and vivacity, I conclude upon the whole, that belief is a more vivid and intense conception of an idea, proceeding from its relation to a present impression.

Thus all probable reasoning is nothing but a species of sensation. 'Tis not solely in poetry and music, we must follow our taste and sentiment, but likewise in philosophy. When I am convinc'd of any principle, 'tis only an idea, which strikes more strongly upon me. When I give the preference to one set

of arguments above another, I do nothing but decide from my feeling concerning the superiority of their influence. Objects have no discoverable connexion together; nor is it from any other principle but custom operating upon the imagination, that we can draw any inference from the appearance of one to the existence of another.

'Twill here be worth our observation, that the past experience, on which all our judgments concerning cause and effect depend, may operate on our mind in such an insensible manner as never to be taken notice of, and may even in some measure be unknown to us. A person, who stops short in his journey upon meeting a river in his way, foresees the consequences of his proceeding forward; and his knowledge of these consequences is convey'd to him by past experience, which informs him of such certain conjunctions of causes and effects. But can we think, that on this occasion he reflects on any past experience, and calls to remembrance instances, that he has seen or heard of, in order to discover the effects of water on animal bodies? No surely; this is not the method in which he proceeds in his reasoning. The idea of sinking is so closely connected with that of water, and the idea of suffocating with that of sinking, that the mind makes the transition without the assistance of the memory. The custom operates before we have time for reflection. The objects seem so inseparable, that we interpose not a moment's delay in passing from the one to the other. But as this transition proceeds from experience, and not from any primary connexion betwixt the ideas, we must necessarily acknowledge, that experience may produce a belief and a judgment of causes and effects by a secret operation, and without being once thought of. This removes all pretext, if there yet remains any, for asserting that the mind is convinc'd by reasoning of that principle, *that instances of which we have no experience, must necessarily resemble those, of which we have.* For we here find, that the understanding or imagination can draw inferences from past experience, without reflecting on it; much more without forming any principle concerning it, or reasoning upon that principle.

In general we may observe, that in all the most establish'd and uniform conjunctions of causes and effects, such as those of gravity, impulse, solidity, &c., the mind never carries its view expressly to consider any past experience: Tho' in other associations of objects, which are more rare and unusual, it may assist the custom and transition of ideas by this reflection. Nay we find in some cases, that the reflection produces the belief without the custom; or more properly speaking, that the reflection produces the custom in an *oblique* and *artificial* manner. I explain myself. 'Tis certain, that not only in philosophy, but even in common life, we may attain the knowledge of a particular cause merely by one experiment, provided it be made with judgment, and after a careful removal of all foreign and superfluous circumstances. Now as after one experiment of this kind, the mind, upon the appearance either of the cause or the effect, can draw an inference concerning the existence of its correlative; and as a habit can never be acquir'd merely by one instance; it may be thought, that belief cannot in this case be esteem'd the effect of custom. But this difficulty will vanish, if we consider, that tho' we are here suppos'd to have had only one experiment of a particular effect, yet we have many millions to convince us of this principle; *that like objects, plac'd in like circumstances, will always produce like effects;* and as this principle has establish'd itself by a sufficient custom, it bestows an evidence and firmness on any opinion, to which it can be apply'd. The connexion of the ideas is not habitual after one experiment; but this connexion is comprehended under another principle, that is habitual; which brings us back to our hypothesis. In all cases we transfer our experience to instances, of which we have no experience, either *expressly* or *tacitly*, either *directly* or *indirectly*.

I must not conclude this subject without observing, that 'tis very difficult to talk of the operations of the mind with perfect propriety and exactness; because common language has seldom made any very nice distinctions among them, but has generally call'd by the same term all such as nearly resemble

each other. And as this is a source almost inevitable of obscurity and confusion in the author; so it may frequently give rise to doubts and objections in the reader, which otherwise he wou'd never have dream'd of. Thus my general position, that an opinion or belief is *nothing but a strong and lively idea deriv'd from a present impression related to it*, may be liable to the following objection, by reason of a little ambiguity in those words *strong and lively*. It may be said, that not only an impression may give rise to reasoning, but that an idea may also have the same influence; especially upon my principle, *that all our ideas are deriv'd from correspondent impressions*. For suppose I form at present an idea, of which I have forgot the correspondent impression, I am able to conclude from this idea, that such an impression did once exist; and as this conclusion is attended with belief, it may be ask'd, from whence are the qualities of force and vivacity deriv'd, which constitute this belief? And to this I answer very readily, *from the present idea*. For as this idea is not here consider'd as the representation of any absent object, but as a real perception in the mind, of which we are intimately conscious, it must be able to bestow on whatever is related to it the same quality, call it *firmness, or solidity, or force, or vivacity*, with which the mind reflects upon it, and is assur'd of its present existence. The idea here supplies the place of an impression, and is entirely the same, so far as regards our present purpose.

Upon the same principles we need not be surpriz'd to hear of the remembrance of an idea; that is, of the idea of an idea, and of its force and vivacity superior to the loose conceptions of the imagination. In thinking of our past thoughts we not only delineate out the objects, of which we were thinking, but also conceive the action of the mind in the meditation, that certain *je-ne-scai-quoi*, of which 'tis impossible to give any definition or description, but which every one sufficiently understands. When the memory offers an idea of this, and represents it as past, 'tis easily conceiv'd how that idea may have more vigour and firmness, than when we think of a past thought, of which we have no remembrance.

After this any one will understand how we may form the idea of an impression and of an idea, and how we may believe the existence of an impression and of an idea.

# Section X. Of the influence of belief

But tho' education be disclaim'd by philosophy, as a fallacious ground of assent to any opinion, it prevails nevertheless in the world, and is the cause why all systems are apt to be rejected at first as new and unusual. This perhaps will be the fate of what I have here advanc'd concerning *belief*, and tho' the proofs I have produc'd appear to me perfectly conclusive, I expect not to make many proselytes to my opinion. Men will scarce ever be persuaded, that effects of such consequence can flow from principles, which are seemingly so inconsiderable, and that the far greatest part of our reasonings, with all our actions and passions, can be deriv'd from nothing but custom and habit. To obviate this objection, I shall here anticipate a little what wou'd more properly fall under our consideration afterwards, when we come to treat of the passions and the sense of beauty.

There is implanted in the human mind a perception of pain and pleasure, as the chief spring and moving principle of all its actions. But pain and pleasure have two ways of making their appearance in the mind; of which the one has effects very different from the other. They may either appear in impression to the actual feeling, or only in idea, as at present when I mention them. 'Tis evident the induence of these upon our actions is far from being equal. Impressions always actuate the soul, and that in the highest degree; but 'tis not every idea which has the same efect. Nature has proceeded with caution in this case, and seems to have carefully avoided the inconveniences of two extremes. Did impressions alone influence the will, we should every moment of our lives be subject to the greatest

calamities; because, tho' we foresaw their approach, we should not be provided by nature with any principle of action, which might impel us to avoid them. On the other hand, did every idea influence our actions, our condition would not be much mended. For such is the unsteadiness and activity of thought, that the images of every thing, especially of goods and evils, are always wandering in the mind; and were it mov'd by every idle conception of this kind, it would never enjoy a moment's peace and tranquillity.

Nature has, therefore, chosen a medium, and has neither bestow'd on every idea of good and evil the power of actuating the will, nor yet has entirely excluded them from this influence. Tho' an idle fiction has no efficacy, yet we find by experience, that the ideas of those objects, which we believe either are or will be existent, produce in a lesser degree the same effect with those impressions, which are immediately present to the senses and perception. The effect, then, of belief is to raise up a simple idea to an equality with our impressions, and bestow on it a like influence on the passions. This effect it can only have by making an idea approach an impression in force and vivacity. For as the different degrees of force make all the original difference betwixt an impression and an idea, they must of consequence be the source of all the differences in the effects of these perceptions, and their removal, in whole or in part, the cause of every new resemblance they acquire. Wherever we can make an idea approach the impressions in force and vivacity, it will likewise imitate them in its influence on the mind; and *vice versa*, where it imitates them in that influence, as in the present case, this must proceed from its approaching them in force and vivacity. Belief, therefore, since it causes an idea to imitate the effects of the impressions, must make it resemble them in these qualities, and is nothing but *a more vivid and intense conception of any idea.* This, then, may both serve as an additional argument for the present system, and may give us a notion after what manner our reasonings from causation are able to operate on the will and passions.

As belief is almost absolutely requisite to the exciting our passions, so the passions in their turn are very favourable to belief; and not only such facts as convey agreeable emotions, but very often such as give pain, do upon that account become more readily the objects of faith and opinion. A coward, whose fears are easily awaken'd, readily assents to every account of danger he meets with; as a person of a sorrowful and melancholy disposition is very credulous of every thing, that nourishes his prevailing passion. When any affecting object is presented, it gives the alarm, and excites immediately a degree of its proper passion; especially in persons who are naturally inclined to that passion. This emotion passes by an easy transition to the imagination; and diffusing itself over our idea of the affecting object, makes us form that idea with greater force and vivacity, and consequently assent to it, according to the precedent system. Admiration and surprize have the same effect as the other passions; and accordingly we may observe, that among the vulgar, quacks and projectors meet with a more easy faith upon account of their magnificent pretensions, than if they kept themselves within the bounds of moderation. The first astonishment, which naturally attends their miraculous relations, spreads itself over the whole soul, and so vivifies and enlivens the idea, that it resembles the inferences we draw from experience. This is a mystery, with which we may be already a little acquainted, and which we shall have farther occasion to be let into in the progress of this treatise.

After this account of the influence of belief on the passions, we shall find less difficulty in explaining its effects on the imagination, however extraordinary they may appear. 'Tis certain we cannot take pleasure in any discourse, where our judgment gives no assent to those images which are presented to our fancy. The conversation of those, who have acquir'd a habit of lying, tho' in affairs of no moment, never gives any satisfaction; and that because those ideas they present to us, not being attended with belief, make no impression upon the mind. Poets themselves, tho' liars by profession, always

endeavour to give an air of truth to their fictions; and where that is totally neglected, their performances, however ingenious, will never be able to afford much pleasure. In short, we may observe, that even when ideas have no manner of influence on the will and passions, truth and reality are still requisite, in order to make them entertaining to the imagination.

But if we compare together all the phænomena that occur on this head, we shall find, that truth, however necessary it may seem in all works of genius, has no other effect than to procure an easy reception for the ideas, and to make the mind acquiesce in them with satisfaction, or at least without reluctance. But as this is an effect, which may easily be supposed to flow from that solidity and force, which, according to my system, attend those ideas that are establish'd by reasonings from causation; it follows, that all the influence of belief upon the fancy may be explained from that system. Accordingly we may observe, that wherever that influence arises from any other principles beside truth or reality, they supply its place, and give an equal entertainment to the imagination. Poets have form'd what they call a poetical system of things, which tho' it be believ'd neither by themselves nor readers, is commonly esteem'd a sufficient foundation for any fiction. We have been so much accustom'd to the names of Mars, Jupiter, Venus, that in the same manner as education infixes any opinion, the constant repetition of these ideas makes them enter into the mind ith facility, and prevail upon the fancy, without influencing the judgment. In like manner tragedians always borrow their fable, or at least the names of their principal actors, from some known passage in history; and that not in order to deceive the spectators; for they will frankly confess, that truth is not in any circumstance inviolably observed; but in order to procure a more easy reception into the imagination for those extraordinary events, which they represent. But this is a precaution, which is not required of comic poets, whose personages and incidents, being of a more familiar kind, enter easily into the conception, and are received without any such formality, even tho' at first sight they be known to be fictitious, and the pure offspring of the fancy.

This mixture of truth and falshood in the fables of tragic poets not only serves our present purpose, by shewing, that the imagination can be satisfy'd without any absolute belief or assurance; but may in another view be regarded as a very strong confirmation of this system. 'Tis evident, that poets make use of this artifice of borrowing the names of their persons, and the chief events of their poems, from history, in order to procure a more easy reception for the whole, and cause it to make a deeper impression on the fancy and affections. The several incidents of the piece acquire a kind of relation by being united into one poem or representation; and if any of these incidents be an object of belief, it bestows a force and vivacity on the others, which are related to it. The vividness of the first conception diffuses itself along the relations, and is convey'd, as by so many pipes or canals, to every idea that has any communication with the primary one. This, indeed, can never amount to a perfect assurance; and that because the union among the ideas is, in a manner, accidental: But still it approaches so near, in its influence, as may convince us, that they are deriv'd from the same origin. Belief must please the imagination by means of the force and vivacity which attends it; since every idea, which has force and vivacity, is found to be agreeable to that faculty.

To confirm this we may observe, that the assistance is mutual betwixt the judgment and fancy, as well as betwixt the judgment and passion; and that belief not only gives vigour to the imagination, but that a vigorous and strong imagination is of all talents the most proper to procure belief and authority. 'Tis difficult for us to withold our assent from what is painted out to us in all the colours of eloquence; and the vivacity produc'd by the fancy is in many cases greater than that which arises from custom and experience. We are hurried away by the lively imagination of our author or companion; and even he himself is often a victim to his own fire and genius.

Nor will it be amiss to remark, that as a lively imagination very often degenerates into madness or folly, and bears it a great resemblance in its operations; so they influence the judgment after the same manner, and produce belief from the very same principles. When the imagination, from any extraordinary ferment of the blood and spirits, acquires such a vivacity as disorders all its powers and faculties, there is no means of distinguishing betwixt truth and falshood; but every loose fiction or idea, having the same influence as the impressions of the memory, or the conclusions of the judgment, is receiv'd on the same footing, and operates with equal force on the passions. A present impression and a customary transition are now no longer necessary to inliven our ideas. Every chimera of the brain is as vivid and intense as any of those inferences, which we formerly dignify'd with the name of conclusions concerning matters of fact, and sometimes as the present impressions of the senses.

We may observe the same effect of poetry in a lesser degree; only with this difference, that the least reflection dissipates the illusions of poetry, and places the objects in their proper light. 'Tis however certain, that in the warmth of a poetical enthusiasm, a poet has a counterfeit belief, and even a kind of vision of his objects: And if there be any shadow of argument to support this belief; nothing contributes more to his full conviction than a blaze of poetical figures and images, which have their effect upon the poet himself, as well as upon his readers.

# Section XI. Of the probability of chances

But in order to bestow on this system its full force and evidence, we must carry our eye from it a moment to consider its consequences, and explain from the same principles some other species of reasoning, which are deriv'd from the same origin.

Those philosophers, who have divided human reason into *knowledge and probability*, and have defin'd the first to be *that evidence, which arises from the comparison of ideas*, are oblig'd to comprehend all our arguments from causes or effects under the general term of probability. But tho' every one be free to use his terms in what sense he pleases; and accordingly in the precedent part of this discourse, I have follow'd this method of expression; 'tis however certain, that in common discourse we readily affirm, that many arguments from causation exceed probability, and may be receiv'd as a superior kind of evidence. One wou'd appear ridiculous, who wou'd say, that 'tis only probable the sun will rise to-morrow, or that all men must dye; tho' 'tis plain we have no further assurance of these facts, than what experience affords us. For this reason, 'twould perhaps be more convenient, in order at once to preserve the common signification of words, and mark the several degrees of evidence, to distinguish human reason into three kinds, viz. *that from knowledge, from proofs, and from probabilities*. By knowledge, I mean the assurance arising from the comparison of ideas. By proofs, those arguments, which are deriv'd from the relation of cause and effect, and which are entirely free from doubt and uncertainty. By probability, that evidence, which is still attended with uncertainty. 'Tis this last species of reasoning, I proceed to examine.

Probability or reasoning from conjecture may be divided into two kinds, *viz.* that which is founded on *chance*, and that which arises from causes. We shall consider each of these in order.

The idea of cause and effect is deriv'd from experience, which presenting us with certain objects constantly conjoin'd with each other, produces such a habit of surveying them in that relation, that we cannot without a sensible violence survey them in any other. On the other hand, as chance is nothing real in itself; and, properly speaking, is merely the negation of a cause, its influence on the mind is

contrary to that of causation; and 'tis essential to it, to leave the imagination perfectly indifferent, either to consider the existence or non-existence of that object, which is regarded as contingent. A cause traces the way to our thought, and in a manner forces us to survey such certain objects, in such certain relations. Chance can only destroy this determination of the thought, and leave the mind in its native situation of indifference; in which, upon the absence of a cause, 'tis instantly re-instated.

Since therefore an entire indifference is essential to chance, no one chance can possibly be superior to another, otherwise than as it is compos'd of a superior number of equal chances. For if we affirm that one chance can, after any other manner, be superior to another, we must at the same time affirm, that there is something, which gives it the superiority, and determines the event rather to that side than the other: That is, in other words, we must allow of a cause, and destroy the supposition of chance; which we had before establish'd. A perfect and total indifference is essential to chance, and one total indifference can never in itself be either superior or inferior to another. This truth is not peculiar to my system, but is acknowledge'd by every one, that forms calculations concerning chances.

And here 'tis remarkable, that tho' chance and causation be directly contrary, yet 'tis impossible for us to conceive this combination of chances, which is requisite to render one hazard superior to another, without supposing a mixture of causes among the chances, and a conjunction of necessity in some particulars, with a total indifference in others. Where nothing limits the chances, every notion, that the most extravagant fancy can form, is upon a footing of equality; nor can there be any circumstance to give one the advantage above another. Thus unless we allow, that there are some causes to make the dice fall, and preserve their form in their fall, and lie upon some one of their sides, we can form no calculation concerning the laws of hazard. But supposing these causes to operate, and supposing likewise all the rest to be indifferent and to be determin'd by chance, 'tis easy to arrive at a notion of a superior combination of chances. A dye, that has four sides mark'd with a certain number of spots, and only two with another, affords us an obvious and easy instance of this superiority. The mind is here limited by the causes to such a precise number and quality of the events; and at the same time is undetermin'd in its choice of any particular event.

Proceeding then in that reasoning, wherein we have advanc'd three steps; *that* chance is merely the negation of a cause, and produces a total indifference in the mind; *that* one negation of a cause and one total indifference can never be superior or inferior to another; and *that* there must always be a mixture of causes among the chances, in order to be the foundation of any reasoning: We are next to consider what effect a superior combination of chances can have upon the mind, and after what manner it influences our judgment and opinion. Here we may repeat all the same arguments we employ'd in examining that belief, which arises from causes; and may prove after the same manner, that a superior number of chances produces our assent neither by *demonstration* nor *probability*. 'Tis indeed evident, that we can never by the comparison of mere ideas make any discovery, which can be of consequence in this affair, and that 'tis impossible to prove with certainty, that any event must fall on that side where there is a superior number of chances. To suppose in this case any certainty, were to overthrow what we have establish'd concerning the opposition of chances, and their perfect equality and indifference.

Shou'd it be said, that tho' in an opposition or chances 'tis impo sible to determine with *certainty*, on which side the event will fall, yet we can pronounce with certainty, that 'tis more likely and probable, 'twill be on that side where there is a superior number of chances, than where there is an inferior: Shou'd this be said, I wou'd ask, what is here meant by *likelihood and probability?* The likelihood and probability of chances is a superior number of equal chances; and consequently when we say 'tis likely the event will fall on the side, which is superior, rather than on the inferior, we do no more than affirm,

that where there is a superior number of chances there is actually a superior, and where there is an inferior there is an inferior; which are identical propositions, and of no consequence. The question is, by what means a superior number of equal chances operates upon the mind, and produces belief or assent; since it appears, that 'tis neither by arguments deriv'd from demonstration, nor from probability.

In order to clear up this difficulty, we shall suppose a person to take a dye, form'd after such a manner as that four of its sides are mark'd with one figure, or one number of spots, and two with another; and to put this dye into the box with an intention of throwing it: 'Tis plain, he must conclude the one figure to be more probable than the other, and give the preference to that which is inscrib'd on the greatest number of sides. He in a manner believes, that this will lie uppermost; tho' still with hesitation and doubt, in proportion to the number of chances, which are contrary: And according as these contrary chances diminish, and the superiority encreases on the other side, his belief acquires new degrees of stability and assurance. This belief arises from an operation of the mind upon the simple and limited object before us; and therefore its nature will be the more easily discover'd and explain'd. We have nothing but one single dye to contemplate, in order to comprehend one of the most curious operations of the understanding.

This dye form'd as above, contains three circumstances worthy of our attention. *First*, Certain causes, such as gravity, solidity, a. cubical figure, *&c.* which determine it to fall, to preserve its form in its fall, and to turn up one of its sides. *Secondly*, A certain number of sides, which are suppos'd indifferent. *Thirdly*, A certain figure, inscrib'd on each side. These three particulars form the whole nature of the dye, so far as relates to our present purpose; and consequently are the only circumstances regarded by the mind in its forming a judgment concerning the result of such a throw. Let us, therefore, consider gradually and carefully what must be the influence of these circumstances on the thought and imagination.

First, We have already observ'd, that the mind is determin'd by custom to pass from any cause to its effect, and that upon the appearance of the one, 'tis almost impossible for it not to form an idea of the other. Their constant conjunction in past instances has produc'd such a habit in the mind, that it always conjoins them in its thought, and infers the existence of the one from that of its usual attendant. When it considers the dye as no longer supported by the box, it cannot without violence regard it as suspended in the air; but naturally places it on the table, and views it as turning up one of its sides. This is the effect of the intermingled causes, which are requisite to our forming any calculation concerning chances.

Secondly, 'Tis suppos'd, that tho' the dye be necessarily determin'd to fall, and turn up one of its sides, yet there is nothing to fix the particular side, but that this is determin'd entirely by chance. The very nature and essence of chance is a negation of causes, and the leaving the mind in a perfect indifference among those events, which are suppos'd contingent. When therefore the thought is determin'd by the causes to consider the dye as falling and turning up one of its sides, the chances present all these sides as equal, and make us consider every one of them, one after another, as alike probable and possible. The imagination passes from the cause, *viz.* the throwing of the dye, to the effect, *viz.* the turning up one of the six sides; and feels a kind of impossibility both of stopping short in the way, and of forming any other idea. But as all these six sides are incompatible, and the dye cannot turn up above one at once, this principle directs us not to consider all of them at once as lying uppermost; which we look upon as impossible: Neither does it direct us with its entire force to any particular side; for in that case this side wou'd be consider'd as certain and inevitable; but it directs us to the whole six sides after such a manner as to divide its force equally among them. We conclude in general, that some one of them

must result from the throw: We run all of them over in our minds: The determination of the thought is common to all; but no more of its force falls to the share of any one, than what is suitable to its proportion with the rest. 'Tis after this manner the original impulse, and consequently the vivacity of thought, arising from the causes, is divided and split in pieces by the intermingled chances.

We have already seen the influence of the two first qualities of the dye, *viz.* the *causes*, and the *number* and *indifference* of the sides, and have learn'd how they give an impulse to the thought, and divide that impulse into as many parts as there are unites in the number of sides. We must now consider the effects of the third particular, *viz.* the *figures* inscrib'd on each side. 'Tis evident that where several sides have the same figure inscrib'd on them, they must concur in their influence on the mind, and must unite upon one image or idea of a figure all those divided impulses, that were dispers'd over the several sides, upon which that figure is inscrib'd. Were the question only what side will be turn'd up, these are all perfectly equal, and no one cou'd ever have any advantage above another. But as the question is concerning the figure, and as the same figure is presented by more than one side; 'tis evident, that the impulses belonging to all these sides must re-unite in that one figure, and become stronger and more forcible by the union. Four sides are suppos'd in the present case to have the same figure inscrib'd on them, and two to have another figure. The impulses of the former are, therefore, superior to those of the latter. But as the events are contrary, and 'tis impossible both these figures can be turn'd up; the impulses likewise become contrary, and the inferior destroys the superior, as far as its strength goes. The vivacity of the idea is always proportionable to the degrees of the impulse or tendency to the transition; and belief is the same with the vivacity of the idea, according to the precedent doctrine.

# Section XII. Of the probability of causes

What I have said concerning the probability of chances can serve to no other purpose, than to assist us in explaining the probability of causes; since 'tis commonly allow'd by philosophers, that what the vulgar call chance is nothing but a secret and conceal'd cause. That species of probability, therefore, is what we must chiefly examine.

The probabilities of causes are of several kinds; but are all deriv'd from the same origin, *viz.* the association of ideas to a present impression. *As the habit, which produces the association,* arises from the frequent conjunction of objects, it must arrive at its perfection by degrees, and must acquire new force from each instance, that falls under our observation. The first instance has little or no force: The second makes some addition to it: The third becomes still more sensible; and 'tis by these slow steps, that our judgment arrives at a full assurance. But before it attains this pitch of perfection, it passes thro' several inferior degrees, and in all of them is only to be esteem'd a presumption or probability. The gradation, therefore, from probabilities to proofs is in many cases insensible; and the difference betwixt these kinds of evidence is more easily perceiv'd in the remote degrees, than in the near and contiguous.

'Tis worthy of remark on this occasion, that tho' the species of probability here explain'd be the first in order, and naturally takes place before any entire proof can exist, yet no one, who is arriv'd at the age of maturity, can any longer be acquainted with it. 'Tis true, nothing is more common than for people of the most advanc'd knowledge to have attain'd only an imperfect experience of many particular events; which naturally produces only an imperfect habit and transition: But then we must consider, that the mind, having form'd another observation concerning the connexion of causes and effects, gives new force to its reasoning from that observation; and by means of it can build an argument on one single

experiment, when duly prepar'd and examin'd. What we have found once to follow from any object, we conclude will for ever follow from it; and if this maxim be not always built upon as certain, 'tis not for want of a sufficient number of experiments, but because we frequently meet with instances to the contrary; which leads us to the second species of probability, where there is a *contrariety* in our experience and observation.

'Twou'd be very happy for men in the conduct of their lives and actions, were the same objects always conjoin'd together, and we had nothing to fear but the mistakes of our own judgment, without having any reason to apprehend the uncertainty of nature. But as 'tis frequently found, that one observation is contrary to another, and that causes and effects follow not in the same order, of which we have had experience, we are oblig'd to vary our reasoning on account of this uncertainty, and take into consideration the contrariety of events. The first question, that occurs on this head, is concerning the nature and causes of the contrariety.

The vulgar, who take things according to their first appearance, attribute the uncertainty of events to such an uncertainty in the causes, as makes them often fail of their usual influence, tho' they meet with no obstacle nor impediment in their operation. But philosophers observing, that almost in every part of nature there is contain'd a vast variety of springs and principles, which are hid, by reason of their minuteness or remoteness, find that 'tis at least possible the contrariety of events may not proceed from any contingency in the cause, but from the secret operation of contrary causes. This possibility is converted into certainty by farther observation, when they remark, that upon an exact scrutiny, a contrariety of effects always betrays a contrariety of causes, and proceeds from their mutual hindrance and opposition. A peasant can give no better reason for the stopping of any clock or watch than to say, that commonly it does not go right: But an artizan easily perceives, that the same force in the spring or pendulum has always the same influence on the wheels; but fails of its usual effect, perhaps by reason of a grain of dust, which puts a stop to the whole movement. From the observation of several parallel instances, philosophers form a maxim, that the connexion betwixt all causes and effects is equally necessary, and that its seeming uncertainty in some instances proceeds from the secret opposition of contrary causes.

But however philosophers and the vulgar may differ in their explication of the contrariety of events, their inferences from it are always of the same kind, and founded on the same principles. A contrariety of events in the past may give us a kind of hesitating belief for the future after two several ways. *First*, By producing an imperfect habit and transition from the present impression to the related idea. When the conjunction of any two objects is frequent, without being entirely constant, the mind is determin'd to pass from one object to the other; but not with so entire a habit, as when the union is uninterrupted, and all the instances we have ever met with are uniform and of a piece. We End from common experience, in our actions as well as reasonings, that a constant perseverance in any course of life produces a strong inclination and tendency to continue for the future; tho' there are habits of inferior degrees of force, proportion'd to the inferior degrees of steadiness and uniformity in our conduct.

There is no doubt but this principle sometimes takes place, and produces those inferences we draw from contrary phænomena; tho' I am persuaded, that upon examination we shall not find it to be the principle, that most commonly influences the mind in this species of reasoning. When we follow only the habitual determination of the mind, we make the transition without any reflection, and interpose not a moments delay betwixt the view of one object and the belief of that, which is often found to attend it. As the custom depends not upon any deliberation, it operates immediately, without allowing any time for reflection. But this method of proceeding we have but few instances of in our probable

reasonings; and even fewer than in those, which are deriv'd from the uninterrupted conjunction of objects. In the former species of reasoning we commonly take knowingly into consideration the contrariety of past events; we compare the different sides of the contrariety, and carefully weigh the experiments, which we have on each side: Whence we may conclude, that our reasonings of this kind arise not *directly* from the habit, but in an *oblique* manner; which we must now endeavour to explain.

'Tis evident, that when an object is attended with contrary effects, we judge of them only by our past experience, and always consider those as possible, which we have observ'd to follow from it. And as past experience regulates our judgment concerning the possibility of these effects, so it does that concerning their probability; and that effect, which has been the most common, we always esteem the most likely. Here then are two things to be consider'd, *viz.* the *reasons* which determine us to make the past a standard for the future, and the manner how we extract a single judgment from a contrariety of past events.

First we may observe, that the supposition, *that the future resembles the past*, is not founded on arguments of any kind, but is deriv'd entirely from habit, by which we are determin'd to expect for the future the same train of objects, to which we have been accustom'd. This habit or determination to transfer the past to the future is full and perfect; and consequently the first impulse of the imagination in this species of reasoning is endow'd with the same qualities.

But, *secondly*, when in considering past experiments we find them of a contrary nature, this determination, tho' full and perfect in itself, presents us with no steady object, but offers us a number of disagreeing images in a certain order and proportion. The first impulse, therefore, is here broke into pieces, and diffuses itself over all those images, of which each partakes an equal share of that force and vivacity, that is deriv'd from the impulse. Any of these past events may again happen; and we judge, that when they do happen, they will be mix'd in the same proportion as in the past.

If our intention, therefore, be to consider the proportions of contrary events in a great number of instances, the images presented by our past experience must remain in their *first form*, and preserve their first proportions. Suppose, for instance, I have found by long observation, that of twenty ships, which go to sea, only nineteen return. Suppose I see at present twenty ships that leave the port: I transfer my past experience to the future, and represent to myself nineteen of these ships as returning in safety, and one as perishing. Concerning this there can be no difficulty. But as we frequently run over those several ideas of past events, in order to form a judgment concerning one single event, which appears uncertain; this consideration must change the *first form* of our ideas, and draw together the divided images presented by experience; since 'tis to *it* we refer the determination of that particular event, upon which we reason. Many of these images are suppos'd to concur, and a superior number to concur on one side. These agreeing images unite together, and render the idea more strong and lively, not only than a mere fiction of the imagination, but also than any idea, which is supported by a lesser number of experiments. Each new experiment is as a new stroke of the pencil, which bestows an additional vivacity on the colours, without either multiplying or enlarging the figure. This operation of the mind has been so fully explain'd in treating of the probability of chance, that I need not here endeavour to render it more intelligible. Every past experiment may be consider'd as a kind of chance; it being uncertain to us, whether the object will exist comformable to one experiment or another: And for this reason every thing that has been said on the one subject is applicable to both. Thus upon the whole, contrary experiments produce an imperfect belief, either by weakening the habit, or by dividing and afterwards joining in different parts, that *perfect* habit, which makes us conclude in general, that instances, of which we have no experience, must necessarily resemble those of which we have.

To justify still farther this account of the second species of probability, where we reason with knowledge and reflection from a contrariety of past experiments, I shall propose the following considerations, without fearing to give offence by that air of subtilty, which attends them. Just reasoning ought still, perhaps, to retain its force, however subtile; in the same manner as matter preserves its solidity in the air, and fire, and animal spirits, as well as in the grosser and more sensible forms.

First, We may observe, that there is no probability so great as not to allow of a contrary possibility; because otherwise 'twou'd cease to be a probability, and wou'd become a certainty. That probability of causes, which is most extensive, and which we at present examine, depends on a contrariety of experiments; and 'tis evident an experiment in the past proves at least a possibility for the future.

Secondly, The component parts of this possibility and probability are of the same nature, and differ in number only, but not in kind. It has been observ'd, that all single chances are entirely equal, and that the only circumstance, which can give any event, that is contingent, a superiority over another, is a superior number of chances. In like manner, as the uncertainty of causes is discover'd by experience, which presents us with a view of contrary events, 'tis plain, that when we transfer the past to the future, the known to the unknown, every past experiment has the same weight, and that 'tis only a superior number of them, which can throw the ballance on any side. The possibility, therefore, which enters into every reasoning of this kind, is compos'd of parts, which are of the same nature both among themselves, and with those, that compose the opposite probability.

Thirdly, We may establish it as a certain maxim, that in all moral as well as natural phænomena, wherever any cause consists of a number of parts, and the effect encreases or diminishes, according to the variation of that number, the effect, properly speaking, is a compounded one, and arises from the union of the several effects, that proceed from each part of the cause. Thus because the gravity of a body encreases or diminishes by the encrease or diminution of its parts, we conclude that each part contains this quality and contributes to the gravity of the whole. The absence or presence of a part of the cause is attended with that of a proportionable part of the effect. This connexion or constant conjunction sufficiently proves the one part to be the cause of the other. As the belief, which we have of any event, encreases or diminishes according to the number of chances or past experiments, 'tis to be consider'd as a compounded effect, of which each part arises from a proportionable number of chances or experiments.

Let us now join these three observations, and see what conclusion we can draw from them. To every probability there is an opposite possibility. This possibility is compos'd of parts, that are entirely of the same nature with those of the probability; and consequently have the same influence on the mind and understanding. The belief, which attends the probability, is a compounded effect, and is form'd by the concurrence of the several effects, which proceed from each part of the probability. Since therefore each part of the probability contributes to the production of the belief, each part of the possibility must have the same influence on the opposite side; the nature of these parts being entirely the same. The contrary belief, attending the possibility, implies a view of a certain object, as well as the probability does an opposite view. In this particular both these degrees of belief are alike. The only manner then, in which the superior number of similar component parts in the one can exert its influence, and prevail above the inferior in the other, is by producing a stronger and more lively view of its object. Each part presents a particular view; and all these views uniting together produce one general view, which is fuller and more distinct by the greater number of causes or principles, from which it is deriv'd.

The component parts of the probability and possibility, being alike in their nature, must produce like effects; and the likeness of their effects consists in this, that each of them presents a view of a particular object. But tho' these parts be alike in their nature, they are very different in their quantity and number; and this difference must appear in the effect as well as the similarity. Now as the view they present is in both cases full and entire, and comprehends the object in all its parts, 'tis impossible that in this particular there can be any difference; nor is there any thing but a superior vivacity in the probability, arising from the concurrence of a superior number of views, which can distinguish these effects.

Here is almost the same argument in a different light. All our reasonings concerning the probability of causes are founded on the transferring of past to future. The transferring of any past experiment to the future is sufficient to give us a view of the object; whether that experiment be single, or combin'd with others of the same kind; whether it be entire, or oppos'd by others of a contrary kind. Suppose, then, it acquires both these qualities of combination and opposition, it loses not upon that account its former power of presenting a view of the object, but only concurs with and opposes other experiments, that have a like influence. A question, therefore, may arise concerning the manner both of the concurrence and opposition. As to the *concurrence*, there is only the choice left betwixt these two hypotheses. *First*, That the view of the object, occasion'd by the transference of each past experiment, preserves itself entire, and only multiplies the number of views. Or, *secondly*, That it runs into the other similar and correspondent views, and gives them a superior degree of force and vivacity. But that the first hypothesis is erroneous, is evident from experience, which informs us, that the belief, attending any reasoning, consists in one conclusion, not in a multitude of similar ones, which wou'd only distract the mind, and in many cases wou'd be too numerous to be comprehended distinctly by any finite capacity. It remains, therefore, as the only reasonable opinion, that these similar views run into each other, and unite their forces; so as to produce a stronger and clearer view, than what arises from any one alone. This is the manner, in which past experiments concur, when they are transfer'd to any future event. As to the manner of their *opposition*, 'tis evident, that as the contrary views are incompatible with each other, and 'tis impossible the object can at once exist conformable to both of them, their influence becomes mutually destructive, and the mind is determin'd to the superior only with that force, which remains after subtracting the inferior.

I am sensible how abstruse all this reasoning must appear to the generality of readers, who not being accustom'd to such profound reflections on the intellectual faculties of the mind, will be apt to reject as chimerical whatever strikes not in with the common receiv'd notions, and with the easiest and most obvious principles of philosophy. And no doubt there are some pains requir'd to enter into these arguments; tho' perhaps very little are necessary to perceive the imperfection of every vulgar hypothesis on this subject, and the little light, which philosophy can yet afford us in such sublime and such curious speculations. Let men be once fully perswaded of these two principles, *That there is nothing in any object, consider'd in itself, which can afford us a reason for drawing a conclusion beyond it;* and, *That even after the observation of the frequent or constant conjunction of objects, we have no reason to draw any inference concerning any object beyond those of which we have had experience;* I say, let men be once fully convinc'd of these two principles, and this will throw them so loose from all common systems, that they will make no difficulty of receiving any, which may appear the most extraordinary. These principles we have found to be sufficiently convincing, even with regard to our most certain reasonings from causation: But I shall venture to affirm, that with regard to these conjectural or probable reasonings they still acquire a new degree of evidence.

First, 'Tis obvious, that in reasonings of this kind, 'tis not the object presented to us, which, consider'd in itself, affords us any reason to draw a conclusion concerning any other object or event. For as this latter object is suppos'd uncertain, and as the uncertainty is deriv'd from a conceal'd contrariety of causes in the former, were any of the causes plac'd in the known qualities of that object, they wou'd no longer be conceal'd, nor wou'd our conclusion be uncertain.

But, *secondly*, 'tis equally obvious in this species of reasoning, that if the transference of the past to the future were founded merely on a conclusion of the understanding, it cou'd never occasion any belief or assurance. When we transfer contrary experiments to the future, we can only repeat these contrary experiments with their particular proportions; which cou'd not produce assurance in any single event, upon which we reason, unless the fancy melted together all those images that concur, and extracted from them one single idea or image, which is intense and lively in proportion to the number of experiments from which it is deriv'd, and their superiority above their antagonists. Our past experience presents no determinate object; and as our belief, however faint, fixes itself on a determinate object, 'tis evident that the belief arises not merely from the transference of past to future, but from some operation of the *fancy* conjoin'd with it. This may lead us to conceive the manner, in which that faculty enters into all our reasonings.

I shall conclude this subject with two reflections, which may deserve our attention. The *first* may be explain'd after this manner. When the mind forms a reasoning concerning any matter of fact, which is only probable, it casts its eye backward upon past experience, and transferring it to the future, is presented with so many contrary views of its object, of which those that are of the same kind uniting together, and running into one act of the mind, serve to fortify and inliven it. But suppose that this multitude of views or glimpses of an object proceeds not from experience, but from a voluntary act of the imagination; this effect does not follow, or at least, follows not in the same degree. For tho' custom and education produce belief by such a repetition, as is not deriv'd from experience, yet this requires a long tract of time, along with a very frequent and *undersign'd* repetition. In general we may pronounce, that a person, who wou'd[1] *voluntarily* repeat any idea in his mind, tho' supported by one past experience, wou'd be no more inclin'd to believe the existence of its object, than if he had contented himself with one survey of it. Beside the effect of design; each act of the mind, being separate and independent, has a separate influence, and joins not its force with that of its fellows. Not being united by any common object, producing them, they have no relation to each other; and consequently make no transition or union of forces. This phænomenon we shall understand better afterwards.

My second reflection is founded on those large probabilities, which the mind can judge of, and the minute differences it can observe betwixt them. When the chances or experiments on one side amount to ten thousand, and on the other to ten thousand and one, the judgment gives the preference to the latter, upon account of that superiority; tho' 'tis plainly impossible for the mind to run over every particular view, and distinguish the superior vivacity of the image arising from the superior number, where the difference is so inconsiderable. We have a parallel instance in the affections. 'Tis evident, according to the principles above mention'd, that when an object produces any passion in us, which varies according to the different quantity of the object; I say, 'tis evident, that the passion, properly speaking, is not a simple emotion, but a compounded one, of a great number of weaker passions, deriv'd from a view of each part of the object. For otherwise 'twere impossible the passion shou'd encrease by the encrease of these parts. Thus a man, who desires a thousand pound, has in reality a thousand or more desires, which uniting together, seem to make only one passion; tho' the composition evidently betrays itself upon every alteration of the object, by the preference he gives to the larger number, if superior only by an unite. Yet nothing can be more certain, than that so small a difference

wou'd not be discernible in the passions, nor cou'd render them distinguishable from each other. The difference, therefore, of our conduct in preferring the greater number depends not upon our passions, but upon custom, and *general rules*. We have found in a multitude of instances, that the augmenting the numbers of any sum augments the passion, where the numbers are precise and the difference sensible. The mind can perceive from its immediate feeling, that three guineas produce a greater passion than two; and *this* it transfers to larger numbers, because of the resemblance; and by a general rule assigns to a thousand guineas, a stronger passion than to nine hundred and ninety nine. These general rules we shall explain presently.

But beside these two species of probability, which are deriv'd from an *imperfect* experience and from *contrary* causes, there is a third arising from Analogy, which differs from them in some material circumstances. According to the hypothesis above explain'd all kinds of reasoning from causes or effects are founded on two particulars, *viz.* the constant conjunction of any two objects in all past experience, and the resemblance of a present object to any one of them. The effect of these two particulars is, that the present object invigorates and inlivens the imagination; and the resemblance, along with the constant union, conveys this force and vivacity to the related idea; which we are therefore said to believe, or assent to. If you weaken either the union or resemblance, you weaken the principle of transition, and of consequence that belief, which arises from it. The vivacity of the first impression cannot be fully convey'd to the related idea, either where the conjunction of their objects is not constant, or where the present impression does not perfectly resemble any of those, whose union we are accustom'd to observe. In those probabilities of chance and causes above explain'd, 'tis the constancy of the union, which is diminish'd; and in the probability deriv'd from analogy, 'tis the resemblance only, which is affected. Without some degree of resemblance, as well as union, 'tis impossible there can be any reasoning: but as this resemblance admits of many different degrees, the reasoning becomes proportionally more or less firm and certain. An experiment loses of its force, when transfer'd to instances, which are not exactly resembling; tho' 'tis evident it may still retain as much as may be the foundation of probability, as long as there is any resemblance remaining.

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1. Pages xxii, xxiii.

# Section XIII. Of unphilosophical probability

All these kinds of probability are receiv'd by philosophers, and allow'd to be reasonable foundations of belief and opinion. But there are others, that are deriv'd from the same principles, tho' they have not had the good fortune to obtain the same sanction. The *first* probability of this kind may be accounted for thus. The diminution of the union, and of the resemblance, as above explained, diminishes the facility of the transition, and by that means weakens the evidence; and we may farther observe, that the same diminution of the evidence will follow from a diminution of the impression, and from the shading of those colours, under which it appears to the memory or senses. The argument, which we found on any matter of fact we remember, is more or less convincing, according as the fact is recent or remote; and tho' the difference in these degrees of evidence be not receiv'd by philosophy as solid and legitimate; because in that case an argument must have a different force to day, from what it shall have a month hence; yet notwithstanding the opposition of philosophy, 'tis certain, this circumstance has a considerable influence on the understanding, and secretly changes the authority of the same argument, according to the different times, in which it is propos'd to us. A greater force and vivacity in the impression naturally conveys a greater to the related idea; and 'tis on the degrees of force and vivacity, that the belief depends, according to the foregoing system.

There is a *second* difference, which we may frequently observe in our degrees of belief and assurance, and which never fails to take place, tho' disclaimed by philosophers. An experiment, that is recent and fresh in the memory, affects us more than one that is in some measure obliterated; and has a superior influence on the judgment, as well as on the passions. A lively impression produces more assurance than a faint one; because it has more original force to communicate to the related idea, which thereby acquires a greater force and vivacity. A recent observation has a like effect; because the custom and transition is there more entire, and preserves better the original force in the communication. Thus a drunkard, who has seen his companion die of a debauch, is struck with that instance for some time, and dreads a like accident for himself: But as the memory of it decays away by degrees, his former security returns, and the danger seems less certain and real. I add, as a third instance of this kind, that tho' our reasonings from proofs and from probabilities be considerably different from each other, yet the former species of reasoning often degenerates insensibly into the latter, by nothing but the multitude of connected arguments. 'Tis certain, that when an inference is drawn immediately from an object, without any intermediate cause or effect, the conviction is much stronger, and the persuasion more lively, than when the imagination is carry'd thro' a long chain of connected arguments, however infallible the connexion of each link may be esteem'd. 'Tis from the original impression, that the vivacity of all the ideas is deriv'd, by means of the customary transition of the imagination; and 'tis evident this vivacity must gradually decay in proportion to the distance, and must lose somewhat in each transition. Sometimes this distance has a greater influence than even contrary experiments wou'd have; and a man may receive a more lively conviction from a probable reasoning, which is close and immediate, than from a long chain of consequences, tho' just and conclusive in each part. Nay 'tis seldom such reasonings produce any conviction; and one must have a very strong and firm imagination to preserve the evidence to the end, where it passes thro' so many stages.

But here it may not be amiss to remark a very curious phænomenon, which the present subject suggests to us. 'Tis evident there is no point of ancient history, of which we can have any assurance, but by passing thro' many millions of causes and effects, and thro' a chain of arguments of almost an immeasurable length. Before the knowledge of the fact cou'd come to the first historian, it must be convey'd thro' many mouths; and after it is committed to writing, each new copy is a new object, of which the connexion with the foregoing is known only by experience and observation. Perhaps, therefore, it may be concluded from the precedent reasoning, that the evidence of all ancient history must now be lost; or at least, will be lost in time, as the chain of causes encreases, and runs on to a greater length. But as it seems contrary to common sense to think, that if the republic of letters, and the art of printing continue on the same footing as at present, our posterity, even after a thousand ages, can ever doubt if there has been such a man as Julius Cæsar; this may be consider'd as an objection to the present system. If belief consisted only in a certain vivacity, convey'd from an original impression, it wou'd decay by the length of the transition, and must at last be utterly extinguish'd: And *vice versa*, if belief on some occasions be not capable of such an extinction; it must be something different from that vivacity.

Before I answer this objection I shall observe, that from this topic there has been borrow'd a very celebrated argument against the *Christian Religion*; but with this difference, that the connexion betwixt each link of the chain in human testimony has been there suppos'd not to go beyond probability, and to be liable to a degree of doubt and uncertainty. And indeed it must be confest, that in this manner of considering the subject, (which however is not a true one) there is no history or tradition, but what must in the end lose all its force and evidence. Every new probability diminishes the original conviction; and however great that conviction may be suppos'd, 'tis impossible it can subsist under such reiterated diminutions. This is true in general; tho' we shall find[1] afterwards, that there is one very

memorable exception, which is of vast consequence in the present subject of the understanding.

Mean while to give a solution of the preceding objection upon the supposition, that historical evidence amounts at first to an entire proof; let us consider, that tho' the links are innumerable, that connect any original fact with the present impression, which is the foundation of belief; yet they are all of the same kind, and depend on the fidelity of Printers and Copists. One edition passes into another, and that into a third, and so on, till we come to that volume we peruse at present. There is no variation in the steps. After we know one, we know all of them; and after we have made one, we can have no scruple as to the rest. This circumstance alone preserves the evidence of history, and will perpetuate the memory of the present age to the latest posterity. If all the long chain of causes and effects, which connect any past event with any volume of history, were compos'd of parts different from each other, and which 'twere necessary for the mind distinctly to conceive, 'tis impossible we shou'd preserve to the end any belief or evidence. But as most of these proofs are perfectly resembling, the mind runs easily along them, jumps from one part to another with facility, and forms but a confus'd and general notion of each link. By this means a long chain of argument, has as little effect in diminishing the original vivacity, as a much shorter wou'd have, if compos'd of parts, which were different from each other, and of which each requir'd a distinct consideration.

A fourth unphilosophical species of probability is that deriv'd from *general rules*, which we rashly form to ourselves, and which are the source of what we properly call Prejudice. An *Irishman* cannot have wit, and a *Frenchman* cannot have solidity; for which reason, tho' the conversation of the former in any instance be visibly very agreeable, and of the latter very judicious, we have entertain'd such a prejudice against them, that they must be dunces or fops in spite of sense and reason. Human nature is very subject to errors of this kind; and perhaps this nation as much as any other.

Shou'd it be demanded why men form general rules, and allow them to influence their judgment, even contrary to present observation and experience, I shou'd reply, that in my opinion it proceeds from those very principles, on which all judgments concerning causes and effects depend. Our judgments concerning cause and effect are deriv'd from habit and experience; and when we have been accustom'd to see one object united to another, our imagination passes from the first to the second, by a natural transition, which precedes reflection, and which cannot be prevented by it. Now 'tis the nature of custom not only to operate with its full force, when objects are presented, that are exactly the same with those to which we have been accustom'd; but also to operate in an inferior degree, when we discover such as are similar; and tho' the habit loses somewhat of its force by every difference, yet 'tis seldom entirely destroy'd, where any considerable circumstances remain the same. A man, who has contracted a custom of eating fruit by the use of pears or peaches, will satisfy himself with melons, where he cannot find his favourite fruit; as one, who has become a drunkard by the use of red wines, will be carried almost with the same violence to white, if presented to him. From this principle I have accounted for that species of probability, deriv'd from analogy, where we transfer our experience in past instances to objects which are resembling, but are not exactly the same with those concerning which we have had experience. In proportion as the resemblance decays, the probability diminishes; but still has some force as long as there remain any traces of the resemblance.

This observation we may carry farther; and may remark, that tho' custom be the foundation of all our judgments, yet sometimes it has an effect on the imagination in opposition to the judgment, and produces a contrariety in our sentiments concerning the same object. I explain myself. In almost all kinds of causes there is a complication of circumstances, of which some are essential, and others superfluous; some are absolutely requisite to the production of the effect, and others are only conjoin'd

by accident. Now we may observe, that when these superfluous circumstances are numerous, and remarkable, and frequently conjoin'd with the essential, they have such an influence on the imagination, that even in the absence of the latter they carry us on to the conception of the usual effect, and give to that conception a force and vivacity, which make it superior to the mere fictions of the fancy. We may correct this propensity by a reflection on the nature of those circumstances; but 'tis still certain, that custom takes the start, and gives a biass to the imagination.

To illustrate this by a familiar instance, let us consider the case of a man, who being hung out from a high tower in a cage of iron cannot forbear trembling, when he surveys the precipice below him, tho' he knows himself to be perfectly secure from falling, by his experience of the solidity of the iron, which supports him; and tho' the ideas of fall and descent, and harm and death, be deriv'd solely from custom and experience. The same custom goes beyond the instances, from which it is deriv'd, and to which it perfectly corresponds; and influences his ideas of such objects as are in some respect resembling, but fall not precisely under the same rule. The circumstances of depth and descent strike so strongly upon him, that their influence cannot be destroy'd by the contrary circumstances of support and solidity, which ought to give him a perfect security. His imagination runs away with its object, and excites a passion proportion'd to it. That passion returns back upon the imagination and inlivens the idea; which lively idea has a new influence on the passion, and in its turn augments its force and violence; and both his fancy and affections, thus mutually supporting each other, cause the whole to have a very great influence upon him.

But why need we seek for other instances, while the present subject of [philosophical][2] probabilities offers us so obvious an one, in the opposition betwixt the judgment and imagination arising from these effects of custom? According to my system, all reasonings are nothing but the effects of custom; and custom has no influence, but by in livening the imagination, and giving us a strong conception of any object. It may, therefore, be concluded, that our judgment and imagination can never be contrary, and that custom cannot operate on the latter faculty after such a manner, as to render it opposite to the former. This difficulty we can remove after no other manner, than by supposing the influence of general rules. We shall afterwards take notice of some general rules, by which we ought to regulate our judgment concerning causes and effects; and these rules are form'd on the nature of our understanding, and on our experience of its operations in the judgments we form concerning objects. By them we learn to distinguish the accidental circumstances from the efficacious causes; and when we find that an effect can be produc'd without the concurrence of any particular circumstance, we conclude that that circumstance makes not a part of the efficacious cause, however frequently conjoin'd with it. But as this frequent conjunction necessarily makes it have some effect on the imagination, in spite of the opposite conclusion from general rules, the opposition of these two principles produces a contrariety in our thoughts, and causes us to ascribe the one inference to our judgment, and the other to our imagination. The general rule is attributed to our judgment; as being more extensive and constant. The exception to the imagination; as being more capricious and uncertain.

Thus our general rules are in a manner set in opposition to each other. When an object appears, that resembles any cause in very considerable circumstances, the imagination naturally carries us to a lively conception of the usual effect, tho' the object be different in the most material and most efficacious circumstances from that cause. Here is the first influence of general rules. But when we take a review of this act of the mind, and compare it with the more general and authentic operations of the understanding, we find it to be of an irregular nature, and destructive of all the most establish'd principles of reasonings; which is the cause of our rejecting it. This is a second influence of general rules, and implies the condemnation of the former. Sometimes the one, sometimes the other prevails,

according to the disposition and character of the person. The vulgar are commonly guided by the first, and wise men by the second. Mean while the sceptics may here have the pleasure of observing a new and signal contradiction in our reason, and of seeing all philosophy ready to be subverted by a principle of human nature, and again sav'd by a new direction of the very same principle. The following of general rules is a very unphilosophical species of probability; and yet 'tis only by following them that we can correct this, and all other unphilosophical probabilities.

Since we have instances, where general rules operate on the imagination even contrary to the judgment, we need not be surpriz'd to see their effects encrease, when conjoin'd with that latter faculty, and to observe that they bestow on the ideas they present to us a force superior to what attends any other. Every one knows, there is an indirect manner of insinuating praise or blame, which is much less shocking than the open flattery or censure of any person. However he may communicate his sentiments by such secret insinuations, and make them known with equal certainty as by the open discovery of them, 'tis certain that their influence is not equally strong and powerful. One who lashes me with conceal'd strokes of satire, moves not my indignation to such a degree, as if he flatly told me I was a fool and coxcomb; tho' I equally understand his meaning, as if he did. This difference is to be attributed to the influence of general rules.

Whether a person openly abuses me, or slyly intimates his contempt, in neither case do I immediately perceive his sentiment or opinion; and 'tis only by signs, that is, by its effects, I become sensible of it. The only difference, then, betwixt these two cases consists in this, that in the open discovery of his sentiments he makes use of signs, which are general and universal; and in the secret-intimation employs such as are more singular and uncommon. The effect of this circumstance is, that the imagination, in running from the present impression to the absent idea, makes the transition with greater facility, and consequently conceives the object with greater force, where the connexion is common and universal, than where it is more rare and particular. Accordingly we may observe, that the open declaration of our sentiments is call'd the taking off the mask, as the secret intimation of our opinions is said to be the veiling of them. The difference betwixt an idea produc'd by a general connexion, and that arising from a particular one is here compar'd to the difference betwixt an impression and an idea. This difference in the imagination has a suitable effect on the passions; and this effect is augmented by another circumstance. A secret intimation of anger or contempt shews that we still have some consideration for the person, and avoid the directly abusing him. This makes a conceal'd satire less disagreeable; but still this depends on the same principle. For if an idea were not more feeble, when only intimated, it wou'd never be esteem'd a mark of greater respect to proceed in this method than in the other.

Sometimes scurrility is less displeasing than delicate satire, because it revenges us in a manner for the injury at the very time it is committed, by affording us a just reason to blame and contemn the person, who injures us. But this phænomenon likewise depends upon the same principle. For why do we blame all gross and injurious language, unless it be, because we esteem it contrary to good breeding and humanity? And why is it contrary, unless it be more shocking than any delicate satire? The rules of good-breeding condemn whatever is openly disobliging, and gives a sensible pain and confusion to those, with whom we converse. After this is once establish'd, abusive language is universally blam'd, and gives less pain upon account of its coarseness and incivility, which render the person despicable, that employs it. It becomes less disagreeable, merely because originally it is more so; and 'tis more disagreeable, because it affords an inference by general and common rules, that are palpable and undeniable.

To this explication of the different influence of open and conceal'd flattery or satire, I shall add the consideration of another phænomenon, which is analogous to it. There are many particulars in the point of honour both of men and women, whose violations, when open and avow'd, the world never excuses, but which it is more apt to overlook, when the appearances are sav'd, and the transgression is secret and conceal'd. Even those, who know with equal certainty, that the fault is committed, pardon it more easily, when the proofs seem in some measure oblique and equivocal, than when they are direct and undeniable. The same idea is presented in both cases, and, properly speaking, is equally assented to by the judgment; and yet its influence is different, because of the different manner, in which it is presented. Now if we compare these two cases, of the *open* and *conceal'd* violations of the laws of honour, we shall find, that the difference betwixt them consists in this, that in the first case the sign, from which we infer the blameable action, is single, and suffices alone to be the foundation of our reasoning and judgment; whereas in the latter the signs are numerous, and decide little or nothing when alone and unaccompany'd with many minute circumstances, which are almost imperceptible. But 'tis certainly true, that any reasoning is always the more convincing, the more single and united it is to the eye, and the less exercise it gives to the imagination to collect all its parts, and run from them to the correlative idea, which forms the conclusion. The labour of the thought disturbs the regular progress of the sentiments, as we shall observe presently. The idea strikes not on us with such vivacity; and consequently has no such influence on the passion and imagination.

From the same principles we may account for those observations of the Cardinal de Retz, *that there are many things, in which the world wishes to be deceiv'd;* and *that it more easily excuses a person in acting than in talking contrary to the decorum of his profession and character*.. A fault in words is commonly more open and distinct than one in actions, which admit of many palliating excuses, and decide not so clearly concerning the intention and views of the actor.

Thus it appears upon the whole, that every kind of opinion or judgment, which amounts not to knowledge, is deriv'd entirely from the force and vivacity of the perception, and that these qualities constitute in the mind, what we call the belief of the existence of any object. This force and this vivacity are most conspicuous in the memory; and therefore our confidence in the veracity of that faculty is the greatest imaginable, and equals in many respects the assurance of a demonstration. The next degree of these qualities is that deriv'd from the relation of cause and effect; and this too is very great, especially when the conjunction is found by experience to be perfectly constant, and when the object, which is present to us, exactly resembles those, of which we have had experience. But below this degree of evidence there are many others, which have an influence on the passions and imagination, proportion'd to that degree of force and vivacity, which they communicate to the ideas. 'Tis by habit we make the transition from cause to effect; and 'tis from some present impression we borrow that vivacity, which we diffuse over the correlative idea. But when we have not observ'd a sufficient number of instances, to produce a strong habit; or when these instances are contrary to each other; or when the resemblance is not exact; or the present impression is faint and obscure; or the experience in some measure obliterated from the memory; or the connexion dependent on a long chain of objects; or the inference deriv'd from general rules, and yet not conformable to them: In all these cases the evidence diminishes by the diminution of the force and in tenseness of the idea. This therefore is the nature of the judgment and probability.

What principally gives authority to this system is, beside the undoubted arguments, upon which each part is founded, the agreement of these parts, and the necessity of one to explain another. The belief, which attends our memory, is of the same nature with that, which is deriv'd from our judgments: Nor is there any difference betwixt that judgment, which is deriv'd from a constant and uniform connexion of

causes and effects, and that which depends upon an interrupted and uncertain. 'Tis indeed evident, that in all determinations, where the mind decides from contrary experiments, 'tis first divided within itself, and has an inclination to either side in proportion to the number of experiments we have seen and remember. This contest is at last determin'd to the advantage of that side, where we observe a superior number of these experiments; but still with a diminution of force in the evidence correspondent to the number of the opposite experiments. Each possibility, of which the probability is compos'd, operates separately upon the imagination; and 'tis the larger collection of possibilities, which at last prevails, and that with a force proportionable to its superiority. All these phænomena lead directly to the precedent system; nor will it ever be possible upon any other principles to give a satisfactory and consistent explication of them. Without considering these judgments as the effects of custom on the imagination, we shall lose ourselves in perpetual contradiction and absurdity.

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1. Part IV. sect. 1.
2. Sect. 15 [unphilosophical ?].

# Section XIV. Of the idea of necessary connexion

Having thus explain'd the manner, *in which we reason beyond our immediate impressions, and conclude that such particular causes must have such particular effects;* we must now return upon our footsteps to examine that question, which first occur'd to us, and which we dropt in our way, *viz. What is our idea of necessity, when we say that two objects are* necessarily connected together. *Upon this head I repeat what* I have often had occasion to observe, that as we have no idea, that is not deriv'd from an impression, we must find some impression, that gives rise to this idea of necessity, if we assert we have really such an idea. In order to this I consider, in what objects necessity is commonly suppos'd to lie; and finding that it is always ascrib'd to causes and effects, I turn my eye to two objects suppos'd to be plac'd in that relation; and examine them in all the situations, of which they are susceptible. I immediately perceive, that they are *contiguous* in time and place, and that the object we call cause *precedes* the other we call effect. In no one instance can I go any farther, nor is it possible for me to discover any third relation betwixt these objects. I therefore enlarge my view to comprehend several instances; where I find like objects always existing in like relations of contiguity and succession. At first sight this seems to serve but little to my purpose. The reflection on several instances only repeats the same objects; and therefore can never give rise to a new idea. But upon farther enquiry I find, that the repetition is not in every particular the same, but produces a new impression, and by that means the idea, which I at present examine. For after a frequent repetition, I find, that upon the appearance of one of the objects, the mind is *determin'd* by custom to consider its usual attendant, and to consider it in a stronger light upon account of its relation to the first object. 'Tis this impression, then, or *determination*, which affords me the idea of necessity.

I doubt not but these consequences will at first sight be receiv'd without difficulty, as being evident deductions from principles, which we have already establish'd, and which we have often employ'd in our reasonings. This evidence both in the first principles, and in the deductions, may seduce us unwarily into the conclusion, and make us imagine it contains nothing extraordinary, nor worthy of our curiosity. But tho' such an inadvertence may facilitate the reception of this reasoning, 'twill make it be the more easily forgot; for which reason I think it proper to give warning, that I have just now examin'd one of the most sublime questions in philosophy, *viz. that concerning the power and efficacy of causes;* where all the sciences seem so much interested. Such a warning will naturally rouze up the attention of the reader, and make him desire a more full account of my doctrine, as well as of the

arguments, on which it is founded. This request is so reasonable, that I cannot refuse complying with it; especially as I am hopeful that these principles, the more they are examin'd, will acquire the more force and evidence.

There is no question, which on account of its importance, as well as difficulty, has caus'd more disputes both among antient and modern philosophers, than this concerning the efficacy of causes, or that quality which makes them be followed by their effects. But before they enter'd upon these disputes, methinks it wou'd not have been improper to have examin'd what idea we have of that efficacy, which is the subject of the controversy. This is what I find principally wanting in their reasonings, and what I shall here endeavour to supply.

I begin with observing that the terms of *efficacy, agency, power, force, energy, necessity, connexion,* and *productive quality*, are all nearly synonymous; and therefore 'tis an absurdity to employ any of them in defining the rest. By this observation we reject at once all the vulgar definitions, which philosophers have given of power and efficacy; and instead of searching for the idea in these definitions, must look for it in the impressions, from which it is originally deriv'd. If it be a compound idea, it must arise from compound impressions. If simple, from simple impressions.

I believe the most general and most popular explication of this matter, is to say,[1] that finding from experience, that there are several new productions in matter, such as the motions and variations of body, and concluding that there must somewhere be a power capable of producing them, we arrive at last by this reasoning at the idea of power and efficacy. But to be convinc'd that this explication is more popular than philosophical, we need but reflect on two very obvious principles. *First*, That reason alone can never give rise to any original idea, and *secondly*, that reason, as distinguish'd from experience, can never make us conclude, that a cause or productive quality is absolutely requisite to every beginning of existence. Both these considerations have been sufficiently explain'd; and therefore shall not at present be any farther insisted on.

I shall only infer from them, that since reason can never give rise to the idea of efficacy, that idea must be deriv'd from experience, and from some particular instances of this efficacy, which make their passage into the mind by the common channels of sensation or reflection. Ideas always represent their objects or impressions; and *vice versa*, there are some objects necessary to give rise to every idea. If we pretend, therefore, to have any just idea of this efficacy, we must produce some instance, wherein the efficacy is plainly discoverable to the mind, and its operations obvious to our consciousness or sensation. By the refusal of this, we acknowledge, that the idea is impossible and imaginary; since the principle of innate ideas, which alone can save us from this dilemma, has been already refuted, and is now almost universally rejected in the learned world. Our present business, then, must be to ind some natural production, where the operation and efficacy of a cause can be clearly conceiv'd and comprehended by the mind, without any danger of obscurity or mistake.

In this research we meet with very little encouragement from that prodigious diversity, which is found in the opinions of those philosophers, who have pretended to explain the secret force and energy of causes[2] . There are some, who maintain, that bodies operate by their substantial form; others, by their accidents or qualities; several, by their matter and form; some, by their form and accidents; others, by certain virtues and faculties distinct from all this. All these sentiments again are mix'd and vary'd in a thousand different ways; and form a strong presumption, that none of them have any solidity or evidence. and that the supposition of an efficacy in any of the known qualities of matter is entirely without foundation. This presumption must encrease upon us, when we consider, that these principles

of substantial forms, and accidents, and faculties, are not in reality any of the known properties of bodies, but are perfectly unintelligible and inexplicable. For 'tis evident philosophers wou'd never have had recourse to such obscure and uncertain principles had they met with any satisfaction in such as are clear and intelligible; especially in such an affair as this, which must be an object of the simplest understanding, if not of the senses. Upon the whole, we may conclude, that 'tis impossible in any one instance to shew the principle, in which the force and agency of a cause is plac'd; and that the most refin'd and most vulgar understandings are equally at a loss in this particular. If any one think proper to refute this assertion, he need not put himself to the trouble of inventing any long reasonings; but may at once shew us an instance of a cause, where we discover the power or operating principle. This defiance we are oblig'd frequently to make use of as being almost the only means of proving a negative in philosophy.

The small success, which has been met with in all the attempts to fix this power, has at last oblig'd philosophers to conclude, that the ultimate force and efficacy of nature is perfectly unknown to us, and that 'tis in vain we search for it in all the known qualities of matter. In this opinion they are almost unanimous; and 'tis only in the inference they draw from it, that they discover any difference in their sentiments. For some of them, as the *Cartesians* in particular, having establish'd it as a principle, that we are perfectly acquainted with the essence of matter, have very naturally inferr'd, that it is endow'd with no efficacy, and that 'tis impossible for it of itself to communicate motion, or produce any of those effects, which we ascribe to it. As the essence of matter consists in extension, and as extension implies not actual motion, but only mobility; they conclude, that the energy, which produces the motion, cannot lie in the extension.

This conclusion leads them into another, which they regard as perfectly unavoidable. Matter, say they, is in itself entirely unactive, and depriv' d of any power, by which it may produce, or continue, or communicate motion: But since these effects are evident to our senses, and since the power, that produces them, must be plac'd somewhere, it must lie in the Deity, or that divine being, who contains in his nature all excellency and perfection. 'Tis the deity, therefore, who is the prime mover of the universe, and who not only first created matter, and gave it it's original impulse, but likewise by a continu'd exertion of omnipotence, supports its existence, and successively bestows on it all those motions, and configurations, and qualities, with which it is endow'd.

This opinion is certainly very curious, and well worth our attention; but 'twill appear superfluous to examine it in this place, if we reflect a moment on our present purpose in taking notice of it. We have establish'd it as a principle, that as all ideas are deriv'd from impressions, or some precedent *perceptions*, 'tis impossible we can have any idea of power and efficacy, unless some instances can be produc'd, wherein this power *is perceiv'd* to exert itself. Now as these instances can never be discover'd in body, the *Cartesians*, proceeding upon their principle of innate ideas, have had recourse to a supreme spirit or deity, whom they consider as the only active being in the universe, and as the immediate cause of every alteration in matter. But the principle of innate ideas being allow'd to be false, it follows, that the supposition of a deity can serve us in no stead, in accounting for that idea of agency, which we search for in vain in all the objects, which are presented to our senses, or which we are internally conscious of in our own minds. For if every idea be deriv'd from an impression, the idea of a deity proceeds from the same origin; and if no impression, either of sensation or reflection, implies any force or efficacy, 'tis equally impossible to discover or even imagine any such active principle in the deity. Since these philosophers, therefore, have concluded, that matter cannot be endow'd with any efficacious principle, because 'tis impossible to discover in it such a principle; the same course of reasoning shou'd determine them to exclude it from the supreme being. Or if they

estem that opinion absurd and impious, as it really is, I shall tell them how they may avoid it; and that is, by concluding from the very first, that they have no adequate idea of power or efficacy in any object; since neither in body nor spirit, neither in superior nor inferior natures, are they able to discover one single instance of it.

The same conclusion is unavoidable upon the hypothesis of those, who maintain the efficacy of second causes, and attribute a derivative, but a real power and energy to matter. For as they confess, that this energy lies not in any of the known qualities of matter, the difficulty still remains concerning the origin of its idea. If we have really an idea of power, we may attribute power to an unknown quality: But as 'tis impossible, that that idea can be deriv'd from such a quality, and as there is nothing in known qualities, which can produce it; it follows that we deceive ourselves, when we imagine we are possest of any idea of this kind, after the manner we commonly understand it. All ideas are deriv'd from, and represent impressions. We never have any impression, that contains any power or efficacy. We never therefore have any idea of power.

It has been establish'd as a certain principle, that general or abstract ideas are nothing but individual ones taken in a certain light, and that, in effecting on any object, 'tis as impossible to exclude from our thought all particular degrees of quantity and quality as from the real nature of things. If we be possest, therefore, of any idea of power in general, we must also be able to conceive some particular species of it; and as power cannot subsist alone, but is always regarded as an attribute of some being or existence, we must be able to place this power in some particular being, and conceive that being as endow'd with a real force and energy, by which such a particular effect necessarily results from its operation. We must distinctly and particularly conceive the connexion betwixt the cause and effect, and be able to pronounce, from a simple view of the one, that it must be follow'd or preceded by the other. This is the true manner of conceiving a particular power in a particular body: and a general idea being impossible without an individual; where the latter is impossible, 'tis certain the former can never exist. Now nothing is more evident, than that the human mind cannot form such an idea of two objects, as to conceive any connexion betwixt them, or comprehend distinctly that power or efficacy, by which they are united. Such a connexion wou'd amount to a demonstration, and wou'd imply the absolute impossibility for the one object not to follow, or to be conceiv'd not to follow upon the other: Which kind of connexion has already been rejected in all cases. If any one is of a contrary opinion, and thinks he has attain'd a notion of power in any particular object, I desire he may point out to me that object. But till I meet with such-a-one, which I despair of, I cannot forbear concluding, that since we can never distinctly conceive how any particular power can possibly reside in any particular object, we deceive ourselves in imagining we can form any such general idea.

Thus upon the whole we may infer, that when we talk of any being, whether of a superior or inferior nature, as endow'd with a power or force, proportion'd to any effect; when we speak of a necessary connexion betwixt objects, and suppose, that this connexion depends upon an efficacy or energy, with which any of these objects are endow'd; in all these expressions, *so applied*, we have really no distinct meaning, and make use only of common words, without any clear and determinate ideas. But as 'tis more probable, that these expressions do here lose their true meaning by being *wrong apply'd*, than that they never have any meaning; 'twill be proper to bestow another consideration on this subject, to see if possibly we can discover the nature and origin of those ideas, we annex to them.

Suppose two objects to be presented to us, of which the one is the cause and the other the effect; 'tis plain, that from the simple consideration of one, or both these objects we never shall perceive the tie, by which they are united, or be able certainly to pronounce, that there is a connexion betwixt them. 'Tis

not, therefore, from any one instance, that we arrive at the idea of cause and effect, of a necessary connexion of power, of force, of energy, and of efficacy. Did we never see any but particular conjunctions of objects, entirely different from each other, we shou'd never be able to form any such ideas.

But again; suppose we observe several instances, in which the same objects are always conjoin'd together, we immediately conceive a connexion betwxxt them, and begin to draw an inference from one to another. This multiplicity of resembling instances, therefore, constitutes the very essence of power or connexion, and is the source, from which the idea of it arises. In order, then, to understand the idea of power, we must consider that multiplicity; nor do I ask more to give a solution of that difficulty, which has so long perplex'd us. For thus I reason. The repetition of perfectly similar instances can never alone give rise to an original idea, different from what is to be found in any particular instance, as has been observ'd, and as evidently follows from our fundamental principle, *that all ideas are copy'd from impressions.* Since therefore the idea of power is a new original idea, not to be found in any one instance, and which yet arises from the repetition of several instances, it follows, that the repetition *alone* has not that effect, but must either *discover* or *produce* something new, which is the source of that idea. Did the repetition neither discover nor produce any thing new, our ideas might be multiply'd by it, but wou'd not be enlarg'd above what they are upon the observation of one single instance. Every enlargement, therefore, (such as the idea of power or connexion) which arises from the multiplicity of similar instances, is copy'd from some effects of the multiplicity, and will be perfectly understood by understanding these effects. Wherever we find any thing new to be discover'd or produc'd by the repetition, there we must place the power, and must never look for it in any other object.

But 'tis evident, in the first place, that the repetition of like objects in like relations of succession and contiguity *discovers* nothing new in any one of them; since we can draw no inference from it, nor make it a subject either of our demonstrative or probable reasonings;[3] as has been already prov'd. Nay suppose we cou'd draw an inference, 'twou'd be of no consequence in the present case; since no kind of reasoning can give rise to a new idea, such as this of power is; but wherever we reason, we must antecedently be possest of clear ideas, which may be the objects of our reasoning. The conception always precedes the understanding; and where the one is obscure, the other is uncertain; where the one fails, the other must fail also.

Secondly, 'Tis certain that this repetition of similar objects in similar situations *produces* nothing new either in these objects, or in any external body. For 'twill readily be allow'd, that the several instances we have of the conjunction of resembling causes and effects are in themselves entirely independent, and that the communication of motion, which I see result at present from the shock of two billiard-balls, is totally distinct from that which I saw result from such an impulse a twelve-month ago. These impulses have no influence on each other. They are entirely divided by time and place; and the one might have existed and communicated motion, tho' the other never had been in being.

There is, then, nothing new either discover'd or produc'd in any objects by their constant conjunction, and by the uninterrupted resemblance of their relations of succession and contiguity. But 'tis from this resemblance, that the ideas of necessity, of power, and of efficacy, are deriv'd. These ideas, therefore, represent not any thing, that does or can belong to the objects, which are constantly conjoin'd. This is an argument, which, in every view we can examine it, will be found perfectly unanswerable. Similar instances are still the first source of our idea of power or necessity; at the same time that they have no influence by their similarity either on each other, or on any external object. We must therefore, tum

ourselves to some other quarter to seek the origin of that idea.

Tho' the several resembling instances, which give rise to the idea of power, have no influence on each other, and can never produce any new quality *in the object*, which can be the model of that idea, yet the *observation* of this resemblance produce a new impression *in the mind*, which is its real model. For after we have observ'd the resemblance in a sufficient number of instances, we immediately feel a determination of the mind to pass from one object to its usual attendant, and to conceive it in a stronger light upon account of that relation. This determination is the only effect of the resemblance; and therefore must be the same with power or efficacy, whose idea is deriv'd from the resemblance. The several instances of resembling conjunctions leads us into the notion of power and necessity. These instances are in themselves totally distinct from each other, and have no union but in the mind, which observes them, and collects their ideas. Necessity, then, is the effect of this observation, and is nothing but an internal impression of the mind, or a determination to carry our thoughts from one object to another. Without considering it in this view, we can never arrive at the most distant notion of it, or be able to attribute it either to external or internal objects, to spirit or body, to causes or effects.

The necessary connexion betwixt causes and effects is the foundation of our inference from one to the other. The foundation of our inference is the transition arising from the accustom'd union. These are, therefore, the same.

The idea of necessity arises from some impression. There is no impression convey'd by our senses, which can give rise to that idea. It must, therefore, be deriv'd from some internal impression, or impression of reflection. There is no internal impression, which has any relation to the present business, but that propensity, which custom produces, to pass from an object to the idea of its usual attendant. This therefore is the essence of necessity. Upon the whole, necessity is something, that exists in the mind, not in objects; nor is it, possible for us ever to form the most distant idea of it, consider'd as a quality in bodies. Either we have no idea of necessity, or necessity is nothing but that determination of the thought to pass from causes to effects and from effects to causes, according to their experience'd union.

Thus as the necessity, which makes two times two equal to four, or three angles of a triangle equal to two right ones, lies only in the act of the understanding, by which we consider and compare these ideas; in like manner the necessity or power, which unites causes and effects, lies in the determination of the mind to pass from the one to the other. The efficacy or energy of causes is neither plac'd in the causes themselves, nor in the deity, nor in the concurrence of these two principles; but belongs entirely to the soul, which considers the union of two or more objects in all past instances. 'Tis here that the real power of causes is plac'd, along with their connexion and necessity.

I am sensible, that of all the paradoxes, which I have had, or shall hereafter have occasion to advance in the course of this treatise, the present one is the most violent, and that 'tis merely by dint of solid proof and reasoning I can ever hope it will have admission, and overcome the inveterate prejudices of mankind. Before we are reconcil'd to this doctrine, how often must we repeat to ourselves, *that* the simple view of any two objects or actions, however related, can never give us any idea of power, or of a connexion betwixt them: *that* this idea arises from the repetition of their union: *that* the repetition neither discovers nor causes any thing in the objects, but has an influence only on the mind, by that customary transition it produces: *that* this customary transition is, therefore, the same with the power and necessity; which are consequently qualities of perceptions, not of objects, and are internally felt by the soul, and not perceiv'd externally in bodies? There is commonly an astonishment attending every

thing extraordinary; and this astonishment changes immediately into the highest degree of esteem or contempt, according as we approve or disapprove of the subject. I am much afraid, that tho' the foregoing reasoning appears to me the shortest and most decisive imaginable; yet with the generality of readers the biass of the mind will prevail, and give them a prejudice against the present doctrine.

This contrary biass is easily accounted for. 'Tis a common observation, that the mind has a great propensity to spread itself on external objects, and to conjoin with them any internal impressions, which they occasion, and which always make their appearance at the same time that these objects discover themselves to the senses. Thus as certain sounds and smells are always found to attend certain visible objects, we naturally imagine a conjunction, even in place, betwixt the objects and qualities, tho' the qualities be of such a nature as to admit of no such conjunction, and really exist no where. But of this more fully[4] hereafter. Mean while 'tis sufficient to observe, that the same propensity is the reason, why we suppose necessity and power to lie in the objects we consider, not in our mind, that considers them; notwithstanding it is not possible for us to form the most distant idea of that quality, when it is not taken for the determination of the mind, to pass from the idea of an object to that of its usual attendant.

But tho' this be the only reasonable account we can give of necessity, the contrary notion is so riveted in the mind from the principles above-mention'd, that I doubt not but my sentiments will be treated by many as extravagant and ridiculous. What! the efficacy of causes lie in the determination of the mind! As if causes did not operate entirely independent of the mind, and wou'd not continue their operation, even tho' there was no mind existent to contemplate them, or reason concerning them. Thought may well depend on causes for its operation, but not causes on thought. This is to reverse the order of nature, and make that secondary, which is really primary. To every operation there is a power proportion'd; and this power must be plac'd on the body, that operates. If we remove the power from one cause, we must ascribe it to another: But to remove it from all causes, and bestow it on a being, that is no ways related to the cause or effect, but by perceiving them, is a gross absurdity, and contrary to the most certain principles of human reason.

I can only reply to all these arguments, that the case is here much the same, as if a blind man shou'd pretend to find a great many absurdities in the supposition, that the colour of scarlet is not the same with the sound of a trumpet, nor light the same with solidity. If we have really no idea of a power or efficacy in any object, or of any real connexion betwixt causes and effects, 'twill be to little purpose to prove, that an efficacy is necessary in all operations. We do not understand our own meaning in talking so, but ignorantly confound ideas, which are entirely distinct from each other. I am, indeed, ready to allow, that there may be several qualities both in material and immaterial objects, with which we are utterly unacquainted; and if we please to call these *power* or *efficacy*, 'twill be of little consequence to the world. But when, instead of meaning these unknown qualities, we make the terms of power and efficacy signify something, of which we have a clear idea, and which is incompatible with those objects, to which we apply it, obscurity and error begin then to take place, and we are led astray by a false philosophy. This is the case, when we transfer the determination of the thought to external objects, and suppose any real intelligible connexion betwixt them; that being a quality, which can only belong to the mind that considers them.

As to what may be said, that the operations of nature are independent of our thought and reasoning, I allow it; and accordingly have observ'd, that objects bear to each other the relations of contiguity and succession; that like objects may be observ'd in several instances to have like relations; and that all this is independent of, and antecedent to the operations of the understanding. But if we go any farther, and

ascribe a power or necessary connexion to these objects; this is what we can never observe in them, but must draw the idea of it from what we feel internally in contemplating them. And this I carry so far, that I am ready to convert my present reasoning into an instance of it, by a subtility, which it will not be difficult to comprehend.

When any object is presented to us, it immediately conveys to the mind a lively idea of that object, which is usually found to attend it; and this determination of the mind forms the necessary connexion of these objects. But when we change the point of view, from the objects to the perceptions; in that case the impression is to be considered as the cause, and the lively idea as the effect; and their necessary connexion is that new determination, which we feel to pass from the idea of the one to that of the other. The uniting principle among our internal perceptions is as unintelligible as that among external objects, and is not known to us any other way than by experience. Now the nature and effects of experience have been already sufficiently examin'd and explain'd. It never gives us any insight into the internal structure or operating principle of objects, but only accustoms the mind to pass from one to another.

'Tis now time to collect all the different parts of this reasoning, and by joining them together form an exact definition of the relation of cause and effect, which makes the subject of the present enquiry. This order wou'd not have been excusable, of first examining our inference from the relation before we had explain'd the relation itself, had it been possible to proceed in a different method. But as the nature of the relation depends so much on that of the inference, we have been oblig'd to advance in this seemingly preposterous manner, and make use of terms before we were able exactly to define them, or fix their meaning. We shall now correct this fault by giving a precise definition of cause and effect.

There may two definitions be given of this relation, which are only different, by their presenting a different view of the same object, and making us consider it either as a *philosophical* or as a *natural* relation; either as a comparison of two ideas, or as an association betwixt them. We may define a cause to be 'An object precedent and contiguous to another, and where all the objects resembling the former are plac'd in like relations of precedence and contiguity to those objects, that resemble the latter.' If this definition be esteem'd defective, because drawn from objects foreign to the cause, we may substitute this other definition in its place, *viz.* 'A cause is an object precedent and contiguous to another, and so united with it, that the idea of the one determines the mind to form the idea of the other, and the impression of the one to form a more lively idea of the other.' Shou'd this definition also be rejected for the same reason, I know no other remedy, than that the persons, who express this delicacy, should substitute a juster definition in its place. But for my part I must own my incapacity for such an undertaking. When I examine with the utmost accuracy those objects, which are commonly denominated causes and effects, I find, in considering a single instance, that the one object is precedent and contiguous to the other; and in enlarging my view to consider several instances, I find only, that like objects are constantly plac'd in like relations of succession and contiguity. Again, when I consider the influence of this constant conjunction, I perceive, that such a relation can never be an object of reasoning, and can never operate upon the mind, but by means of custom, which determines the imagination to make a transition from the idea of one object to that of its usual attendant, and from the impression of one to a more lively idea of the other. However extraordinary these sentiments may appear, I think it fruitless to trouble myself with any farther enquiry or reasoning upon the subject, but shall repose myself on them as on establish'd maxims.

'Twill only be proper, before we leave this subject, to draw some corollaries from it, by which we may remove several prejudices and popular errors, that have very much prevail'd in philosophy. First, We

may learn from the foregoing doctrine, that all causes are of the same kind, and that in particular there is no foundation for that distinction, which we sometimes make betwixt efficient causes, and causes *sine qua non*; or betwixt efficient causes, and formal, and material, and exemplary, and final causes. For as our idea of efficiency is deriv'd from the constant conjunction of two objects, wherever this is observ'd, the cause is efficient; and where it is not, there can never be a cause of any kind. For the same reason we must reject the distinction betwixt *cause* and *occasion*, when suppos'd to signify any thing essentially different from each other. If constant conjunction be imply'd in what we call occasion, 'tis a real cause. If not, 'tis no relation at all, and cannot give rise to any argument or reasoning.

Secondly, The same course of reasoning will make us conclude, that there is but one kind of *necessity*, as there is but one kind of cause, and that the common distinction betwixt *moral* and *physical* necessity is without any foundation in nature. This clearly appears from the precedent explication of necessity. 'Tis the constant conjunction of objects, along with the determination of the mind, which constitutes a physical necessity: And the removal of these is the same thing with *chance*. As objects must either be conjoin'd or not, and as the mind must either be determin'd or not to pass from one object to another, 'tis impossible to admit of any medium betwixt chance and an absolute necessity. In weakening this conjunction and determination you do not change the nature of the necessity; since even in the operation of bodies, these have different degrees of constancy and force, without producing a different species of that relation.

The distinction, which we often make betwixt *power* and the *exercise* of it, is equally without foundation.

Thirdly, We may now be able fully to overcome all that repugnance, which 'tis so natural for us to entertain against the foregoing reasoning, by which we endeavour'd to prove, that the necessity of a cause to every beginning of existence is not founded on any arguments either demonstrative or intuitive. Such an opinion will not appear strange after the foregoing definitions. If we define a cause to be *an object precedent and contiguous to another, and where all the objects resembling the former are plac'd in a like relation of priority and contiguity to those objects, that resemble the latter;* we may easily conceive, that there is no absolute nor metaphysical necessity, that every beginning of existence shou'd be attended with such an object. If we define a cause to be, *An object precedent and contiguous to another, and so united with it in the imagination, that the idea of the one determines the mind to form the idea of the other, and the impression of the one to form a more lively idea of the other;* we shall make still less difficulty of assenting to this opinion. Such an influence on the mind is in itself perfectly extraordinary and incomprehensible; nor can we be certain of its reality, but from experience and observation.

I shall add as a fourth corollary, that we can never have reason to believe that any object exists, of which we cannot form an idea. For as all our reasonings concerning existence are deriv'd from causation, and as all our reasonings concerning causation are deriv'd from the experience'd conjunction of objects, not from any reasoning or reflection, the same experience must give us a notion of these objects, and must remove all mystery from our conclusions. This is so evident, that 'twou'd scarce have merited our attention, were it not to obviate certain objections of this kind, which might arise against the following reasonings concerning *matter* and *substance*. I need not observe, that a full knowledge of the object is not requisite, but only of those qualities of it, which we believe to exist.

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1. See Mr. *Locke*; chapter of power.

2. See Father *Malbranche*, Book VI. Part ii. chap. 3, and the illustrations upon it.
3. Sect. 6.
4. Part. IV. sect. 5.

# Section XV. Rules by which to judge of causes and effects

According to the precedent doctrine, there are no objects, which by the mere survey, without consulting experience, we can determine to be the causes of any other; and no objects, which we can certainly determine in the same manner not to be the causes. Any thing may produce any thing. Creation, annihilation, motion, reason, volition; all these may arise from one another, or from any other object we can imagine. Nor will this appear strange, if we compare two principles explain'd above, *that the constant conjunction of objects determines their causation*, and [1] *that properly speaking, no objects are contrary to each other, but existence and non-existance*. Where objects are not contrary, nothing hinders them from having that constant conjunction, on which the relation of cause and effect totally depends. Since therefore 'tis possible for all objects to become causes or effects to each other, it may be proper to fix some general rules, by which we may know when they really are so.

1. The cause and effect must be contiguous in space and time.

2. The cause must be prior to the effect.

3. There must be a constant union betwixt the cause and effect. 'Tis chiefly this quality, that constitutes the relation.

4. The same cause always produces the same effect, and the same effect never arises but from the same cause. This principle we derive from experience, and is the source of most of our philosophical reasonings. For when by any clear experiment we have discover'd the causes or effects of any phænomenon, we immediately extend our observation to every phænomenon of the same kind, without waiting for that constant repetition, from which the first idea of this relation is deriv'd.

5. There is another principle, which hangs upon this, *viz.* that where several different objects produce the same effect, it must be by means of some quality, which we discover to be common amongst them. For as like effects imply like causes, we must always ascribe the causation to the circumstance, wherein we discover the resemblance.

6. The following principle is founded on the same reason. The difference in the effects of two resembling objects must proceed from that particular, in which they differ. For as like causes always produce like effects, when in any instance we find our expectation to be disappointed, we must conclude that this irregularity proceeds from some difference in the causes.

7. When any object encreases or diminishes with the encrease or diminution of its cause, 'tis to be regarded as a compounded effect, deriv'd from the union of the several different effects, which arise from the several different parts of the cause. The absence or presence of one part of the cause is here suppos'd to be always attended with the absence or presence of a proportionable part of the effect. This

constant conjunction sufficiently proves, that the one part is the cause of the other. We must, however, beware not to draw such a conclusion from a few experiments; A certain degree of heat gives pleasure; if you diminish that heat, the pleasure diminishes; but it does not follow, that if you augment it beyond a certain degree, the pleasure will likewise augment; for we find that it degenerates into pain.

8. The eighth and last rule I hall take notice of is, that an object, which exists for any time in its full perfection without any effect, is not the sole cause of that effect, but requires to be assisted by some other principle, which may forward its influence and operation. For as like effects necessarily follow from like causes, and in a contiguous time and place, their separation for a moment shews, that these causes are compleat ones.

Here is all the Logic I think proper to employ in my reasoning; and perhaps even this was not very necessary, but might have been supply'd by the natural principles of our understanding. Our scholastic headpieces and logicians shew no such superiority above the mere vulgar in their reason and ability, as to give us any inclination to imitate them in delivering a long system of rules and precepts to direct our judgment, in philosophy. All the rules of this nature are very easy in their invention, but extremely difficult in their application; and even experimental philosophy, which seems the most natural and simple of any, requires the utmost stretch of human judgment. There is no phænomenon in nature, but what is compounded and modify'd by so many different circumstances, that in order to arrive at the decisive point, we must carefully separate whatever is superfluous, and enquire by new experiments, if every particular circumstance of the first experiment was essential to it. These new experiments are liable to a discussion of the same kind; so that the utmost constancy is requir'd to make us persevere in our enquiry, and the utmost sagacity to choose the right way among so many that present themselves. If this be the case even in natural philosophy, how much more in moral, where there is a much greater complication of circumstances, and where those views and sentiments, which are essential to any action of the mind, are so implicit and obscure, that they often escape our strictest attention, and are not only unaccountable in their causes, but even unknown in their existence? I am much afraid, lest the small success I meet with in my enquiries will make this observation bear the air of an apology rather than of boasting.

If any thing can give me security in this particular, 'twill be the enlarging the sphere of my experiments as much as possible; for which reason it may be proper in this place to examine the reasoning faculty of brutes, as well as that of human creatures.

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1. Part I. sect. 5.

# Section XVI. Of the reason of animals

Next to the ridicule of denying an evident truth, is that of taking much pains to defend it; and no truth appears to me more evident, than that beasts are endow'd with thought and reason as well as men. The arguments are in this case so obvious, that they never escape the most stupid and ignorant.

We are conscious, that we ourselves, in adapting means to ends, are guided by reason and design, and that 'tis not ignorantly nor casually we perform those actions, which tend to self-preservation, to the obtaining pleasure, and avoiding pain. When therefore we see other creatures, in millions of instances, perform like actions, and direct them to like ends, all our principles of reason and probability carry us

with an invincible force to believe the existence of a like cause. 'Tis needless in my opinion to illustrate this argument by the enumeration of particulars. The smallest attention will supply us with more than are requisite. The resemblance betwixt the actions of animals and those of men is so entire in this respect, that the very first action of the first animal we shall please to pitch on, will afford us an incontestable argument for the present doctrine.

This doctrine is as useful as it is obvious, and furnishes us with a kind of touchstone, by which we may try every system in this species of philosophy. 'Tis from the resemblance of the external actions of animals to those we ourselves perform, that we judge their internal likewise to resemble ours; and the same principle of reasoning, carry'd one step farther, will make us conclude that since our internal actions resemble each other, the causes, from which they are deriv'd, must also be resembling. When any hypothesis, therefore, is advanc'd to explain a mental operation, which is common to men and beasts, we must apply the same hypothesis to both; and as every true hypothesis will abide this trial, so I may venture to affirm, that no false one will ever be able to endure it. The common defect of those systems, which philosophers have employ'd to account for the actions of the mind, is, that they suppose such a subtility and refinement of thought, as not only exceeds the capacity of mere animals, but even of children and the common people in our own species; who are notwithstanding susceptible of the same emotions and affections as persons of the most accomplish'd genius and understanding. Such a subtility is a clear proof of the falshood, as the contrary simplicity of the truth, of any system.

Let us therefore put our present system concerning the nature of the understanding to this decisive trial, and see whether it will equally account for the reasonings of beasts as for these of the human species.

Here we must make a distinction betwixt those actions of animals, which are of a vulgar nature, and seem to be on a level with their common capacities, and those more extraordinary instances of sagacity, which they sometimes discover for their own preservation, and the propagation of their species. A dog, that avoids fire and precipices, that shuns strangers, and caresses his master, affords us an instance of the first kind. A bird, that chooses with such care and nicety the place and materials of her nest, and sits upon her eggs for a due time, and in a suitable season, with all the precaution that a chymist is capable of in the most delicate projection, furnishes us with a lively instance of the second.

As to the former actions, I assert they proceed from a reasoning, that is not in itself different, nor founded on different principles, from that which appears in human nature. 'Tis necessary in the first place, that there be some impression immediately present to their memory or senses, in order to be the foundation of their judgment. From the tone of voice the dog infers his master's anger, and foresees his own punishment. From a certain sensation affecting his smell, he judges his game not to be far distant from him.

Secondly, The inference he draws from the present impression is built on experience, and on his observation of the conjunction of objects in past instances. As you vary this experience, he varies his reasoning. Make a beating follow upon one sign or motion for some time, and afterwards upon another; and he will successively draw different conclusions, according to his most recent experience.

Now let any philosopher make a trial, and endeavour to explain that act of the mind, which we call *belief* and give an account of the principles, from which it is deriv'd, independent of the influence of custom on the imagination, and let his hypothesis be equally applicable to beasts as to the human species; and after he has done this, I promise to embrace his opinion. But at the same time I demand as

an equitable condition, that if my system be the only one, which can answer to all these terms, it may be receiv'd as entirely satisfactory and convincing. And that 'tis the only one, is evident almost without any reasoning. Beasts certainly never perceive any real connexion among objects. 'Tis therefore by experience they infer one from another. They can never by any arguments form a general conclusion, that those objects, of which they have had no experience, resemble those of which they have. 'Tis therefore by means of custom alone, that experience operates upon them. All this was sufficiently evident with respect to man. But with respect to beasts there cannot be the least suspicion of mistake; which must be own'd to be a strong confirmation, or rather an invincible proof of my system.

Nothing shews more the force of habit in reconciling us to any phænomenon, than this, that men are not astonish'd at the operations of their own reason, at the same time, that they admire the *instinct* of animals, and find a difficulty in explaining it, merely because it cannot be reduc'd to the very same principles. To consider the matter aright, reason is nothing but a wonderful and unintelligible instinct in our which carries us along a certain train of ideas, and endows them with particular qualities, according to their particular situations and relations. This instinct, 'tis true, arises from past observation and experience; but can any one give the ultimate reason, why past experience and observation produces such an effect, any more than why nature alone shou'd produce it? Nature may certainly produce whatever can arise from habit: Nay, habit is nothing but one of the principles of nature, and derives all its force from that origin.

# Part IV: Of the sceptical and other systems of philosophy

## Section I. Of scepticism with regard to reason

In all demonstrative sciences the rules are certain and infallible; but when we apply them, our fallible and uncertain faculties are very apt to depart from them, and fall into error. We must, therefore, in every reasoning form a new judgment, as a check or controul on our first judgment or belief; and must enlarge our view to comprehend a kind of history of all the instances, wherein our understanding has deceiv'd us, compar'd with those, wherein its testimony was just and true. Our reason must be consider'd as a kind of cause, of which truth is the natural effect; but such-a-one as by the irruption of other causes, and by the inconstancy of our mental powers, may frequently be prevented. By this means all knowledge degenerates into probability; and this probability is greater or less, according to our experience of the veracity or deceitfulness of our understanding, and according to the simplicity or intricacy of the question.

There is no Algebraist nor Mathematician so expert in his science, as to place entire confidence in any truth immediately upon his discovery of it, or regard it as any thing, but a mere probability. Every time he runs over his proofs, his confidence encreases; but still more by the approbation of his friends; and is rais'd to its utmost perfection by the universal assent and applauses of the learned world. Now 'tis evident, that this gradual encrease of assurance is nothing but the addition of new probabilities, and is deriv'd from the constant union of causes and effects, according to past experience and observation.

In accompts of any length or importance, Merchants seldom trust to the infallible certainty of numbers for their security; but by the artificial structure of the accompts, produce a probability beyond what is deriv'd from the skill and experience of the accomptant. For that is plainly of itself some degree of probability; tho' uncertain and variable, according to the degrees of his experience and length of the accompt. Now as none will maintain, that our assurance in a long numeration exceeds probability, I may safely affirm, that there scarce is any proposition concerning numbers, of which we can have a fuller security. For 'tis easily possible, by gradually diminishing the numbers, to reduce the longest series of addition to the most simple question, which can be form'd, to an addition of two single numbers; and upon this supposition we shall find it impracticable to shew the precise limits of knowledge and of probability, or discover that particular number, at which the one ends and the other begins. But knowledge and probability are of such contrary and disagreeing natures, that they cannot well run insensibly into each other, and that because they will not divide, but must be either entirely present, or entirely absent. Besides, if any single addition were certain, every one wou'd be so, and consequently the whole or total sum; unless the whole can be different from all its parts. I had almost said, that this was certain; but I reflect, that it must reduce *itself*, as well as every other reasoning, and from knowledge degenerate into probability.

Since therefore all knowledge resolves itself into probability, and becomes at last of the same nature with that evidence, which we employ in common life, we must now examine this latter species of reasoning, and see on what foundation it stands.

In every judgment, which we can form concerning probability, as well as concerning knowledge, we ought always to correct the first judgment, deriv'd from the nature of the object, by another judgment, deriv'd from the nature of the understanding. 'Tis certain a man of solid sense and long experience ought to have, and usually has, a greater assurance in his opinions, than one that is foolish and ignorant, and that our sentiments have different degrees of authority, even with ourselves, in proportion to the degrees of our reason and experience. In the man of the best sense and longest experience, this authority is never entire; since even such-a-one must be conscious of many errors in the past, and must still dread the like for the future. Here then arises a new species of probability to correct and regulate the first, and fix its just standard and proportion. As demonstration is subject to the controul of probability, so is probability liable to a new correction by a reflex act of the mind, wherein the nature of our understanding, and our reasoning from the first probability become our objects.

Having thus found in every probability, beside the original uncertainty inherent in the subject, a new uncertainty deriv'd from the weakness of that faculty, which judges, and having adjusted these two together, we are oblig'd by our reason to add a new doubt deriv'd from the possibility of error in the estimation we make of the truth and fidelity of our faculties. This is a doubt, which immediately occurs to us, and of which, if we wou'd closely pursue our reason, we cannot avoid giving a decision. But this decision, tho' it shou'd be favourable to our preceding judgment, being founded only on probability, must weaken still further our first evidence, and must itself be weaken'd by a fourth doubt of the same kind, and so on *in infinitum*; till at last there remain nothing of the original probability, however great we may suppose it to have been, and however small the diminution by every new uncertainty. No finite Object can subsist under a decrease repeated *in infinitum*; and even the vastest quantity, which can enter into human imagination, must in this manner be reduc'd to nothing. Let our first belief be never so strong, it must infallibly perish by passing thro' so many new examinations, of which each diminishes somewhat of its force and vigour. When I reflect on the natural fallibility of my judgment, I have less confidence in my opinions, than when I only consider the objects concerning which I reason; and when I proceed still farther, to turn the scrutiny against every successive estimation I make of my faculties, all the rules of logic require a continual diminution, and at last a total extinction of belief and evidence.

Shou'd it here be ask'd me, whether I sincerely assent to this argument, which I seem to take such pains to inculcate, and whether I be really one of those sceptics, who hold that all is uncertain, and that our judgment is not in my thing possest of *any* measures of truth and falshood; I shou'd reply, that this question is entirely superfluous, and that neither I, nor any other person was ever sincerely and constantly of that opinion. Nature, by an absolute and uncontroulable necessity has determin'd us to judge as well as to breathe and feel; nor can we any more forbear viewing certain objects in a stronger and fuller light, upon account of their customary connexion with a present impression, than we can hinder ourselves from thinking as long as we are awake, or seeing the surrounding bodies, when we turn our eyes towards them in broad sunshine. Whoever has taken the pains to refute the cavils of this *total*scepticism, has really disputed without an antagonist, and endeavour'd by arguments to establish a faculty, which nature has antecedently implanted in the mind, and render'd unavoidable.

My intention then in displaying so carefully the arguments of that fantastic sect, is only to make the reader sensible of the truth of my hypothesis, *that all our reasonings concerning causes and effects are deriv'd from nothing but custom; and that belief is more properly an act of the sensitive, than of the cogitative part of our natures.* I have here prov'd, that the very same principles, which make us form a decision upon any subject, and correct that decision by the consideration of our genius and capacity,

and of the situation of our mind, when we examin'd that subject; I say, I have prov'd, that these same principles, when carry'd farther, and apply'd to every new reflex judgment, must, by continually diminishing the original evidence, at last reduce it to nothing, and utterly subvert all belief and opinion. If belief, therefore, were a simple act of the thought, without any peculiar manner of conception, or the addition of a force and vivacity, it must infallibly destroy itself, and in every case terminate in a total suspense of judgment. But as experience will sufficiently convince any one, who thinks it worth while to try, that tho' he can find no error in the foregoing arguments, yet he still continues to believe, and think, and reason as usual, he may safely conclude, that his reasoning and belief is some sensation or peculiar manner of conception, which 'tis impossible for mere ideas and reflections to destroy.

But here, perhaps, it may be demanded, how it happens, even upon my hypothesis, that these arguments above explain'd produce not a total suspense of judgment, and after what manner the mind ever retains a degree of assurance in any subject? For as these new probabilities, which by their repetition perpetually diminish the original evidence, are founded on the very same principles, whether of thought or sensation, as the primary judgment, it may seem unavoidable, that in either case they must equally subvert it, and by the opposition, either of contrary thoughts or sensations, reduce the mind to a total uncertainty. I suppose, there is some question propos'd to me, and that after revolving over the impressions of my memory and senses, and carrying my thoughts from them to such objects, as are commonly conjoin'd with them, I feel a stronger and more forcible conception on the one side, than on the other. This strong conception forms my first decision. I suppose, that afterwards I examine my judgment itself, and observing from experience, that 'tis sometimes just and sometimes erroneous, I consider it as regulated by contrary principles or causes, of which some lead to truth, and some to error; and in balancing these contrary causes, I diminish by a new probability the assurance of my first decision. This new probability is liable to the same diminution as the foregoing, and so on, *in infinitum* . 'Tis therefore demanded, *how it happens, that even after all we retain a degree of belief, which is sufficient for our purpose, either in philosophy or common life.*

I answer, that after the first and second decision; as the action of the mind becomes forc'd and unnatural, and the ideas faint and obscure; tho' the principles of judgment, and the balancing of opposite causes be the same as at the very beginning; yet their influence on the imagination, and the vigour they add to, or diminish from the thought, is by no means equal. Where the mind reaches not its objects with easiness and facility, the same principles have not the same effect as in a more natural conception of the ideas; nor does the imagination feel a sensation, which holds any proportion with that which arises from its common judgments and opinions. The attention is on the stretch: The posture of the mind is uneasy; and the spirits being diverted from their natural course, are not govern'd in their movements by the same laws, at least not to the same degree, as when they How in their usual channel.

If we desire similar instances, 'twill not be very difficult to find them. The present subject of metaphysics will supply us abundantly. The same argument, which wou'd have been esteem'd convincing in a reasoning concerning history or politics, has little or no influence in these abstruser subjects, even tho' it be perfectly comprehended; and that because there is requir'd a study and an effort of thought, in order to its being comprehended: And this effort of thought disturbs the operation of our sentiments, on which the belief depends. The case is the same in other subjects. The straining of the imagination always hinders the regular flowing of the passions and sentiments. A tragic poet, that wou'd represent his heroes as very ingenious and witty in their misfortunes, wou'd never touch the passions. As the emotions of the soul prevent any subtile reasoning and reflection, so these latter actions of the mind are equally prejudicial to the former. The mind, as well as the body, seems to be

endow'd with a certain precise degree of force and activity, which it never employs in one action, but at the expence of all the rest. This is more evidently true, where the actions are of quite different natures; since in that case the force of the mind is not only diverted, but even the disposition chang'd, so as to render us incapable of a sudden transition from one action to the other, and still more of performing both at once. No wonder, then, the conviction, which arises from a subtile reasoning, diminishes in proportion to the efforts, which the imagination makes to enter into the reasoning, and to conceive it in all its parts. Belief, being a lively conception, can never be entire, where it is not founded on something natural and easy.

This I take to be the true state of the question, and cannot approve of that expeditious way, which some take with the sceptics, to reject at once all their arguments without enquiry or examination. If the sceptical reasonings be strong, say they, 'tis a proof, that reason may have some force and authority: if weak, they can never be sufficient to invalidate all the conclusions of our understanding. This argument is not just; because the sceptical reasonings, were it possible for them to exist, and were they not destroy'd by their subtility, wou'd be successively both strong and weak, according to the successive dispositions of the mind. Reason first appears in possession of the throne, prescribing laws, and imposing maxims, with an absolute sway and authority. Her enemy, therefore, is oblig'd to take shelter under her protection, and by making use of rational arguments to prove the fallaciousness and imbecility of reason, produces, in a manner, a patent under her hand and seal. This patent has at first an authority, proportion'd to the present and immediate authority of reason, from which it is deriv'd. But as it is suppos'd to be contradictory to reason, it gradually diminishes the force of that governing power, and its own at the same time; till at last they both vanish away into nothing, by a regular and just diminution. The sceptical and dogmatical reasons are of the same kind, tho' contrary in their operation and tendency; so that where the latter is strong, it has an enemy of equal force in the former to encounter; and as their forces were at first equal, they still continue so, as long as either of them subsists; nor does one of them lose any force in the contest, without taking as much from its antagonist. 'Tis happy, therefore, that nature breaks the force of all sceptical arguments in time, and keeps them from having any considerable influence on the understanding. Were we to trust entirely to their self-destruction, that can never take place, 'till they have first subverted all conviction, and have totally destroy'd human reason.

# Section II. Of scepticism with regard to the senses

Thus the sceptic still continues to reason and believe, even tho' he asserts, that he cannot defend his reason by reason; and by the same rule he must assent to the principle concerning the existence of body, tho' he cannot pretend by any arguments of philosophy to maintain its veracity. Nature has not left this to his choice, and has doubtless esteem'd it an affair of too great importance to be trusted to our uncertain reasonings and speculations. We may well ask, *What causes induce us to believe in the existence of body?* but 'tis in vain to ask, *Whither there be body or not?* That is a point, which we must take for granted in all our reasonings.

The subject, then, of our present enquiry is concerning the *causes* which induce us to believe in the existence of body: And my reasonings on this head I shall begin with a distinction, which at first sight may seem superfluous, but which will contribute very much to the perfect understanding of what follows. We ought to examine apart those two questions, which are commonly confounded together,

*viz*. Why we attribute a continu'd existence to objects, even when they are not present to the senses; and why we suppose them to have an existence distinct from the mind and perception. Under this last head I comprehend their situation as well as relations, their external position as well as the *independence* of their existence and operation. These two questions concerning the continu'd and distinct existence of body are intimately connected together. For if the objects of our senses continue to exist, even when they are not perceiv'd, their existence is of course independent of and distinct from the perception; and *vice versa*, if their existence be independent of the perception and distinct from it, they must continue to exist, even tho' they be not perceiv'd. But tho' the decision of the one question decides the other; yet that we may the more easily discover the principles of human nature, from whence the decision arises, we shall carry along with us this distinction, and shall consider, whether it be the *senses*, *reason*, or the *imagination*, that produces the opinion of a *continu'd* or of a *distinct* existence. These are the only questions, that are intelligible on the present subject. For as to the notion of external existence, when taken for something specifically different from our perceptions,[1] we have already shewn its absurdity.

To begin with the senses, 'tis evident these faculties are incapable of giving rise to the notion of the *continu'd* existence of their objects, after they no longer appear to the senses. For that is a contradiction in terms, and supposes that the senses continue to operate, even after they have ceas'd all manner of operation. These faculties, therefore, if they have any influence in the present case, must produce the opinion of a distinct, not of a continu'd existence; and in order to that, must present their impressions either as images and representations, or as these very distinct and external existences.

That our senses offer not their impressions as the images of something *distinct*, or *independent*, and *external*, is evident; because they convey to us nothing but a single perception, and never give us the least intimation of any thing beyond. A single perception can never produce the idea of a double existence, but by some inference either of the reason or imagination. When the mind looks farther than what immediately appears to it, its conclusions can never be put to the account of the senses; and it certainly looks farther, when from a single perception it infers a double existence, and supposes the relations of resemblance and causation betwixt them.

If our senses, therefore, suggest any idea of distinct existences, they must convey the impressions as those very existences, by a kind of fallacy and illusion. Upon this head we may observe, that all sensations are felt by the mind, such as they really are, and that when we doubt, whether they present themselves as distinct objects, or as mere impressions, the difficulty is not concerning their nature, but concerning their relations and situation. Now if the senses presented our impressions as external to, and independent of ourselves, both the objects and ourselves must be obvious to our senses, otherwise they cou'd not be compar'd by these faculties. The difficulty, then, is how far we are ourselves the objects of our senses.

'Tis certain there is no question in philosophy more abstruse than that concerning identity, and the nature of the uniting principle, which constitutes a person. So far from being able by our senses merely to determine this question, we must have recourse to the most profound metaphysics to give a satisfactory answer to it; and in common life 'tis evident these ideas of self and person are never very fix'd nor determinate. 'Tis absurd, therefore, to imagine the senses can ever distinguish betwixt ourselves and external objects.

Add to this, that every impression, external and internal, passions, affections, sensations, pains and pleasures, are originally on the same footing; and that whatever other differences we may observe

among them, they appear, all of them, in their true colours, as impressions or perceptions. And indeed, if we consider the matter aright, 'tis scarce possible it shou'd be otherwise, nor is it conceivable that our senses shou'd be more capable of deceiving us in the situation and relations, than in the nature of our impressions. For since all actions and sensations of the mind are known to us by consciousness, they must necessarily appear in every particular what they are, and be what they appear. Every thing that enters the mind, being in *reality* as the perception, 'tis impossible any thing shou'd to *feeling* appear different. This were to suppose, that even where we are most intimately conscious, we might be mistaken.

But not to lose time in examining, whether 'tis possible for our senses to deceive us, and represent our perceptions as distinct from ourselves, that is as *external* to and *independent* of us; let us consider whether they really do so, and whether this error proceeds from an immediate sensation, or from some other causes.

To begin with the question concerning *external* existence, it may perhaps be said, that setting aside the metaphysical question of the identity of a thinking substance, our own body evidently belongs to us; and as several impressions appear exterior to the body, we suppose them also exterior to ourselves. The paper, on which I write at present, is beyond my hand. The table is beyond the paper. The walls of the chamber beyond the table. And in casting my eye towards the window, I perceive a great extent of fields and buildings beyond my chamber. From all this it may be infer'd, that no other faculty is requir'd, beside the senses, to convince us of the external existence of body. But to prevent this inference, we need only weigh the three following considerations. *First*, That, properly speaking, 'tis not our body we perceive, when we regard our limbs and members, but certain impressions, which enter by the senses; so that the ascribing a real and corporeal existence to these impressions, or to their objects, is an act of the mind as difficult to explain, as that which we examine at present. *Secondly*, Sounds, and tastes, and smells, tho' commonly regarded by the mind as continu'd independent qualities, appear not to have any existence in extension, and consequently cannot appear to the senses as situated externally to the body. The reason, why we ascribe a place to them, shall be consider'd[2] afterwards. *Thirdly*, Even our sight informs us not of distance or outness (so to speak) immediately and without a certain reasoning and experience, as is acknowledge'd by the most rational philosophers.

As to the *independency* of our perceptions on ourselves, this can never be an object of the senses; but any opinion we form concerning it, must be deriv'd from experience and observation: And we shall see afterwards, that our conclusions from experience are far from being favourable to the doctrine of the independency of our perceptions. Mean while we may observe that when we talk of real distinct existences, we have commonly more in our eye their in dependency than external situation in place, and think an object has a sufficient reality, when its Being is uninterrupted, and independent of the incessant revolutions, which we are conscious of in ourselves.

Thus to resume what I have said concerning the senses; they give us no notion of continu'd existence, because they cannot operate beyond the extent, in which they really operate. They as little produce the opinion of a distinct existence, because they neither can offer it to the mind as represented, nor as original. To offer it as represented, they must present both an object and an image. To make it appear as original, they must convey a falshood; and this falshood must lie in the relations and situation: In order to which they must be able to compare the object with ourselves; and even in that case they do not, nor is it possible they shou'd, deceive us. We may, therefore, conclude with certainty, that the opinion of a continu'd and of a distinct existence never arises from the senses.

To confirm this we may observe, that there are three different kinds of impressions convey'd by the senses. The first are those of the figure, bulk, motion and solidity of bodies. The second those of colours, tastes, smells, sounds, heat and cold. The third are the pains and pleasures, that arise from the application of objects to our bodies, as by the cutting of our flesh with steel, and such like. Both philosophers and the vulgar suppose the first of these to have a distinct continu'd existence. The vulgar only regard the second as on the same footing. Both philosophers and the vulgar, again, esteem the third to be merely perceptions; and consequently interrupted and dependent beings.

Now 'tis evident, that, whatever may be our philosophical opinion, colours, sounds, heat and cold, as far as appears to the senses, exist after the same manner with motion and solidity, and that the difference we make betwixt them in this respect, arises not from the mere perception. So strong is the prejudice for the distinct continu'd existence of the former qualities, that when the contrary opinion is advanc'd by modern philosophers, people imagine they can almost refute it from their feeling and experience, and that their very senses contradict this philosophy. 'Tis also evident, that colours, sounds, &c. are originally on the same footing with the pain that arises from steel, and pleasure that proceeds from a fire; and that the difference betwixt them is founded neither on perception nor reason, but on the imagination. For as they are confest to be, both of them, nothing but perceptions arising from the particularconfigurations and motions of the parts of body, wherein possibly can their difference consist? Upon the whole, then, we may conclude, that as far as the senses are judges, all perceptions are the same in the manner of their existence.

We may also observe in this instance of sounds and colours, that we can attribute a distinct continu'd existence to objects without ever consulting Reason, or weighing our opinions by any philosophical principles. And indeed, whatever convincing arguments philosophers may fancy they can produce to establish the belief of objects independent of the mind, 'tis obvious these arguments are known but to very few, and that 'tis not by them, that children, peasants, and the greatest part of mankind are induc'd to attribute objects to some impressions, and deny them to others. Accordingly we find, that all the conclusions, which the vulgar form on this head, are directly contrary to those, which are confirm'd by philosophy. For philosophy informs us, that every thing, which appears to the mind, is nothing but a perception, and is interrupted, and dependent on the mind; whereas the vulgar confound perceptions and objects, and attribute a distinct continu'd existence to the very things they feel or see. This sentiment, then, as it is entirely unreasonable, must proceed from some other faculty than the understanding. To which we may add, that as long as we take our perceptions and objects to be the same, we can never infer the existence of the one from that of the other, nor form any argument from the relation of cause and effect; which is the only one that can assure us of matter of fact. Even after we distinguish our perceptions from our objects, 'twill appear presently, that we are still incapable of reasoning from the existence of one to that of the other: So that upon the whole our reason neither does, nor is it possible it ever shou'd, upon any supposition, give us an assurance of the continu'd and distinct existence of body. That opinion must be entirely owing to the imagination which must now be the subject of our enquiry.

Since all impressions are internal and perishing existences, and appear as such, the notion of their distinct and continu'd existence must arise from a concurrence of some of their qualities with the qualities of the imagination; and since this notion does not extend to all of them, it must arise from certain qualities peculiar to some impressions. 'Twill therefore be easy for us to discover these qualities by a comparison of the impressions, to which we attribute a distinct and continu'd existence, with those, which we regard as internal and perishing.

We may observe, then, that 'tis neither upon account of the involuntariness of certain impressions, as is commonly suppos'd, nor of their superior force and violence, that we attribute to them a reality, and continu'd existence, which we refuse to others, that are voluntary or feeble. For 'tis evident our pains and pleasures, our passions and affections, which we never suppose to have any existence beyond our perception, operate with greater violence, and are equally involuntary, as the impressions of figure and extension, colour and sound, which we suppose to be permanent beings. The heat of a fire, when moderate, is suppos'd to exist in the fire; but the pain, which it causes upon a near approach, is not taken to have any being except in the perception.

These vulgar opinions, then, being rejected, we must search for some other hypothesis, by which we may discover those peculiar qualities in our impressions, which makes us attribute to them a distinct and continu'd existence.

After a little examination, we shall find, that all those objects, to which we attribute a continu'd existence, have a peculiar *constancy*, which distinguishes them from the impressions, whose existence depends upon our perception. Those mountains, and houses, and trees, which lie at present under my eye, have always appear'd to me in the same order; and when I lose sight of them by shutting my eyes or turning my head, I soon after find them return upon me without the least alteration. My bed and table, my books and papers, present themselves in the same uniform manner, and change not upon account of any interruption in my seeing or perceiving them. This is the case with all the impressions, whose objects are suppos'd to have an external existence; and is the case with no other impressions, whether gentle or violent, voluntary or involuntary.

This constancy, however, is not so perfect as not to admit of very considerable exceptions. Bodies often change their position and qualities, and after a little absence or interruption may become hardly knowable. But here 'tis observable, that even in these changes they preserve a *coherence*, and have a regular dependence on each other; which is the foundation of a kind of reasoning from causation, and produces the opinion of their continu'd existence. When I return to my chamber after an hour's absence, I find not my fire in the same situation, in which I left it: But then I am accustom'd in other instances to see a like alteration produc'd in a like time, whether I am present or absent, near or remote. This coherence, therefore, in their changes is one of the characteristics of external objects, as well as their constancy.

Having found that the opinion of the continu'd existence of body depends on the coherence and constancy of certain impressions, I now proceed to examine after what manner these qualities give rise to so extraordinary an opinion. To begin with the coherence; we may observe, that tho' those internal impressions, which we regard as fleeting and perishing, have also a certain coherence or regularity in their appearances, yet 'tis of somewhat a different nature, from that which we discover in bodies. Our passions are found by experience to have a mutual connexion with and dependence on each other; but on no occasion is it necessary to suppose, that they have existed and operated, when they were not perceiv'd, in order to preserve the same dependence and connexion, of which we have had experience. The case is not the same with relation to external objects. Those require a continu'd existence, or otherwise lose, in a great measure, the regularity of their operation. I am here seated in my chamber with my face to the fire; and all the objects, that strike my senses, are contain'd in a few yards around me. My memory, indeed, informs me of the existence of many objects; but then this information extends not beyond their past existence, nor do either my senses or memory give any testimony to the continuance of their being. When therefore I am thus seated, and revolve over these thoughts, I hear on a sudden a noise as of a door turning upon its hinges; and a little after

see a porter, who advances towards me. This gives occasion to many new reflections and reasonings. First, I never have observ'd, that this noise cou'd proceed from any thing but the motion of a door; and therefore conclude, that the present phænomenon is a contradiction to all past experience, unless the door, which I remember on t'other side the chamber, be still in being. Again, I have always found, that a human body was possest of a quality, which I call gravity, and which hinders it from mounting in the air, as this porter must have done to arrive at my chamber, unless the stairs I remember be not annihilated by my absence. But this is not all. I receive a letter, which upon opening it I perceive by the hand-writing and subscription to have come from a friend, who says he is two hundred leagues distant. 'Tis evident I can never account for this phænomenon, conformable to my experience in other instances, without spreading out in my mind the whole sea and continent between us, and supposing the effects and continu'd existence of posts and ferries, according to my memory and observation. To consider these phænomena of the porter and letter in a certain light, they are contradictions to common experience, and may be regarded as objections to those maxims, which we form concerning the connexions of causes and effects. I am accustom'd to hear such a sound, and see such an object in motion at the same time. I have not receiv'd in this particular instance both these perceptions. These observations are contrary, unless I suppose that the door still remains, and that it was open'd without my perceiving it: And this supposition, which was at first entirely arbitrary and hypothetical, acquires a force and evidence by its being the only one, upon which I can reconcile these contradictions. There is scarce a moment of my life, wherein there is not a similar instance presented to me, and I have not occasion to suppose the continu'd existence of objects, in order to connect their past and present appearances, and give them such an union with each other, as I have found by experience to be suitable to their particular natures and circumstances. Here then I am naturally led to regard the world, as something real and durable, and as preserving its existence, even when it is no longer present to my perception.

But tho' this conclusion from the coherence of appearances may seem to be of the same nature with our reasonings concerning causes and effects; as being deriv'd from custom, and regulated by past experience; we shall find upon examination, that they are at the bottom considerably different from each other, and that this inference arises from the understanding, and from custom in an indirect and oblique manner. For 'twill readily be allow'd, that since nothing is ever really present to the mind, besides its own perceptions, 'tis not only impossible, that any habit shou'd ever be acquir'd otherwise than by the regular succession of these perceptions, but also that any habit shou'd ever exceed that degree of regularity. Any degree, therefore, of regularity in our perceptions, can never be a foundation for us to infer a greater degree of regularity in some objects, which are not perceiv'd; since this supposes a contradiction, *viz.* a habit acquir'd by what was never present to the mind. But 'tis evident, that whenever we infer the continu'd existence of the objects of sense from their coherence, and the frequency of their union, 'tis in order to bestow on the objects a greater regularity than what is observ'd in our mere perceptions. We remark a connexion betwixt two kinds of objects in their past appearance to the senses, but are not able to observe this connexion to be perfectly constant, since the turning about of our head, or the shutting of our eyes is able to break it. What then do we suppose in this case, but that these objects still continue their usual connexion, notwithstanding their apparent interruption, and that the irregular appearances are join'd by something, of which we are insensible? But as all reasoning concerning matters of fact arises only from custom, and custom can only be the effect of repeated perceptions, the extending of custom and reasoning beyond the perceptions can never be the direct and natural effect of the constant repetition and connexion, but must arise from the co-operation of some other principles.

I have already[3] observ'd, in examining the foundation of mathematics, that the imagination, when set into any train of thinking, is apt to continue, even when its object fails it, and like a galley put in motion by the oars, carries on its course without any new impulse. This I have assign'd for the reason, why, after considering several loose standards of equality, and correcting them by each other, we proceed to imagine so correct and exact a standard of that relation, as is not liable to the least error or variation. The same principle makes us easily entertain this opinion of the continu'd existence of body. Objects have a certain coherence even as they appear to our senses; but this coherence is much greater and more uniform, if we suppose the objects to have a continu'd existence; and as the mind is once in the train of observing an uniformity among objects, it naturally continues, till it renders the uniformity as compleat as possible. The simple supposition of their continu'd existence suffices for this purpose, and gives us a notion of a much greater regularity among objects, than what they have when we look no farther than our senses.

But whatever force we may ascribe to this principle, I am afraid 'tis too weak to support alone so vast an edifice, as is that of the continu'd existence of all external bodies; and we must join the *constancy* of their appearance to the *coherence*, in order to give a satisfactory account of opinion. As the explication of this will lead me into a considerable compass of very profound reasoning; I think it proper, in order to avoid confusion, to give a short sketch or abridgment of my system, and afterwards draw out all its parts in their full compass. This inference from the constancy of our perceptions, like the precedent from their coherence, gives rise to the opinion of the *continu'd* existence of body, which is prior to that of its *distinct* existence, and produces that latter principle.

When we have been accustom'd to observe a constancy in certain impressions, and have found, that the perception of the sun or ocean, for instance, returns upon us after an absence or annihilation with like parts and in a like order, as at its first appearance, we are not apt to regard these interrupted perceptions as different, (which they really are) but on the contrary consider them as individually the same, upon account of their resemblance. But as this interruption of their existence is contrary to their perfect identity, and makes us regard the first impression as annihilated, and the second as newly created, we find ourselves somewhat at a loss, and are involv'd in a kind of contradiction. In order to free ourselves from this difficulty, we disguise, as much as possible, the interruption, or rather remove it entirely, by supposing that these interrupted perceptions are connected by a real existence, of which we are insensible. This supposition, or idea of continu'd existence, acquires a force and vivacity from the memory of these broken impressions, and from that propensity, which they give us, to suppose them the same; and according to the precedent reasoning, the very essence of belief consists in the force and vivacity of the conception.

In order to justify this system, there are four things requisite. *First*, To explain the *principium individuationis*, or principle of identity. *Secondly*, Give a reason, why the resemblance of our broken and interrupted perceptions induces us to attribute an identity to them. *Thirdly*, Account for that propensity, which this illusion gives, to unite these broken appearances by a continu'd existence. *Fourthly* and lastly, Explain that force and vivacity of conception, which arises from the propensity.

First, As to the principle of individuation; we may observe, that the view of any one object is not sufficient to convey the idea of identity. For in that proposition, *an object is the same with itself*, if the idea express'd by the word, *object*, were no ways distinguish'd from that meant by *itself*; we really shou'd mean nothing, nor wou'd the proposition contain a predicate and a subject, which however are imply'd in this affirmation. One single object conveys the idea of unity, not that of identity.

On the other hand, a multiplicity of objects can never convey this idea, however resembling they may be suppos'd. The mind always pronounces the one not to be the other, and considers them as forming two, three, or any determinate number of objects, whose existences are entirely distinct and independent.

Since then both number and unity are incompatible with the relation of identity, it must lie in something that is neither of them. But to tell the truth, at first sight this seems utterly impossible. Betwixt unity and number there can be no medium; no more than betwixt existence and non-existence. After one object is suppos'd to exist, we must either suppose another also to exist; in which case we have the idea of number: Or we must suppose it not to exist; in which case the first object remains at unity.

To remove this difficulty, let us have recourse to the idea of time or duration. I have already observ'd[4], that time, in a strict sense, implies succession, and that when we apply its idea to any unchangeable object, 'tis only by a fiction of the imagination, by which the unchangeable object is suppos'd to participate of the changes of the co-existent objects, and in particular of that of our perceptions. This fiction of the imagination almost universally takes place; and 'tis by means of it, that a single object, plac'd before us, and survey'd for any time without our discovering in it any interruption or variation, is able to give us a notion of identity. For when we consider any two points of this time, we may place them in different lights: We may either survey them at the very same instant; in which case they give us the idea of number, both by themselves and by the object; which must be multiply'd, in order to be conceiv'd at once, as existent in these two different points of time: Or on the other hand, we may trace the succession of time by alike succession of ideas, and conceiving first one moment, along with the object then existent, imagine afterwards a change in the time without any *variation* or *interruption* in the object; in which case it gives us the idea of unity. Here then is an idea, which is a medium betwixt unity and number; or more properly speaking, is either of them, according to the view, in which we take it: And this idea we call that of identity. We cannot, in any propriety of speech, say, that an object is the same with itself, unless we mean, that the object existent at one time is the same with itself existent at another. By this means we make a difference, betwixt the idea meant by the word, *object*, and that meant by *itself*, without going the length of number, and at the same time without restraining ourselves to a strict and absolute unity.

Thus the principle of individuation is nothing but the *invariableness* and *uninteruptedness* of any object, thro' a suppos'd variation of time, by which the mind can trace it in the different periods of its existence, without any break of the view, and without being oblig'd to form the idea of multiplicity or number.

I now proceed to explain the *second* part of my system, and shew why the constancy of our perceptions makes us ascribe to them a perfect numerical identity, tho' there be very long intervals betwixt their appearance, and they have only one of the essential qualities of identity, *viz. invariableness*. That I may avoid all ambiguity and confusion on this head, I shall observe, that I here account for the opinions and belief of the vulgar with regard to the existence of body; and therefore must entirely conform myself to their manner of thinking and of expressing themselves. Now we have already observ'd, that however philosophers may distinguish betwixt the objects and perceptions of the senses; which they suppose co-existent and resembling; yet this is a distinction, which is not comprehended by the generality of mankind, who as they perceive only one being, can never assent to the opinion of a double existence and representation. Those very sensations, which enter by the eye or ear, are with them the true objects, nor can they readily conceive that this pen or paper, which is

immediately perceiv'd, represents another, which is different from, but resembling it. In order, therefore, to accommodate myself to their notions, I shall at first suppose; that there is only a single existence, which I shall call indifferently *object* or *perception*, according as it shall seem best to suit my purpose, understanding by both of them what any common man means by a hat, or shoe, or stone, or any other impression, convey'd to him by his senses. I shall be sure to give warning, when I return to a more philosophical way of speaking and thinking.

To enter, therefore, upon the question concerning the source of the error and deception with regard to identity, when we attribute it to our resembling perceptions, notwithstanding their interruption; I must here recal an observation, which I have already prov'd and explain'd[5] . Nothing is more apt to make us mistake one idea for another, than any relation betwixt them, which associates them together in the imagination, and makes it pass with facility from one to the other. Of all relations, that of resemblance is in this respect the most efficacious; and that because it not only causes an association of ideas, but also of dispositions, and makes us conceive the one idea by an act or operation of the mind, similar to that by which we conceive the other. This circumstance I have observ'd to be of great moment; and we may establish it for a general rule, that whatever ideas place the mind in the same disposition or in similar ones, are very apt to be confounded. The mind readily passes from one to the other, and perceives not the change without a strict attention, of which, generally speaking, 'tis wholly incapable.

In order to apply this general maxim, we must first examine the disposition of the mind in viewing any object which preserves a perfect identity, and then find some other object, that is confounded with it, by causing a similar disposition. When we fix our thought on any object, and suppose it to continue the same for some time; 'tis evident we suppose the change to lie only in the time, and never exert ourselves to produce any new image or idea of the object. The faculties of the mind repose themselves in a manner, and take no more exercise, than what is necessary to continue that idea, of which we were formerly possest, and which subsists without variation or interruption. The passage from one moment to another is scarce felt, and distinguishes not itself by a different perception or idea, which may require a different direction of the spirits, in order to its conception.

Now what other objects, beside identical ones, are capable of placing the mind in the same disposition, when it considers them, and of causing the same uninterrupted passage of the imagination from one idea to another? This question is of the last importance. For if we can find any such objects, we may certainly conclude, from the foregoing principle, that they are very naturally confounded with identical ones, and are taken for them in most of our reasonings. But tho' this question be very important, 'tis not very difficult nor doubtful. For I immediately reply, that a succession of related objects places the mind in this disposition, and is consider'd with the same smooth and uninterrupted progress of the imagination, as attends the view of the same invariable object. The very nature and essence of relation is to connect our ideas with each other, and upon the appearance of one, to facilitate the transition to its correlative. The passage betwixt related ideas is, therefore, so smooth and easy, that it produces little alteration on the mind, and seems like the continuation of the same action; and as the continuation of the same action is an effect of the continu'd view of the same object, 'tis for this reason we attribute sameness to every succession of related objects. The thought slides along the succession with equal facility, as if it consider'd only one object; and therefore confounds the succession with the identity.

We shall afterwards see many instances of this tendency of relation to make us ascribe an *identity* to *different* objects; but shall here confine ourselves to the present subject. We find by experience, that there is such a *constancy* in almost all the impressions of the senses, that their interruption produces no alteration on them, and hinders them not from returning the same in appearance and in situation as at

their first existence. I survey the furniture of my chamber; I shut my eyes, and afterwards open them; and find the new perceptions to resemble perfectly those, which formerly struck my senses. This resemblance is observ'd in a thousand instances, and naturally connects together our ideas of these interrupted perceptions by the strongest relation, and conveys the mind with an easy transition from one to another. An easy transition or passage of the imagination, along the ideas of these different and interrupted perceptions, is almost the same disposition of mind with that in which we consider one constant and uninterrupted perception. 'Tis therefore very natural for us to mistake the one for the other[6].

The persons, who entertain this opinion concerning the identity of our resembling perceptions, are in general all the unthinking and unphilosophical part of mankind, (that is, all of us, at one time or other) and consequently such as suppose their perceptions to be their only objects, and never think of a double existence internal and external, representing and represented. The very image, which is present to the senses, is with us the real body; and 'tis to these interrupted images we ascribe a perfect identity. But as the interruption of the appearance seems contrary to the identity, and naturally leads us to regard these resembling perceptions as different from each other, we here find ourselves at a loss how to reconcile such opposite opinions. The smooth passage of the imagination along the ideas of the resembling perceptions makes us ascribe to them a perfect identity. The interrupted manner of their appearance makes us consider them as so many resembling, but still distinct beings, which appear after certain intervals. The perplexity arising from this contradiction produces a propension to unite these broken appearances by the fiction of a continu'd existence, which is the *third* part of that hypothesis I propos'd to explain.

Nothing is more certain from experience, than that any contradiction either to the sentiments or passions gives a sensible uneasiness, whether it proceeds from without or from within; from the opposition of external objects, or from the combat of internal principles. On the contrary, whatever strikes in with the natural propensities, and either externally forwards their satisfaction, or internally concurs

with their movements, is sure to give a sensible pleasure. Now there being here an opposition betwixt the notion of the identity of resembling perceptions, and the interruption of their appearance, the mind must be uneasy in that situation, and will naturally seek relief from the uneasiness. Since the uneasiness arises from the opposition of two contrary principles, it must look for relief by sacrificing the one to the other. But as the smooth passage of our thought along our resembling perceptions makes us ascribe to them an identity, we can never without reluctance yield up that opinion. We must, therefore, turn to the other side, and suppose that our perceptions are no longer interrupted, but preserve a oontinu'd as well as an invariable existence, and are by that means entirely the same. But here the interruptions in the appearance of these perceptions are so long and frequent, that 'tis impossible to overlook them; and as the *appearance* of a perception in the mind and its *existence* seem at first sight entirely the same, it may be doubted, whether we can ever assent to so palpable a contradiction, and suppose a perception to exist without being present to the mind. In order to clear up this matter, and learn how the interruption in the appearance of a perception implies not necessarily an interruption in its existence, 'twill be proper to touch upon some principles, which we shall have occasion to explain more fully afterwards[7].

We may begin with observing, that the difficulty in the present case is not concerning the matter of fact, or whether the mind forms such a conclusion concerning the continu'd existence of its perceptions, but only concerning the manner in which the conclusion is form'd, and principles from

which it is deriv'd. 'Tis certain, that almost all mankind, and even philosophers themselves, for the greatest part of their lives, take their perceptions to be their only objects, and suppose, that the very being, which is intimately present to the mind, is the real body or material existence. 'Tis also certain, that this very perception or object is suppos'd to have a continu'd uninterrupted being, and neither to be annihilated by our absence, nor to be brought into existence by our presence. When we are absent from it, we say it still exists, but that we do not feel, we do not see it. When we are present, we say we feel, or see it. Here then may arise two questions; *First*, How we can satisfy ourselves in supposing a perception to be absent from the mind without being annihilated. *Secondly*, After what manner we conceive an object to become present to the mind, without some new creation of a perception or image; and what we mean by this *seeing*, and *feeling*, and *perceiving*. a As to the first question; we may observe, that what we call a mind, is nothing but a heap or collection of different perceptions, united together by certain relations, and suppos'd, tho' falsely, to be endow'd with a perfect simplicity and identity. Now as every perception is distinguishable from another, and may be consider'd as separately existent; it evidently follows, that there is no absurdity in separating any particular perception from the mind; that is, in breaking off all its relations, with that connected mass of perceptions, which constitute a thinking being.

The same reasoning affords us an answer to the second question. If the name of *perception* renders not this separation from a mind absurd and contradictory, the name of *object*, standing for the very same thing, can never render their conjunction impossible. External objects are seen, and felt, and become present to the mind; that is, they acquire such a relation to a connected heap of perceptions, as to influence them very considerably in augmenting their number by present reflections and passions, and in storing the memory with ideas. The same continu'd and uninterrupted Being may, therefore, be sometimes present to the mind, and sometimes absent from it, without any real or essential change in the Being itself. An interrupted appearance to the senses implies not necessarily an interruption in the existence. The supposition of the continu'd existence of sensible objects or perceptions involves no contradiction. We may easily indulge our inclination to that supposition. When the exact resemblance of our perceptions makes us ascribe to them an identity, we may remove the seeming interruption by feigning a continu'd being, which may fill those intervals, and preserve a perfect and entire identity to our perceptions.

But as we here not only *feign* but *believe* this continu'd existence, the question is, *from whence arises such a belief;* and this question leads us to the *forth*member of this system. It has been prov'd already, that belief in general consists in nothing, but the vivacity of an idea; and that an idea may acquire this vivacity by its relation to some present impression. Impressions are naturally the most vivid perceptions of the mind; and this quality is in part convey'd by the relation to every connected idea. The relation causes a smooth passage from the impression to the idea, and even gives a propensity to that passage. The mind falls so easily from the one perception to the other, that it scarce perceives the change, but retains in the second a considerable share of the vivacity of the first. It is excited by the lively impression; and this vivacity is convey'd to the related idea, without any great diminution in the passage, by reason of the smooth transition and the propensity of the imagination.

But suppose, that this propensity arises from some other principle, besides that of relation; 'tis evident it must still have the same effect, and convey the vivacity from the impression to the idea. Now this is exactly the present case. Our memory presents us with a vast number of instances of perceptions perfectly resembling each other, that return at different distances of time, and after considerable interruptions. This resemblance gives us a propension to consider these interrupted perceptions as the same; and also a propension to connect them by a continu'd existence, in order to justify this identity,

and avoid the contradiction, in which the interrupted appearance of these perceptions seems necessarily to involve us. Here then we have a propensity to feign the continu'd existence of all sensible objects; and as this propensity arises from some lively impressions of the memory, it bestows a vivacity on that fiction; or in other words, makes us believe the continu'd existence of body. If sometimes we ascribe a continu'd existence to objects, which are perfectly new to us, and of whose constancy and coherence we have no experience, 'tis because the manner, in which they present themselves to our senses, resembles that of constant and coherent objects; and this resemblance is a source of reasoning and analogy, and leads us to attribute the same qualities to the similar objects.

I believe an intelligent reader will find less difficulty to assent to this system, than to comprehend it fully and distinctly, and will allow, after a little reelection, that every part carries its own proof along with it. 'Tis indeed evident, that as the vulgar *suppose* their perceptions to be their only objects, and at the same time *believe* the continu'd existence of matter, we must account for the origin of the belief upon that supposition. Now upon that supposition, 'tis a false opinion that any of our objects, or perceptions, are identically the same after an interruption; and consequently the opinion of their identity can never arise from reason, but must arise from the imagination. The imagination is seduc'd into such an opinion only by means of the resemblance of certain perceptions; since we find they are only our resembling perceptions, which we have a propension to suppose the same. This propension to bestow an identity on our resembling perceptions, produces the fiction of a continu'd existence; since that fiction, as well as the identity, is really false, as is acknowledge'd by all philosophers, and has no other effect than to remedy the interruption of our perceptions, which is the only circumstance that is contrary to their identity. In the last place this propension causes belief by means of the present impressions of the memory; since without the remembrance of former sensations, 'tis plain we never shou'd have any belief of the continu'd existence of body. Thus in examining all these parts, we find that each of them is supported by the strongest proofs; and that all of them together form a consistent system, which is perfectly convincing. A strong propensity or inclination alone, without any present impression, will sometimes cause a belief or opinion. How much more when aided by that circumstance?

But tho' we are led after this manner, by the natural propensity of the imagination, to ascribe a continu'd existence to those sensible objects or perceptions, which we find to resemble each other in their interrupted appearance; yet a very little reflection and philosophy is sufficient to make us perceive the fallacy of that opinion. I have already observ'd, that there is an intimate connexion betwixt those two principles, of a *continu'd* and of a *distinct* or *independent*existence, and that we no sooner establish the one than the other follows, as a necessary consequence. 'Tis the opinion of a continu'd existence, which first takes place, and without much study or reflection draws the other along with it, wherever the mind follows its first and most natural tendency. But when we compare experiments, and reason a little upon them, we quickly perceive, that the doctrine of the independent existence of our sensible perceptions is contrary to the plainest experience. This leads us backward upon our footsteps to perceive our error in attributing a continu'd existence to our perceptions, and is the origin of many very curious opinions, which we shall here endeavour to account for.

'Twill first be proper to observe a few of those experiments, which convince us, that our perceptions are not possest of any independent existence. When we press one eye with a finger, we immediately perceive all the objects to become double, and one half of them to be remov'd from their common and natural position. But as we do not attribute a continu'd existence to both these perceptions, and as they are both of the same nature, we clearly perceive, that all our perceptions are dependent on our organs, and the disposition of our nerves and animal spirits. This opinion is confirm'd by the seeming encrease

and diminution of objects, according to their distance; by the apparent alterations in their figure; by the changes in their colour and other qualities from our sickness and distempers; and by an infinite number of other experiments of the same kind; from all which we learn, that our sensible perceptions are not possest of any distinct or independent existence.

The natural consequence of this reasoning shou'd be, that our perceptions have no more a continu'd than an independent existence; and indeed philosophers have so far run into this opinion, that they change their system, and distinguish, (as we shall do for the future) betwixt perceptions and objects, of which the former are suppos'd to be interrupted, and perishing, and different at every different return; the latter to be uninterrupted, and to preserve a continu'd existence and identity. But however philosophical this new system may be esteem'd, I assert that 'tis only a palliative remedy, and that it contains all the difficulties of the vulgar system, with some others, that are peculiar to itself. There are no principles either of the understanding or fancy, which lead us directly to embrace this opinion of the double existence of perceptions and objects, nor can we arrive at it but by passing thro' the common hypothesis of the identity and continuance of our interrupted perceptions. Were we not first persuaded, that our perceptions are our only objects, and continue to exist even when they no longer make their appearance to the senses, we shou'd never be led to think, that our perceptions and objects are different, and that our objects alone preserve a continu'd existence. 'The latter hypothesis has no primary recommendation either to reason or the imagination, but acquires all its influence on the imagination from the former.' This proposition contains two parts, which we shall endeavour to prove as distinctly and clearly, as such abstruse subjects will permit.

As to the first part of the proposition, *that this philosophical hypotheses has no primary recommendation, either to reason or the imagination*„ we may soon satisfy ourselves with regard to reason by the following reflections. The only existences, of which we are certain, are perceptions, which being immediately present to us by consciousness, command our strongest assent, and are the first foundation of all our conclusions. The only conclusion we can draw from the existence of one thing to that of another, is by means of the relation of cause and effect, which shews, that there is a connexion betwixt them, and that the existence of one is dependent on that of the other. The idea of this relation is deriv'd from past experience, by which we find, that two beings are constantly conjoin'd together, and are always present at once to the mind. But as no beings are ever present to the mind but perceptions; it follows that we may observe a conjunction or a relation of cause and effect between different perceptions, but can never observe it between perceptions and objects. 'Tis impossible, therefore, that from the existence or any of the qualities of the former, we can ever form any conclusion concerning the existence of the latter, or ever satisfy our reason in this particular.

'Tis no less certain, that this philosophical system has no primary recommendation to the *imagination*, and that that faculty wou'd never, of itself, and by its original tendency. have fallen upon such a principle. I confess it will be somewhat difficult to prove this to the full satisfaction of the reader; because it implies a negative, which in many cases will not admit of any positive proof. If any one wou'd take the pains to examine this question, and wou'd invent a system, to account for the direct origin of this opinion from the imagination, we shou'd be able, by the examination of that system, to pronounce a certain judgment in the present subject. Let it be taken for granted, that our perceptions are broken, and interrupted, and however like, are still different from each other; and let any one upon this supposition shew why the fancy, directly and immediately, proceeds to the belief of another existence, resembling these perceptions in their nature, but yet continu'd, and uninterrupted, and identical; and after he has done this to my satisfaction, I promise to renounce my present opinion. Mean while I cannot forbear concluding, from the very abstractedness and difficulty of the first

supposition, that 'tis an improper subject for the fancy to work upon. Whoever wou'd explain the origin of the common opinion concerning the continu'd and distinct existence of body, must take the mind in its common situation, and must proceed upon the supposition, that our perceptions are our only objects, and continue to exist even when they are not perceiv'd. Tho' this opinion be false, 'tis the most natural of any, and has alone any primary recommendation to the fancy.

As to the second part of the proposition, *that the philosophical system acquires all its influence on the imagination from the vulgar one;* we may observe, that this is a natural and unavoidable consequence of the foregoing conclusion, *that it has no primary recommendation to reason or the imagination*. For as the philosophical system is found by experience to take hold of many minds, and in particular of all those, who reflect ever so little on this subject, it must derive all its authority from the vulgar system; since it has no original authority of its own. The manner, in which these two systems, tho' directly contrary, are connected together, may be explain'd, as follows.

The imagination naturally runs on in this train of thinking. Our perceptions are our only objects: Resembling perceptions are the same, however broken or uninterrupted in their appearance: This appearing interruption is contrary to the identity: The interruption consequently extends not beyond the appearance, and the perception or object really continues to exist, even when absent from us: Our sensible perceptions have, therefore, a continu'd and uninterrupted existence. But as a little reflection destroys this conclusion, that our perceptions have a continu'd existence, by shewing that they have a dependent one, 'twou'd naturally be expected, that we must altogether reject the opinion, that there is such a. thing in nature as a continu'd existence, which is preserv'd even when it no longer appears to the senses. The case, however, is otherwise. Philosophers are so far from rejecting the opinion of a continu'd existence upon rejecting that of the independence and continuance of our sensible perceptions, that tho' all sects agree in the latter sentiment, the former, which is, in a manner, its necessary consequence, has been peculiar to a few extravagant sceptics; who after all maintain'd that opinion in words only, and were never able to bring themselves sincerely to believe it.

There is a great difference betwixt such opinions as we form after a calm and profound reflection, and such as we embrace by a kind of instinct or natural impulse, on account of their suitableness and conformity to the mind. If these opinions become contrary, 'tis not difficult to foresee which of them will have the advantage. As long as our attention is bent upon the subject, the philosophical and study'd principle may prevail; but the moment we relax our thoughts, nature will display herself, and draw us back to our former opinion. Nay she has sometimes such an influence, that she can stop our progress, even in the midst of our most profound reflections, and keep us from running on with all the consequences of any philosophical opinion. Thus tho' we clearly perceive the dependence and interruption of our perceptions, we stop short in our carreer, and never upon that account reject the notion of an independent and continu'd existence. That opinion has taken such deep root in the imagination, that 'tis impossible ever to eradicate it, nor will any strain'd metaphysical conviction of the dependence of our perceptions be sufficient for that purpose.

But tho' our natural and obvious principles here prevail above our study'd reflections, 'tis certain there must be some struggle and opposition in the case; at least so long as these reflections retain any force or vivacity. In order to set ourselves at ease in this particular, we contrive a new hypothesis, which seems to comprehend both these principles of reason and imagination. This hypothesis is the philosophical one of the double existence of perceptions and objects; which pleases our reason, in allowing, that our dependent perceptions are interrupted and different; and at the same time is agreeable to the imagination, in attributing a continu'd existence to something else, which we call

*objects*. This philosophical system, therefore, is the monstrous offspring of two principles, which are contrary to each other, which are both at once embrac'd by the mind, and which are unable mutually to destroy each other. The imagination tells us, that our resembling perceptions have a continu'd and uninterrupted existence, and are not annihilated by their absence. Reflection tells us, that even our resembling perceptions are interrupted in their existence, and different from each other. The contradiction betwixt these opinions we elude by a new fiction, which is conformable to the hypotheses both of reflection and fancy, by ascribing these contrary qualities to different existences; the *interruption* to perceptions, and the *continuance* to objects. Nature is obstinate, and will not quit the field, however strongly attack'd by reason; and at the same time reason is so clear in the point, that there is no possibility of disguising her. Not being able to reconcile these two enemies, we endeavour to set ourselves at ease as much as possible, by successively granting to each whatever it demands, and by feigning a double existence, where each may find something, that has all the conditions it desires. Were we fully convinc'd, that our resembling perceptions are continu'd, and identical, and independent, we shou'd never run into this opinion of a double existence; since we shou'd find satisfaction in our first supposition, and wou'd not look beyond. Again, were we fully convinc'd, that our perceptions are dependent, and interrupted, and different, we shou'd be as little inclin'd to embrace the opinion of a double existence; since in that case we shou'd clearly perceive the error of our first supposition of a continu'd existence, and wou'd never regard it any farther. 'Tis therefore from the intermediate situation of the mind, that this opinion arises, and from such an adherence to these two contrary principles, as makes us seek some pretext to justify our receiving both; which happily at last is found in the system of a double existence.

Another advantage of this philosophical system is its similarity to the vulgar one; by which means we can humour our reason for a moment, when it becomes troublesome and solicitous; and yet upon its least negligence or inattention, can easily return to our vulgar and natural notions. Accordingly we find, that philosophers neglect not this advantage; but immediately upon leaving their closets, mingle with the rest of mankind in those exploded opinions, that our perceptions are our only objects, and continue identically and uninterruptedly the same in all their interrupted appearances.

There are other particulars of this system, wherein we may remark its dependence on the fancy, in a very conspicuous manner. Of these, I shall observe the two following. *First*, We suppose external objects to resemble internal perceptions. I have already shewn, that the relation of cause and effect can never afford us any just conclusion from the existence or qualities of our perceptions to the existence of external continu'd objects: And I shall farther add, that even tho' they cou'd afford such a conclusion, we shou'd never have any reason to infer, that our objects resemble our perceptions. That opinion, therefore, is deriv'd from nothing but the quality of the fancy above-explain'd, *that it borrows all its ideas from some precedent perception.* We never can conceive any thing but perceptions, and therefore must make every thing resemble them.

Secondly, As we suppose our objects in general to resemble our perceptions, so we take it for granted, that every particular object resembles that perception, which it causes. The relation of cause and effect determines us to join the other of resemblance; and the ideas of these existences being already united together in the fancy by the former relation, we naturally add the latter to compleat the union. We have a strong propensity to compleat every union by joining new relations to those which we have before observ'd betwixt any ideas, as we shall have occasion to observe presently[8] .

Having thus given an account of all the systems both popular and philosophical, with regard to external existences, I cannot forbear giving vent to a certain sentiment, which arises upon reviewing

those systems. I begun this subject with premising, that we ought to have an implicit faith in our senses, and that this wou'd be the conclusion, I shou'd draw from the whole of my reasoning. But to be ingenuous, I feel myself *at present* of a quite contrary sentiment, and am more inclin'd to repose no faith at all in my senses; or rather imagination, than to place in it such an implicit confidence. I cannot conceive how such trivial qualities of the fancy, conducted by such false suppositions, can ever lead to any solid and rational system. They are the coherence and constancy of our perceptions, which produce the opinion of their continu'd existence; tho' these qualities of perceptions have no perceivable connexion with such an existence. The constancy of our perceptions has the most considerable effect, and yet is attended with the greatest difficulties. 'Tis a gross illusion to suppose, that our resembling perceptions are numerically the same; and 'tis this illusion, which leads us into the opinion, that these perceptions are uninterrupted, and are still existent, even when they are not present to the senses. This is the case with our popular system. And as to our philosophical one, 'tis liable to the same difficulties; and is over-and-above loaded with this absurdity, that it at once denies and establishes the vulgar supposition. Philosophers deny our resembling perceptions to be identically the same, and uninterrupted; and yet have so great a propensity to believe them such, that they arbitrarily invent a new set of perceptions, to which they attribute these qualities. I say, a new set of perceptions: For we may well suppose in general, but 'tis impossible for us distinctly to conceive, objects to be in their nature any thing but exactly the same with perceptions. What then can we look for from this confusion of groundless and extraordinary opinions but error and falshood? And how can we justify to ourselves any belief we repose in them?

This sceptical doubt, both with respect to reason and the senses, is a malady, which can never be radically cur'd, but must return upon us every moment, however we may chace it away, and sometimes may seem entirely free from it. 'Tis impossible upon any system to defend either our understanding or senses; and we but expose them farther when we endeavour to justify them in that manner. As the sceptical doubt arises naturally from a profound and intense reflection on those subjects, it always encreases, the farther we carry our reflections, whether in opposition or conformity to it. Carelessness and in-attention alone can afford us any remedy. For this reason I rely entirely upon them; and take it for granted, whatever may be the reader's opinion at this present moment, that an hour hence he will be persuaded there is both an external and internal world; and going upon that supposition, I intend to examine some general systems both ancient and modem, which have been propos'd of both, before I proceed to a more particular enquiry concerning our impressions. This will not, perhaps, in the end be found foreign to our present purpose.

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1. Part II. sect. 6.
2. Sect. 5.
3. Part II. sect. 4.
4. Part II. sect. 5.
5. Part II. sect. 5.
6. This reasoning, it must be confest, is somewhat abstruse, and difficult to be comprehended; but it is remarkable, that this very difficulty may be converted into a proof of the reasoning. We may observe, that there are two relations, and both of them resemblances, which contribute to our mistaking the succession of our interrupted perceptions for an identical object. The first is, the resemblance of the perceptions: The second is the resemblance, which the act of the mind in surveying a succession of resembling objects bears to that in surveying an identical object. Now these resemblances we are apt to confound with each other; and 'tis natural we shou'd, according to this very reasoning. But let us keep them distinct, and we shall find no difficulty in conceiving the precedent argument.
7. Sect. 6.

8. Sect. 5.

# Section III. Of the antient philosophy

Several moralists have recommended it as an excellent method of becoming acquainted with our own hearts, and knowing our progress in virtue, to recollect our dreams in a morning, and examine them with the same rigour, that we wou'd our most serious and most deliberate actions. Our character is the same throughout, say they, and appears best where artifice, fear, and policy have no place, and men can neither be hypocrites with themselves nor others. The generosity, or baseness of our temper, our meekness or cruelty, our courage or pusilanimity, influence the fictions of the imagination with the most unbounded liberty, and discover themselves in the most glaring colours. In like manner, I am persuaded, there might be several useful discoveries made from a criticism of the fictions of the antient philosophy, concerning *substances, and substantial forms, and accidents, and occult qualities;* which, however unreasonable and capricious, have a very intimate connexion with the principles of human nature.

'Tis confest by the most judicious philosophers, that our ideas of bodies are nothing but collections form'd by the mind of the ideas of the several distinct sensible qualities, of which objects are compos'd, and which we find to have a constant union with each other. But however these qualities may in themselves be entirely distinct, 'tis certain we commonly regard the compound, which they form, as One thing, and as continuing the Same under very considerable alterations. The acknowledge'd composition is evidently contrary to this suppos'd *simplicity*, and the variation to the *identity*. It may, therefore, be worth while to consider the causes, which make us almost universally fall into such evident contradictions, as well as the *means* by which we endeavour to conceal them.

'Tis evident, that as the ideas of the several distinct *successive* qualities of objects are united together by a very close relation, the mind, in looking along the succession, must be carry'd from one part of it to another by an easy transition, and will no more perceive the change, than if it contemplated the same unchangeable object. This easy transition is the effect, or rather essence of relation; and as the imagination readily takes one idea for another, where their influence on the mind is similar; hence it proceeds, that any such succession of related qualities is readily consider'd as one continu'd object, existing without any variation. The smooth and uninterrupted progress of the thought, being alike in both cases, readily deceives the mind, and makes us ascribe an identity to the changeable succession of connected qualities. But when we alter our method of considering the succession, and instead of tracing it gradually thro' the successive points of time, survey at once any two distinct periods of its duration, and compare the different conditions of the successive qualities; in that case the variations, which were insensible when they arose gradually, do now appear of consequence, and seem entirely to destroy the identity. By this means there arises a kind of contrariety in our method of thinking, from the different points of view, in which we survey the object, and from the nearness or remoteness of those instants of time, which we compare together. When we gradually follow an object in its successive changes, the smooth progress of the thought makes us ascribe an identity to the succession; because 'tis by a similar act of the mind we consider an unchangeable object. When we compare its situation after a considerable change the progress of the thought is broke; and consequently we are presented with the idea of diversity: In order to reconcile which contradictions the imagination is apt to feign something unknown and invisible, which it supposes to continue the same under all these variations; and this unintelligible something it calls a *substance, or original and first matter.*

We entertain a like notion with regard to the *simplicity* of substances, and from like causes. Suppose an object perfectly simple and indivisible to be presented, along with another object, whose *co-existent* parts are connected together by a strong relation, 'tis evident the actions of the mind, in considering these two objects, are not very different. The imagination conceives the simple object at once, with facility, by a single effort of thought, without change or variation. The connexion of parts in the compound object has almost the same effect, and so unites the object within itself, that the fancy feels not the transition in passing from one part to another. Hence the colour, taste, figure, solidity, and other qualities, combin'd in a peach or melon, are conceiv'd to form *one thing*; and that on account of their close relation, which makes them affect the thought in the same manner, as if perfectly uncompounded. But the mind rests not here. Whenever it views the object in another light, it finds that all these qualities are different, and distinguishable, and separable from each other; which view of things being destructive of its primary and more natural notions, obliges the imagination to feign an unknown something, or *original* substance and matter, as a principle of union or cohesion among these qualities, and as what may give the compound object a title to be call'd one thing, notwithstanding its diversity and composition.

The peripatetic philosophy asserts the *original* matter to be perfectly homogeneous in all bodies, and considers fire, water, earth, and air, as of the very same substance; on account of their gradual revolutions and changes into each other. At the same time it assigns to each of these species of objects a distinct *substantial form*, which it supposes to be the source of all those different qualities they possess, and to be a new foundation of simplicity and identity to each particular species. All depends on our manner of viewing the objects. When we look along the insensible changes of bodies, we suppose all of them to be of the same substance or essence; When we consider their sensible differences, we attribute to each of them a substantial and essential difference. And in order to indulge ourselves in both these ways of considering our objects, we suppose all bodies to have at once a substance and a substantial form.

The notion of *accidents* is an unavoidable consequence of this method of thinking with regard to substances and substantial forms; nor can we forbear looking upon colours, sounds, tastes, figures, and other properties of bodies, as existences, which cannot subsist apart, but require a subject of inhesion to sustain and support them. For having never discover'd any of these sensible qualities, where, for the reasons above-mention'd, we did not likewise fancy a substance to exist; the same habit, which makes us infer a connexion betwixt cause and effect, makes us here infer a dependence of every quality on the unknown substance. The custom of imagining a dependence has the same effect as the custom of observing it wou'd have. This conceit, however, is no more reasonable than any of the foregoing. Every quality being a distinct thing from another, may be conceiv'd to exist apart, and may exist apart, not only from every other quality, but from that unintelligible chimera of a substance.

But these philosophers carry their fictions still farther in their sentiments concerning *occult qualities*, and both suppose a substance supporting, which they do not understand, and an accident supported, of which they have as imperfect an idea. The whole system, therefore, is entirely incomprehensible, and yet is deriv'd from principles as natural as any of these above-explain'd.

In considering this subject we may observe a gradation of three opinions, that rise above each other, according as the persons, who form them, acquire new degrees of reason and knowledge. These opinions are that of the vulgar, that of a false philosophy, and that of the true; where we shall find upon enquiry, that the true philosophy approaches nearer to the sentiments of the vulgar, than to those of a mistaken knowledge. 'Tis natural for men, in their common and careless way of thinking, to imagine

they perceive a connexion betwixt such objects as they have constantly found united together; and because custom has render'd it difficult to separate the ideas, they are apt to fancy such a separation to be in itself impossible and absurd. But philosophers, who abstract from the effects of custom, and compare the ideas of objects, immediately perceive the falshood of these vulgar sentiments, and discover that there is no known connexion among objects. Every different object appears to them entirely distinct and separate; and they perceive, that 'tis not from a view of the nature and qualities of objects we infer one from another, but only when in several instances we observe them to have been constantly conjoin'd. But these philosophers, instead of drawing a just inference from this observation, and concluding, that we have no idea of power or agency, separate from the mind, and belonging to causes; I say, instead of drawing this conclusion, they frequently search for the qualities, in which this agency consists, and are displeased with every system, which their reason suggests to them, in order to explain it. They have sufficient force of genius to free them from the vulgar error, that there is a natural and perceivable connexion betwixt the several sensible qualities and actions of matter; but not sufficient to keep them from ever seeking for this connexion in matter, or causes. Had they fallen upon the just conclusion, they wou'd have return'd back to the situation of the vulgar, and wou'd have regarded all these disquisitions with indolence and indifference. At present they seem to be in a very lamentable condition, and such as the poets have given us but a faint notion of in their descriptions of the punishment of *Sisyphus* and *Tantalus*. For what can be imagin'd more tormenting, than to seek with eagerness, what for ever flies us; and seek for it in a place, where 'tis impossible it can ever exist?

But as nature seems to have observ'd a kind of justice and compensation in every thing, she has not neglected philosophers more than the rest of the creation; but has reserv'd them a consolation amid all their disappointments and afflictions. This consolation principally consists in their invention of the words *faculty* and *occult quality*. For it being usual, after the frequent use of terms, which are really significant and intelligible, to omit the idea, which we wou'd express by them, and to preserve only the custom, by which we recal the idea at pleasure; so it naturally happens, that after the frequent use of terms, which are wholly insignificant and unintelligible, we fancy them to be on the same footing with the precedent, and to have a secret meaning, which we might discover by reflection. The resemblance of their appearance deceives the mind, as is usual, and makes us imagine a thorough resemblance and conformity. By this means these philosophers set themselves at ease, and arrive at last, by an illusion, at the same indifference, which the people attain by their stupidity, and true philosophers by their moderate scepticism. They need only say, that any phænomenon, which puzzles them, arises from a faculty or an occult quality, and there is an end of all dispute and enquiry upon the matter.

But among all the instances, wherein the Peripatetics have shewn they were guided by every trivial propensity of the imagination, no one is more remarkable than their *sympathies, antipathies, and horrors of a vacuum.* There is a very remarkable inclination in human nature, to bestow on external objects the same emotions, which it observes in itself; and to find every where those ideas, which are most present to it. This inclination, 'tis true, is suppress'd by a little reflection, and only takes place in children, poets, and the antient philosophers. It appears in children, by their desire of beating the stones, which hurt them: In poets, by their readiness to personify every thing: And in the antient philosophers, by these fictions of sympathy and antipathy. We must pardon children, because of their age; poets, because they profess to follow implicitly the suggestions of their fancy: But what excuse shall we find to justify our philosophers in so signal a weakness?

# Section IV. Of the modern philosophy

But here it may be objected, that the imagination, according to my own confession, being the ultimate judge of all systems of philosophy, I am unjust in blaming the antient philosophers for makeing use of that faculty, and allowing themselves to be entirely guided by it in their reasonings. In order to justify myself, I must distinguish in the imagination betwixt the principles which are permanent, irresistible, and universal; such as the customary tradition from causes to effects, and from effects to causes: And the principles, which are changeable, weak, and irregular; such as those I have just now taken notice of. The former are the foundation of all our thoughts and actions, so that upon their removal human nature must immediately perish and go to ruin. The latter are neither unavoidable to mankind, nor necessary, or so much as useful in the conduct of life; but on the contrary are observ'd only to take place in weak minds, and being opposite to the other principles of custom and reasoning, may easily be subverted by a due contrast and opposition. For this reason the former are received by philosophy, and the latter rejected. One who concludes somebody to be near him, when he hears an articulate voice in the dark, reasons justly and naturally; tho' that conclusion be deriv'd from nothing but custom, which infixes and inlivens the idea of a human creature, on account of his usual conjunction with the present impression. But one, who is tormented he knows not why, with the apprehension of spectres in the dark, may, perhaps, be said to reason, and to reason naturally too: But then it must be in the same sense, that a malady is said to be natural; as arising from natural causes, tho' it be contrary to health, the most agreeable and most natural situation of man. The opinions of the antient philosophers, their fictions of substance and accident, and their reasonings concerning substantial forms and occult qualities, are like the spectres in the dark, and are deriv'd from principles, which, however common, are neither universal nor unavoidable in human nature. The *modern philosophy* pretends to be entirely free from this defect, and to arise only from the solid, permanent, and consistent principles of the imagination. Upon what grounds this pretension is founded must now be the subject of our enquiry.

The fundamental principle of that philosophy is the opinion concerning colours, sounds, tastes, smells, heat and cold; which it asserts to be nothing but impressions in the mind, deriv'd from the operation of external objects, and without any resemblance to the qualities of the objects. Upon examination, I find only one of the reasons commonly produc'd for this opinion to be satisfactory, *viz.* that deriv'd from the variations of those impressions, even while the external object, to all appearance, continues the same. These variations depend upon several circumstances. Upon the different situations of our health: A man in a malady feels a disagreeable taste in meats, which before pleas'd him the most. Upon the different complexions and constitutions of men: That seems bitter to one, which is sweet to another. Upon the difference of their external situation and position: Colours reflected from the clouds change according to the distance of the clouds, and according to the angle they make with the eye and luminous body. Fire also communicates the sensation of pleasure at one distance, and that of pain at another. Instances of this kind are very numerous and frequent.

The conclusion drawn from them, is likewise as satisfactory as can possibly be imagin'd. 'Tis certain, that when different impressions of the same sense arise from any object, every one of these impressions has not a resembling quality existent in the object. For as the same object cannot, at the same time, be endow'd with different qualities of the same sense, and as the same quality cannot resemble impressions entirely different; it evidently follows, that many of our impressions have no external model or archetype. Now from like effects we presume like causes. Many of the impressions of colour, sound, *&c.* are confest to he nothing but internal existences, and to arise from causes, which no ways resemble them. These impressions are in appearance nothing different from the other impressions of colour, sound, *&c.* We conclude, therefore, that they are, all of them, deriv'd from a like origin.

This principle being once admitted, all the other doctrines of that philosophy seem to follow by an easy consequence. For upon the removal of sounds, colours, heat, cold, and other sensible qualities, from the rank of continu'd independent existences, we are reduc'd merely to what are called primary qualities, as the only *real* ones, of which we have any adequate notion. These primary qualities are extension and solidity, with their different mixtures and modifications; figure, motion, gravity, and cohesion. The generation, encrease, decay, and corruption of animals and vegetables, are nothing but changes of figure and motion; as also the operations of all bodies on each other; of fire, of light, water, air, earth, and of all the elements and powers of nature. One figure and motion produces another figure and motion; nor does there remain in the material universe any other principle, either active or passive, of which we can form the most distant idea.

I believe many objections might be made to this system: But at present I shall confine myself to one, which is in my opinion very decisive. I assert, that instead of explaining the operations of external objects by its means, we utterly annihilate all these objects, and reduce ourselves to the opinions of the most extravagant scepticism concerning them. If colours, sounds, tastes, and smells be merely perceptions, nothing we can conceive is possest of a real, continu'd, and independent existence; not even motion, extension and solidity, which are the primary qualities chiefly insisted on.

To begin with the examination of motion; 'tis evident this is a quality altogether inconceivable alone, and without a reference to some other object. The idea of motion necessarily supposes that of a body moving. Now what is our idea of the moving body, without which motion is incomprehensible? It must resolve itself into the idea of extension or of solidity; and consequently the reality of motion depends upon that of these other qualities.

This opinion, which is universally acknowledge'd concerning motion, I have prov'd to be true with regard to extension; and have shewn that 'tis impossible to conceive extension, but as compos'd of parts, endow'd with colour or solidity. The idea of extension is a compound idea; but as it is not compounded of an infinite number of parts or inferior ideas, it must at last resolve itself into such as are perfectly simple and indivisible. These simple and indivisible parts, not being ideas of extension, must be non-entities, unless conceiv'd as colour'd or solid. Colour is excluded from any real existence. The reality, therefore, of our idea of extension depends upon the reality of that of solidity, nor can the former be just while the latter is chimerical. Let us, then, lend our attention to the examination of the idea of solidity.

The idea of solidity is that of two objects, which being impell'd by the utmost force, cannot penetrate each other; but still maintain a separate and distinct existence. Solidity, therefore, is perfectly incomprehensible alone, and without the conception of some bodies, which are solid, and maintain this separate and distinct existence. Now what idea have we of these bodies? The ideas of colours, sounds, and other secondary qualities are excluded. The idea of motion depends on that of extension, and the idea of extension on that of solidity. 'Tis impossible, therefore, that the idea of solidity can depend on either of them. For that wou'd be to run in a circle, and make one idea depend on another, while at the same time the latter depends on the former. Our modern philosophy, therefore, leaves us no just nor satisfactory idea of solidity; nor consequently of matter.

This argument will appear entirely conclusive to every one that comprehends it; but because it may seem abstruse and intricate to the generality of readers, I hope to be excus'd, if I endeavour to render it more obvious by some variation of the expression. In order to form an idea of solidity, we must conceive two bodies pressing on each other without any penetration; and 'tis impossible to arrive at this

idea, when we confine ourselves to one object, much more without conceiving any. Two non-entities cannot exclude each other from their places; because they never possess any place, nor can be endow'd with any quality. Now I ask, what idea do we form of these bodies or objects, to which we suppose solidity to belong? To say, that we conceive them merely as solid, is to run on *in infinitum*. To affirm, that we paint them out to ourselves as extended, either resolves all into a false idea, or returns in a circle. Extension must necessarily be consider'd either as colour'd, which is a false idea; or as solid, which brings us back to the first question. We may make the same observation concerning mobility and figure; and upon the whole must conclude, that after the exclusion of colours, sounds, heat and cold from the rank of external existences, there remains nothing, which can afford us a just and consistent idea of body.

Add to this, that, properly speaking, solidity or impenetrability is nothing, but an impossibility of annihilation, as [1] has been already observ'd: For which reason 'tis the more necessary for us to form some distinct idea of that object, whose annihilation we suppose impossible. An impossibility of being annihilated cannot exist, and can never be conceived to exist, by itself; but necessarily requires some object or real existence, to which it may belong. Now the difficulty still remains, how to form an idea of this object or existence, without having recourse to the secondary and sensible qualities.

Nor must we omit on this occasion our accustom'd method of examining ideas by considering those impressions, from which they are deriv'd. The impressions, which enter by the sight and hearing, the smell and taste, are affirm'd by modern philosophy to be without any resembling objects; and consequently the idea of solidity, which is suppos'd to be real, can never be deriv'd from any of these senses. There remains, therefore, the feeling as the only sense, that can convey the impression, which is original to the idea of solidity; and indeed we naturally imagine, that we feel the solidity of bodies, and need but touch any object in order to perceive this quality. But this method of thinking is more popular than philosophical; as will appear from the following reflections.

First, 'Tis easy to observe, that tho' bodies are felt by means of their solidity, yet the feeling is a quite different thing from the solidity; and that they have not the least resemblance to each other. A man, who has the palsey in one hand, has as perfect an idea of impenetrability, when he observes that hand to be supported by the table, as when he feels the same table with the other hand. An object, that presses upon any of our members, meets with resistance; and that resistance, by the motion it gives to the nerves and animal spirits, conveys a certain sensation to the mind; but it does not follow, that the sensation, motion, and resistance are any ways resembling.

Secondly, The impressions of touch are simple impressions, except when consider'd with regard to their extension; which makes nothing to the present purpose: And from this simplicity I infer, that they neither represent solidity, nor any, real object. For let us put two cases, *viz*. that of a man, who presses a stone, or any solid body, with his hand, and that of two stones, which press each other; 'twill readily be allow'd, that these two cases are not in every respect alike, but that in the former there is conjoin'd with the solidity, a feeling or sensation, of which there is no appearance in the latter. In order, therefore, to make these two cases alike, 'tis necessary to remove some part of the impression, which the man feels by his hand, or organ of sensation; and that being impossible in a simple impression, obliges us to remove the whole, and proves that this whole impression has no archetype or model in external objects. To which we may add, that solidity necessarily supposes two bodies, along with contiguity and impulse; which being a compound object, can never be represented by a simple impression. Not to mention, that tho' solidity continues always invariably the same, the impressions of touch change every moment upon us; which is a clear proof that the latter are not representations of the

former.

Thus there is a direct and total opposition betwixt our reason and our senses; or more properly speaking, betwixt those conclusions we form from cause and effect, and those that persuade us of the continu'd and independent existence of body. When we reason from cause and effect, we conclude, that neither colour, sound, taste, nor smell have a continu'd and independent existence. When we exclude these sensible qualities there remains nothing in the universe, which has such an existence.

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1. Part II. sect. 4.

# Section V. Of the immateriality of the soul

Having found such contradictions and difficulties in every system concerning external objects, and in the idea of matter, which we fancy so clear and determinate, we shall naturally expect still greater difficulties and contradiction in every hypothesis concerning our internal perceptions, and the nature of the mind, which we are apt to imagine so much more obscure, and uncertain. But in this we shou'd deceive ourselves. The intellectual world, tho' involv'd in infinite obscurities, is not perplex'd with any such contradictions, as those we have discover'd in the natural. What is known concerning it, agrees with itself; and what is unknown, we must be contented to leave so.

'Tis true, wou'd we hearken to certain philosophers, they promise to diminish our ignorance; but I am afraid 'tis at the hazard of running us into contradictions, from which the subject is of itself exempted. These philosophers are the curious reasoners concerning the material or immaterial substances, in which they suppose our perceptions to inhere. In order to put a stop to these endless cavils on both sides, I know no better method, than to ask these philosophers in a few words, *What they mean by substance and inhesion?* And after they have answer'd this question, 'twill then be reasonable, and not till then, to enter seriously into the dispute.

This question we have found impossible to be answer'd with regard to matter and body: But besides that in the case of the mind, it labours under all the same difficulties, 'tis burthen'd with some additional ones, which are peculiar to that subject. As every idea is deriv'd from a precedent impression, had we any idea of the substance of our minds, we must also have an impression of it; which is very difficult, if not impossible, to be conceiv'd. For how can an impression represent a substance, otherwise than by resembling it? And how can an impression resemble a substance, since, according to this philosophy, it is not substance, and has none of the peculiar qualities or characteristics of a substance?

But leaving the question *of what may or may not be*, for that other *what actually is*, I desire those philosophers, who pretend that we have an idea of the substance of our minds, to point out the impression that produces it, and tell distinctly after what manner that impression operates, and from what object it is deriv'd. Is it an impression of sensation or of redaction? Is it pleasant, or painful, or indifferent? Does it attend us at all times, or does it only return at intervals? If at intervals, at what times principally does it return, and by what causes is it produc'd?

If instead of answering these questions, any one shou'd evade the difficulty, by saying, that the definition of a substance is *something which may exist by itself;* and that this definition ought to satisfy

us: Shou'd this be said, I shou'd observe, that this definition agrees to every thing, that can possibly be conceiv'd; and never will serve to distinguish substance from accident, or the soul from its perceptions. For thus I reason. Whatever is clearly conceiv'd may exist; and whatever is clearly conceiv'd, after any manner, may exist after the same manner. This is one principle, which has been already acknowledg'd. Again, every thing, which is different, is distinguishable, and every thing which is distinguishable, is separable by the imagination. This is another principle. My conclusion from both is, that since all our perceptions are different from each other, and from every thing else in the universe, they are also distinct and separable, and may be consider'd as separately existent, and may exist separately, and have no need of any thing else to support their existence. They are, therefore, substances, as far as this definition explains a substance.

Thus neither by considering the first origin of ideas, nor by means of a definition are we able to arrive at any satisfactory notion of substance; which seems to me a sufficient reason for abandoning utterly that dispute concerning the materiality and immateriality of the soul, and makes me absolutely condemn even the question itself. We have no perfect idea of any thing but of a perception. A substance is entirely different from a perception. We have, therefore, no idea of a substance. Inhesion in something is suppos'd to be requisite to support the existence of our perceptions. Nothing appears requisite to support the existence of a perception. We have, therefore, no idea of inhesion. What possibility then of answering that question, *Whether perception inhere in a material or immaterial substance*, when we do not so much as understand the meaning of the question?

There is one argument commonly employ'd for the immateriality of the soul, which seems to me remarkable. Whatever is extended consists of parts; and whatever consists of parts is divisible, if not in reality, at least in the imagination. But 'tis impossible any thing divisible can be *conjoin'd* to a thought or perception, which is a being altogether inseparable and indivisible. For supposing such a conjunction, wou'd the indivisible thought exist on the left or on the right hand of this extended divisible body? On the surface or in the middle? On the back- or fore-side of it? If it be conjoin'd with the extension, it must exist somewhere within its dimensions. If it exist within its dimensions, it must either exist in one particular part; and then that particular part is indivisible, and the perception is conjoin'd only with it, not with the extension: Or if the thought exists in every part, it must also be extended, and separable, and divisible, as well as the body; which is utterly absurd and contradictory. For can any one conceive a passion of a yard in length, a foot in breadth, and an inch in thickness? Thought, therefore, and extension are qualities wholly incompatible, and never can incorporate together into one subject.

This argument affects not the question concerning the *substance* of the soul, but only that concerning its *local conjunction* with matter; and therefore it may not be improper to consider in general what objects are, or are not susceptible of a local conjunction. This is a curious question, and may lead us to some discoveries of considerable moment.

The first notion of space and extension is deriv'd solely from the senses of sight and feeling; nor is there any thing, but what is colour'd or tangible, that has parts dispos'd after such a manner, as to convey that idea. When we diminish or encrease a relish, 'tis not after the same manner that we diminish or increase any visible object; and when several sounds strike our hearing at once, custom and reflection alone make us form an idea of the degrees of the distance and contiguity of those bodies, from which they are deriv'd. Whatever marks the place of its existence either must be extended, or must be a mathematical point, without parts or composition. What is extended must have a particular figure, as square, round, triangular; none of which will agree to a desire, or indeed to any impression or

idea, except of these two senses above-mention'd. Neither ought a desire, tho' indivisible, to be consider'd as a mathematical point. For in that case 'twou'd be possible, by the addition of others, to make two, three, four desires, and these dispos'd and situated in such a manner, as to have a determinate length, breadth and thickness; which is evidently absurd.

'Twill not be surprising after this, if I deliver a maxim, which is condemn'd by several metaphysicians, and is esteem'd contrary to the most certain principles of human reason. This maxim is *that an object may exist, and yet be no where*: and I assert, that this is not only possible, but that the greatest part of beings do and must exist after this manner. An object may be said to be no where, when its parts are not so situated with respect to each other, as to form any figure or quantity; nor the whole with respect to other bodies so as to answer to our notions of contiguity or distance. Now this is evidently the case with all our perceptions and objects, except those of the sight and feeling. A moral reflection cannot be plac'd on the right or on the left hand of a passion, nor can a smell or sound be either of a circular or a square figure. These objects and perceptions, so far from requiring any particular place, are absolutely incompatible with it, and even the imagination cannot attribute it to them. And as to the absurdity of supposing them to be no where, we may consider, that if the passions and sentiments appear to the perception to have any particular place, the idea of extension might be deriv'd from them, as well as from the sight and touch; contrary to what we have already establish'd. If they *appear* not to have any particular place, they may possibly *exist* in the same manner; since whatever we conceive is possible.

'Twill not now be necessary to prove, that those perceptions, which are simple, and exist no where, are incapable of any conjunction in place with matter or body, which is extended and divisible; since 'tis impossible to found a relation[1] but on some common quality. It may be better worth our while to remark, that this question of the local conjunction of objects does not only occur in metaphysical disputes concerning the nature of the soul, but that even in common life we have every moment occasion to examine it. Thus supposing we consider a fig at one end of the table, and an olive at the other, 'tis evident, that in forming the complex ideas of these substances, one of the most obvious is that of their different relishes; and 'tis as evident, that we incorporate and conjoin these qualities with such as are colour'd and tangible. The bitter taste of the one, and sweet of the other are suppos'd to lie in the very visible body, and to be separated from each other by the whole length of the table. This is so notable and so natural an illusion, that it may be proper to consider the principles, from which it is deriv'd.

Tho' an extended object be incapable of a conjunction in place with another, that exists without any place or extension, yet are they susceptible of many other relations. Thus the taste and smell of any fruit are inseparable from its other qualities of colour and tangibility; and which-ever of them be the cause or effect, 'tis certain they are always co-existent. Nor are they only co-existent in general, but also co-temporary in their appearance in the mind; and 'tis upon the application of the extended body to our senses we perceive its particular taste and smell. These relations, then, of *causation, and contiguity in the time of their appearance*, betwixt the extended object and the quality, which exists without any particular place, must have such an effect on the mind, that upon the appearance of one it will immediately turn its thought to the conception of the other. Nor is this all. We not only turn our thought from one to the other upon account of their relation, but likewise endeavour to give them a new relation, *viz.* that of a *conjunction in place*, that we may render the transition more easy and natural. For 'tis a quality, which I shall often have occasion to remark in human nature, and shall explain more fully in its proper place, that when objects are united by any relation, we have a strong propensity to add some new relation to them, in order to compleat the union. In our arrangement of bodies we never fail to place such as are resembling, in contiguity to each other, or at least in

correspondent points of view: Why? but because we feel a satisfaction in joining the relation of contiguity to that of resemblance, or the resemblance of situation to that of qualities. The effects of this propensity have been[2] already observ'd in that resemblance, which we so readily suppose betwixt particular impressions and their external causes: But we shall not find a more evident effect of it, than in the present instance, where from the relations of causation and contiguity in time betwixt two objects, we feign likewise that of a conjunction in place, in order to strengthen the connexion.

But whatever confus'd notions we may form of an union in place betwixt an extended body, as a fig, and its particular taste, 'tis certain that upon reflection we must observe in this union something altogether unintelligible and contradictory. For shou'd we ask ourselves one obvious question, *viz.* if the taste, which we conceive to be contain'd in the circumference of the body, is in every part of it or in one only, we must quickly find ourselves at a loss, and perceive the impossibility of ever giving a satisfactory answer. We cannot reply, that 'tis only in one part: For experience convinces us, that every part has the same relish. We can as little reply, that it exists in every part: For then we must suppose it figur'd and extended; which is absurd and incomprehensible. Here then we are influenc'd by two principles directly contrary to each other, *viz.* that *inclination* of our fancy by which we are determin'd to incorporate the taste with the extended object, and our reason, which shows us the impossibility of such an union. Being divided betwixt these opposite principles, we renounce neither one nor the other, but involve the subject in such confusion and obscurity, that we no longer perceive the opposition. We suppose, that the taste exists within the circumference of the body, but in such a manner, that it fills the whole without extension, and exists entire in every part without separation. In short, we use in our most familiar way of thinking, that scholastic principle, which, when crudely propos'd, appears so shocking, of *totem in toto & totum in qualibel parte:* Which is much the same, as if we shou'd say, that a thing is in a certain place, and yet is not there.

All this absurdity proceeds from our endeavouring to bestow a place on what is utterly incapable of it; and that endeavour again arises from our inclination to compleat an union, which is founded on causation, and a contiguity of time, by attributing to the objects a conjunction in place. But if ever reason be of sufficient force to overcome prejudice, 'tis certain, that in the present case it must prevail. For we have only this choice left, either to suppose that some beings exist without any place; or that they are figur'd and extended; or that when they are incorporated with extended objects, the whole is in the whole, and the whole in every part. The absurdity of the two last suppositions proves sufficiently the veracity of the first. Nor is there any fourth opinion. For as to the supposition of their existence in the manner of mathematical points, it resolves itself into the second opinion, and supposes, that several passions may be plac'd in a circular figure, and that a certain number of smells, conjoin'd with a certain number of sounds, may make a body of twelve cubic inches; which appears ridiculous upon the bare mentioning of it.

But tho' in this view of things we cannot refuse to condemn the materialists, who conjoin all thought with extension; yet a little reflection will show us equal reason for blaming their antagonists, who conjoin all thought with a simple and indivisible substance. The most vulgar philosophy informs us, that no external object can make itself known to the mind immediately, and without the interposition of an image or perception. That table, which just now appears to me, is only a perception, and all its qualities are qualities of a perception. Now the most obvious of all its qualities is extension. The perception consists of parts. These parts are so situated, as to afford us the notion of distance and contiguity; of length, breadth, and thickness. The termination of these three dimensions is what we call figure. This figure is moveable, separable, and divisible. Mobility, and separability are the distinguishing properties of extended objects. And to cut short all disputes, the very idea of extension

is copy'd from nothing but an impression, and consequently must perfectly agree to it, To say the idea of extension agrees to any thing, is to say it is extended. The free-thinker may now triumph in his turn; and having found there are impressions and ideas really extended, may ask his antagonists, how they can incorporate a simple and indivisible subject with an extended perception? All the arguments of Theologians may here be retorted upon them. Is the indivisible subject, or immaterial substance, if you will, on the left or on the right hand of the perception? Is it in this particular part, or in that other? Is it in every part without being extended? Or is it entire in any one part without deserting the rest? 'Tis impossible to give any answer to these questions, but what will both be absurd in itself, and will account for the union of our indivisible perceptions with an extended substance.

This gives me an occasion to take a-new into consideration the question concerning the substance of the soul; and tho' I have condemn'd that question as utterly unintelligible, yet I cannot forbear proposing some farther reflections concerning it. I assert, that the doctrine of the immateriality, simplicity, and indivisibility of a thinking substance is a true atheism, and will serve to justify all those sentiments, for which *Spinoza* is so universally infamous. From this topic, I hope at least to reap one advantage, that my adversaries will not have any pretext to render the present doctrine odious by their declamations, when they see that they can be so easily retorted on them.

The fundamental principle of the atheism of *Spinoza* is the doctrine of the simplicity of the universe, and the unity of that substance, in which he supposes both thought and matter to inhere. There is only one substance, says he, in the world; and that substance is perfectly simple and indivisible, and exists every where, without any local presence. Whatever we discover externally by sensation; whatever we feel internally by reflection; all these are nothing but modifications of that one, simple, and necessarily existent being, and are not possest of any separate or distinct existence. Every passion of the soul; every configuration of matter, however different and various, inhere in the same substance, and preserve in themselves their characters of distinction, without communicating them to that subject, in which they inhere. The same *substratum*, if I may so speak, supports the most different modifications, without any difference in itself; and varies them, without any variation. Neither time, nor place, nor all the diversity of nature are able to produce any composition or change in its perfect simplicity and identity.

I believe this brief exposition of the principles of that famous atheist will be sufficient for the present purpose, and that without entering farther into these gloomy and obscure regions, I shall be able to shew, that this hideous hypothesis is almost the same with that of the immateriality of the soul, which has become so popular. To make this evident, let us[3] remember, that as every idea is deriv'd from a preceding perception, 'tis impossible our idea of a perception, and that of an object or external existence can ever represent what are specifically different from each other. Whatever difference we may suppose betwixt them, 'tis still incomprehensible to us; and we are oblig'd either to conceive an external object merely as a relation without a relative, or to make it the very same with a perception or impression.

The consequence I shall draw from this may, at first sight, appear a mere sophism; but upon the least examination will be found solid and satisfactory. I say then, that since we may suppose, but never can conceive a specific difference betwixt an object and impression; any conclusion we form concerning the connexion and repugnance of impressions, will not be known certainly to be applicable to objects; but that on the other hand, whatever conclusions of this kind we form concerning objects, will most certainly be applicable to impressions. The reason is not difficult. As an object is suppos'd to be different from an impression, we cannot be sure, that the circumstance, upon which we found our

reasoning, is common to both, supposing we form the reasoning upon the impression. 'Tis still possible, that the object may differ from it in that particular. But when we first form our reasoning concerning the object, 'tis beyond doubt, that the same reasoning must extend to the impression: And that because the quality of the object, upon which the argument is founded, must at least be conceiv'd by the mind; and cou'd not be conceiv'd, unless it were common to an impression; since we have no idea but what is deriv'd from that origin. Thus we may establish it as a certain maxim, that we can never, by any principle, but by an irregular kind[4] of reasoning from experience, discover a connexion or repugnance betwixt objects, which extends not to impressions; tho' the inverse proposition may not be equally true, that all the discoverable relations of impressions are common to objects.

To apply this to the present case; there are two different systems of beings presented, to which I suppose myself under a necessity of assigning some substance, or ground of inhesion. I observe first the universe of objects or of body: The sun, moon and stars; the earth, seas, plants, animals, men, ships, houses, and other productions either of art or nature. Here *Spinoza* appears, and tells me, that these are only modifications; and that the subject, in which they inhere, is simple, in compounded, and indivisible. After this I consider the other system of beings, *viz.* the universe of thought, or my impressions and ideas. There I observe another sun, moon and stars; an earth, and seas, cover'd and inhabited by plants and animals; towns, houses, mountains, rivers; and in short every thing I can discover or conceive in the first system. Upon my enquiring concerning these, Theologians present themselves, and tell me, that these also are modifications, and modifications of one simple, uncompounded, and indivisible substance. Immediately upon which I am deafen'd with the noise of a hundred voices, that treat the first hypothesis with detestation and scorn, and the second with applause and veneration. I turn my attention to these hypotheses to see what may be the reason of so great a partiality; and find that they have the same fault of being unintelligible, and that as far as we can understand them, they are so much alike, that 'tis impossible to discover any absurdity in one, which is not common to both of them. We have no idea of any quality in an object, which does not agree to, and may not represent a quality in an impression; and that because all our ideas are deriv'd from our impressions. We can never, therefore, find any repugnance betwixt an extended object as a modification, and a simple uncompounded essence, as its substance, unless that repugnance takes place equally betwixt the perception or impression of that extended object, and the same uncompounded essence. Every idea of a quality in an object passes thro' an impression; and therefore every *perceivable* relation, whether of connexion or repugnance, must be common both to objects and impressions.

But tho' this argument, consider'd in general, seems evident beyond all doubt and contradiction, yet to make it more clear and sensible, let us survey it in detail; and see whether all the absurdities, which have been found in the system of *Spinoza*, may not likewise be discover'd in that of Theologians[5] .

First, It has been said against *Spinoza*, according to the scholastic way of talking, rather than thinking, that a mode, not being any distinct or separate existence, must be the very same with its substance, and consequently the extension of the universe, must be in a manner identify'd with that simple, uncompounded essence, in which the universe is suppos'd to inhere. But this, it may be pretended, is utterly impossible and inconceivable unless the indivisible substance expand itself; so as to correspond to the extension, or the extension contract itself, so as to answer to the indivisible substance. This argument seems just, as far as we can understand it; and 'tis plain nothing is requir'd, but a change in the terms, to apply the same argument to our extended perceptions, and the simple essence of the soul; the ideas of objects and perceptions being in every respect the same, only attended with the supposition of a difference, that is unknown and incomprehensible.

Secondly, It has been said, that we have no idea of substance, which is not applicable to matter; nor any idea of a distinct substance, which is not applicable to every distinct portion of matter. Matter, therefore, is not a mode but a substance, and each part of matter is not a distinct mode, but a distinct substance. I have already prov'd, that we have no perfect idea of substance; but that taking it for *something, that can exist by itself*, 'tis evident every perception is a substance, and every distinct part of a perception a distinct substance: And consequently the one hypothesis labours under the same difficulties in this respect with the other.

Thirdly, It has been objected to the system of one simple substance in the universe, that this substance being the support or *substratum* of every thing, must at the very same instant be modify'd into forms, which are contrary and incompatible. The round and square figures are incompatible in the same substance at the same time. How then is it possible, that the same substance can at once be modify'd into that square table, and into this round one? I ask the same question concerning the impressions of these tables; and find that the answer is no more satisfactory in one case than in the other.

It appears, then, that to whatever side we turn, the same difficulties follow us, and that we cannot advance one step towards the establishing the simplicity and immateriality of the soul, without preparing the way for a dangerous and irrecoverable atheism. 'Tis the same case, if instead of calling thought a modification of the soul, we shou'd give it the more antient, and yet more modish name of an *action*. By an action we mean much the same thing, as what is commonly call'd an abstract mode; that is, something, which, properly speaking, is neither distinguishable, nor separable from its substance, and is only conceiv'd by a distinction of reason, or an abstraction. But nothing is gain'd by this change of the term of modification, for that of action; nor do we free ourselves from one single difficulty by its means; as will appear from the two following reflections.

First, I observe, that the word, action, according to this explication of it, can never justly be apply'd to any perception, as deriv'd from a mind or thinking substance. Our perceptions are all really different, and separable, and distinguishable from each other, and from every thing else, which we can imagine; and therefore 'tis impossible to conceive, how they can be the action or abstract mode of any substance. The instance of motion, which is commonly made use of to shew after what manner perception depends, as an action, upon its substance, rather confounds than instructs us. Motion to all appearance induces no real nor essential change on the body, but only varies its relation to other objects. But betwixt a person in the morning walking in a garden with company, agreeable to him; and a person in the afternoon inclos'd in a dungeon, and full of terror, despair, and resentment, there seems to be a radical difference, and of quite another kind, than what is produc'd on a body by the change of its situation. As we conclude from the distinction and separability of their ideas, that external objects have a separate existence from each other; so when we make these ideas themselves our objects, we must draw the same conclusion concerning *them*, according to the precedent reasoning. At least it must be confest, that having no idea of the substance of the soul, 'tis impossible for us to tell how it can admit of such differences, and even contrarieties of perception without any fundamental change; and consequently can never tell in what sense perceptions are actions of that substance. The use, therefore, of the word, *action*, unaccompany'd with any meaning, instead of that of modification, makes no addition to our knowledge, nor is of any advantage to the doctrine of the immateriality of the soul.

I add in the second place, that if it brings any advantage to that cause, it must bring an equal to the cause of atheism. For do our Theologians pretend to make a monopoly of the word, *action*, and may not the atheists likewise take possession of it, and affirm that plants, animals, men, *&c.* are nothing but particular actions of one simple universal substance, which exerts itself from a blind and absolute

necessity? This you'll say is utterly absurd. I own 'tis unintelligible; but at the same time assert, according to the principles above-explain'd, that 'tis impossible to discover any absurdity in the supposition, that all the various objects in nature are actions of one simple substance, which absurdity will not be applicable to a like supposition concerning impressions and ideas.

From these hypotheses concerning the *substance* and *local conjunction* of our perceptions, we may pass to another, which is more intelligible than the former, and more important than the latter, *viz.* concerning the *cause* of our perceptions. Matter and motion, 'tis commonly said in the schools, however vary'd, are still matter and motion, and produce only a difference in the position and situation of objects. Divide a body as often as you please, 'tis still body. Place it in any figure, nothing ever results but figure, or the relation of parts. Move it in any manner, you still find motion or a change of relation. 'Tis absurd to imagine, that motion in a circle, for instance, shou'd be nothing but merely motion in a circle; while motion in another direction, as in an ellipse, shou'd also be a passion or moral reflection: That the shocking of two globular particles shou'd become a sensation of pain, and that the meeting of two triangular ones shou'd afford a pleasure. Now as these different shocks, and variations, and mixtures are the only changes, of which matter is susceptible, and as these never afford us any idea of thought or perception, 'tis concluded to be impossible, that thought can ever be caus'd by matter.

Few have been able to withstand the seeming evidence of this argument; and yet nothing in the world is more easy than to refute it. We need only reflect on what has been prov'd at large, that we are never sensible of any connexion betwixt causes and effects, and that 'tis only by our experience of their constant conjunction, we can arrive at any knowledge of this relation. Now as all objects, which are not contrary, are susceptible of a constant conjunction, and as no real objects are contrary,[6] I have inferr'd from these principles, that to consider the matter *a priori* any thing may produce any thing, and that we shall never discover a reason, why any object may or may not be the cause of any other, however great, or however little the resemblance may be betwixt them. This evidently destroys the precedent reasoning concerning the cause of thought or perception. For tho' there appear no manner of connexion betwixt motion or thought, the case is the same with all other causes and effects. Place one body of a pound weight on one end of a lever, and another body of the same weight on another end; you will never find in these bodies any principle of motion dependent on their distances from the center, more than of thought and perception. If you pretend, therefore, to prove *a priori* that such a position of bodies can never cause thought; because turn it which way you will, 'tis nothing but a position of bodies; you must by the same course of reasoning conclude, that it can never produce motion; since there is no more apparent connexion in the one case than in the other. But as this latter conclusion is contrary to evident experience, and as 'tis possible we may have a like experience in the operations of the mind, and may perceive a constant conjunction of thought and motion; you reason too hastily, when from the mere consideration of the ideas, you conclude that 'tis impossible motion can ever produce thought, or a different position of parts give rise to a different passion or reflection. Nay 'tis not only possible we may have such an experience, but 'tis certain we have it; since every one may perceive, that the different dispositions of his body change his thoughts and sentiments. And shou'd it be said, that this depends on the union of soul and body; I wou'd answer, that we must separate the question concerning the substance of the mind from that concerning the cause of its thought; and that confining ourselves to the latter question we find by the comparing their ideas, that thought and motion are different from each other, and by experience, that they are constantly united; which being all the circumstances, that enter into the idea of cause and effect, when apply'd to the operations of matter, we may certainly conclude, that motion may be, and actually is, the cause of thought and perception.

There seems only this dilemma left us in the present case; either to assert, that nothing can be the cause of another, but where the mind can perceive the connexion in its idea of the objects: Or to maintain, that all objects, which we find constantly conjoin'd, are upon that account to be regarded as causes and effects. If we choose the first part of the dilemma, these are the consequences. *First*, We in reality affirm, that there is no such thing in the universe as a cause or productive principle, not even the deity himself; since our idea of that supreme Being is deriv'd from particular impressions, none of which contain any efficacy, nor seem to have *any* connexion with *any* other existence. As to what may be said, that the connexion betwixt the idea of an infinitely powerful being, and that of any effect, which he wills, is necessary and unavoidable; I answer, that we have no idea of a being endow'd with any power, much less of one endow'd with infinite power. But if we will change expressions, we can only define power by connexion; and then in saying, that the idea of an infinitely powerful being is connected with that of every effect, which he wills, we really do no more than assert, that a being, whose volition is connected with every effect, is connected with every effect; which is an identical proposition, and gives us no insight into the nature of this power or connexion. But, *secondly*, supposing, that the deity were the great and efficacious principle, which supplies the deficiency of all causes, this leads us into the grossest impieties and absurdities. For upon the same account, that we have recourse to him in natural operations, and assert that matter cannot of itself communicate motion, or produce thought, *viz.* because there is no apparent connexion betwixt these objects; I say, upon the very same account, we must acknowledge that the deity is the author of all our volitions and perceptions; since they have no more apparent connexion either with one another, or with the suppos'd but unknown substance of the soul. This agency of the supreme Being we know to have been asserted by [7] several philosophers with relation to all the actions of the mind, except volition, or rather an inconsiderable part of volition; tho' 'tis easy to perceive, that this exception is a mere pretext, to avoid the dangerous consequences of that doctrine. If nothing be active but what has an apparent power, thought is in no case any more active than matter; and if this inactivity must make us have recourse to a deity, the supreme being is the real cause of all our actions, bad as well as good, vicious as well as virtuous.

Thus we are necessarily reduc'd to the other side of the dilemma, *viz.* that all objects, which are found to be constantly conjoin'd, are upon that account only to be regarded as causes and effects. Now as all objects, which are not contrary, are susceptible of a constant conjunction, and as no real objects are contrary; it follows, that for ought we can determine by the mere ideas, any thing may be the cause or effect of any thing; which evidently gives the advantage to the materialists above their antagonists. To pronounce, then, the final decision upon the whole; the question concerning the substance of the soul is absolutely unintelligible: All our perceptions are not susceptible of a local union, either with what is extended or unextended; there being some of them of the one kind, and some of the other: And as the constant conjunction of objects constitutes the very essence of cause and effect, matter and motion may often be regarded as the causes of thought, as far as we have any notion of that relation.

'Tis certainly a kind of indignity to philosophy, whose sovereign authority ought every where to be acknowledge'd, to oblige her on every occasion to make apologies for her conclusions, and justify herself to every particular art and science, which may be offended at her. This puts one in mind of a king arraign'd for high-treason against his subjects. There is only one occasion, when philosophy will think it necessary and even honourable to justify herself, and that is, when religion may seem to be in the least offended; whose rights are as dear to her as her own, and are indeed the same. If any one, therefore, shou'd imagine that the foregoing arguments are any ways dangerous to religion, I hope the following apology will remove his apprehensions.

There is no foundation for any conclusion *a priori* either concerning the operations or duration of any object, of which 'tis possible for the human mind to form a conception. Any object may be imagin'd to become entirely inactive, or to be annihilated in a moment; and 'tis an evident principle, *that whatever we can imagine, is possible.* Now this is no more true of matter, than of spirit; of an extended compounded substance, than of a simple and unextended. In both cases the metaphysical arguments for the immortality of the soul are equally inconclusive; and in both cases the moral arguments and those deriv'd from the analogy of nature are equally strong and convincing. If my philosophy, therefore, makes no addition to the arguments for religion, I have at least the satisfaction to think it takes nothing from them, but that every thing remains precisely as before.

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1. Part I. sect. 5.
2. Sect. 2, towards the end.
3. Part II. sect. 6.
4. Such as that of Sect. 2, from the coherence of our perceptions.
5. See *Bayle's* dictionary, article of *Spinoza*.
6. Part III. sect. 15.
7. As father *Malebranche* and other *Cartesians*.

# Section VI. Of personal identity

There are some philosophers, who imagine we are every moment intimately conscious of what we call our Self; that we feel its existence and its continuance in existence; and are certain, beyond the evidence of a demonstration, both of its perfect identity and simplicity. The strongest sensation, the most violent passion, say they, instead of distracting us from this view, only fix it the more intensely, and make us consider their influence on *self* either by their pain or pleasure. To attempt a farther proof of this were to weaken its evidence; since no proof can be deriv'd from any fact, of which we are so intimately conscious; nor is there any thing, of which we can be certain, if we doubt of this. Unluckily all these positive assertions are contrary to that very experience, which is pleaded for them, nor have we any idea of *self*; after the manner it is here explain'd. For from what impression cou'd this idea be deriv'd? This question 'tis impossible to answer without a manifest contradiction and absurdity; and yet 'tis a question, which must necessarily be answer'd, if we wou'd have the idea of self pass for clear and intelligible. It must be some one impression, that gives rise to every real idea. But self or person is not any one impression, but that to which our several impressions and ideas are suppos'd to have a reference. If any impression gives rise to the idea of self, that impression must continue invariably the same, thro' the whole course of our lives; since self is suppos'd to exist after that manner. But there is no impression constant and invariable. Pain and pleasure, grief and joy, passions and sensations succeed each other, and never all exist at the same time. It cannot, therefore, be from any of these impressions, or from any other, that the idea of self is deriv' d; and consequently there is no such idea.

But farther, what must become of all our particular perceptions upon this hypothesis? All these are different, and distinguishable, and separable from each other, and may be separately consider'd, and may exist separately, and have no need of any thing to support their existence. After what manner, therefore, do they belong to self; and how are they connected with it? For my part, when I enter most intimately into what I call *myself*, I always stumble on some particular perception or other, of heat or cold, light or shade, love or hatred, pain or pleasure. I never can catch *myself* at any time without a perception, and never can observe any thing but the perception. When my perceptions are remov'd for any time, as by sound sleep; so long am I insensible of *myself* and may truly be said not to exist. And

were all my perceptions remov'd by death, and cou'd I neither think, nor feel, nor see, nor love, nor hate after the dissolution of my body, I shou'd be entirely annihilated, nor do I conceive what is farther requisite to make me a perfect non-entity. If any one upon serious and unprejudic'd reflection, thinks he has a different notion of *himself*; I must confess I can reason no longer with him. All I can allow him is, that he may be in the right as well as I, and that we are essentially different in this particular. He may, perhaps, perceive something simple and continu'd, which he calls *himself*; tho' I am certain there is no such principle in me.

But setting aside some metaphysicians of this kind, I may venture to affirm of the rest of mankind, that they are nothing but a bundle or collection of different perceptions, which succeed each other with an inconceivable rapidity, and are in a perpetual flux and movement. Our eyes cannot turn in their sockets without varying our perceptions. Our thought is still more variable than our sight; and all our other senses and faculties contribute to this change; nor is there any single power of the soul, which remains unalterably the same, perhaps for one moment. The mind is a kind of theatre, where several perceptions successively make their appearance; pass, re-pass, glide away, and mingle in an infinite variety of postures and situations. There is properly no *simplicity* in it at one time, nor *identity* in different; whatever natural propension we may have to imagine that simplicity and identity. The comparison of the theatre must not mislead us. They are the successive perceptions only, that constitute the mind; nor have we the most distant notion of the place, where these scenes are represented, or of the materials, of which it is compos'd.

What then gives us so great a propension to ascribe an identity to these successive perceptions, and to suppose ourselves possest of an invariable and uninterrupted existence thro' the whole course of our lives? In order to answer this question, we must distinguish betwixt personal identity, as it regards our thought or imagination, and as it regards our passions or the concern we take in ourselves. The first is our present subject; and to explain it perfectly we must take the matter pretty deep, and account for that identity, which we attribute to plants and animals; there being a great analogy betwixt it, and the identity of a self or person.

We have a distinct idea of an object, that remains invariable and uninterrupted thro' a suppos'd variation of time; and this idea we call that of *identity* or *sameness*. We have also a distinct idea of several different objects existing in succession, and connected together by a close relation; and this to an accurate view affords as perfect a notion of d*diversity*, as if there was no manner of relation among the objects. But tho' these two ideas of identity, and a succession of related objects be in themselves perfectly distinct, and even contrary, yet 'tis certain, that in our common way of thinking they are generally confounded with each other. That action of the imagination, by which we consider the uninterrupted and invariable object, and that by which we reflect on the succession of related objects, are almost the same to the feeling, nor is there much more effort of thought requir'd in the latter case than in the former. The relation facilitates the transition of the mind from one object to another, and renders its passage as smooth as if it contemplated one continu'd object. This resemblance is the cause of the confusion and mistake, and makes us substitute the notion of identity, instead of that of related objects. However at one instant we may consider the related succession as variable or interrupted, we are sure the next to ascribe to it a perfect identity, and regard it as invariable and uninterrupted. Our propensity to this mistake is so great from the resemblance above-mention'd, that we fall into it before we are aware; and tho' we incessantly correct ourselves by reflection, and return to a more accurate method of thinking, yet we cannot long sustain our philosophy, or take off this biass from the imagination. Our last resource is to yield to it, and boldly assert that these different related objects are in effect the same, however interrupted and variable. In order to justify to ourselves this absurdity, we

often feign some new and unintelligible principle, that connects the objects together, and prevents their interruption or variation. Thus we feign the continu'd existence of the perceptions of our senses, to remove the interruption; and run into the notion of a *soul*, and *self* and *substance*, to disguise the variation. But we may farther observe, that where we do not give rise to such a fiction, our propension to confound identity with relation is so great, that we are apt to imagine[1] something unknown and mysterious, connecting the parts, beside their relation; and this I take to be the case with regard to the identity we ascribe to plants and vegetables. And even when this does not take place, we still feel a propensity to confound these ideas, tho' we are not able fully to satisfy ourselves in that particular, nor find any thing invariable and uninterrupted to justify our notion of identity.

Thus the controversy concerning identity is not merely a dispute of words. For when we attribute identity, in an improper sense, to variable or interrupted objects, our mistake is not confin'd to the expression, but is commonly attended with a fiction, either of something invariable and uninterrupted, or of something mysterious and inexplicable, or at least with a propensity to such fictions. What will suffice to prove this hypothesis to the satisfaction of every fair enquirer, is to shew from daily experience and observation, that the objects, which are variable or interrupted, and yet are suppos'd to continue the same, are such only as consist of a succession of parts, connected together by resemblance, contiguity, or causation. For as such a succession answers evidently to our notion of diversity, it can only be by mistake we ascribe to it an identity; and as the relation of parts, which leads us into this mistake, is really nothing but a. quality, which produces an association of ideas, and an easy transition of the imagination from one to another, it can only be from the resemblance, which this act of the mind bears to that, by which we contemplate one continu'd object, that the error arises. Our chief business, then, must be to prove, that all objects, to which we ascribe identity, without observing their invariableness and uninterruptedness, are such as consist of a succession of related objects.

In order to this, suppose any mass of matter, of which the parts are contiguous and connected, to be plac'd before us; 'tis plain we must attribute a perfect identity to this mass, provided all the parts continue uninterruptedly and invariably the same, whatever motion or change of place we may observe either in the whole or in any of the parts. But supposing some very *small* or *inconsiderable* part to be added to the mass, or subtracted from it; tho' this absolutely destroys the identity of the whole, strictly speaking; yet as we seldom think so accurately, we scruple not to pronounce a mass of matter the same, where we find so trivial an alteration. The passage of the thought from the object before the change to the object after it, is so smooth and easy, that we scarce perceive the transition, and are apt to imagine, that 'tis nothing but a continu'd survey of the same object.

There is a very remarkable circumstance, that attends this experiment; which is, that tho' the change of any considerable part in a mass of matter destroys the identity of the whole, yet we must measure the greatness part, not absolutely, but by its *proportion* to the whole. The addition or diminution of a mountain wou'd not be sutficient to produce a diversity in a planet; tho' the change of a very few inches wou'd be able to destroy the identity of some bodies. 'Twill be impossible to account for this, but by reflecting that objects operate upon the mind, and break or interrupt the continuity of its actions not according to their real greatness, but according to their proportion to each other: And therefore, since this interruption makes an object cease to appear the same, it must be the uninterrupted progress of the thought, which constitutes the [perfect?] [imperfect] identity.

This may be confirm'd by another phænomenon. A change in any considerable part of a body destroys its identity; but 'tis remarkable, that where the change is produc'd *gradually* and *insensibly* we are less apt to ascribe to it the same effect. The reason can plainly be no other, than that the mind, in following

the successive changes of the body, feels an easy passage from the surveying its condition in one moment to the viewing of it in another, and at no particular time perceives any interruption in its actions. From which continu'd perception, it ascribes a continu'd existence and identity to the object.

But whatever precaution we may use in introducing the changes gradually, and making them proportion able to the whole, 'tis certain, that where the changes are at last observ'd to become considerable, we make a scruple of ascribing identity to such different objects. There is, however, another artifice, by which we may induce the imagination to advance a step farther; and that is, by producing a reference of the parts to each other, and a combination to some *common end* or purpose. A ship, of which a considerable part has been chang'd by frequent reparations, is still consider'd as the same; nor does the difference of the materials hinder us from ascribing an identity to it. The common end, in which the parts conspire, is the same under all their variations, and affords an easy transition of the imagination from one situation of the body to another.

But this is still more remarkable, when we add a *sympathy* of parts to their *common end*, and suppose that they bear to each other, the reciprocal relation of cause and effect in all their actions and operations. This is the case with all animals and vegetables; where not only the several parts have a reference to some general purpose, but also a mutual dependance on, and connexion with each other. The effect of so strong a relation is, that tho' every one must allow, that in a very few years both vegetables and animals endure a *total* change, yet we still attribute identity to them, while their form, size, and substance are entirely alter'd. An oak, that grows from a small plant to a large tree, is still the same oak; tho' there be not one particle of matter, or figure of its parts the same. An infant becomes a man, and is sometimes fat, sometimes lean, without any change in his identity.

We may also consider the two following phænomena, which are remarkable in their kind. The first is, that tho' we commonly be able to distinguish pretty exactly betwixt numerical and specific identity, yet it sometimes happens, that we confound them, and in our thinking and reasoning employ the one for the other. Thus a man, who hears n noise, that is frequently interrupted and renew'd, says, it is still the same noise; tho' 'tis evident the sounds have only a specific identity or resemblance, and there is nothing numerically the same, but the cause, which produc'd them. In like manner it may be said without breach of the propriety of language, that such a church, which was formerly of brick, fell to ruin, and that the parish rebuilt the same church of free-stone, and according to modern architecture. Here neither the form nor materials are the same, nor is there any thing common to the two objects, but their relation to the inhabitants of the parish; and yet this alone is sufficient to make us denominate them the same. But we must observe, that in these cases the first object is in a manner annihilated before the second comes into existence; by which means, we are never presented in any one point of time with the idea of difference and multiplicity; and for that reason are less scrupulous in calling them the same.

Secondly, We may remark, that tho' in a succession of related objects, it be in a manner requisite, that the change of parts be not sudden nor entire, in order to preserve the identity, yet where the objects are in their nature changeable and inconstant, we admit of a more sudden transition, than wou'd otherwise be consistent with that relation. Thus as the nature of a river consists in the motion and change of parts; tho' in less than four and twenty hours these be totally alter'd; this hinders not the river from continuing the same during several ages. What is natural and essential to any thing is, in a manner, expected; and what is expected makes less impression, and appears of less moment, than what is unusual and extraordinary. A considerable change of the former kind seems really less to the imagination, than the most trivial alteration of the latter; and by breaking less the continuity of the thought, has less

influence in destroying the identity.

We now proceed to explain the nature of *personal identity*, which has become so great a question in philosophy, especially of late years in *England* where all the abstruser sciences are study'd with a peculiar ardour and application. And here 'tis evident, the same method of reasoning must be continu'd, which has so successfully explain'd the identity of plants, and animals, and ships, and houses, and of all the compounded and changeable productions either of art or nature. The identity, which we ascribe to the mind of man, is only a fictitious one, and of a like kind with that which we ascribe to vegetables and animal bodies. It cannot, therefore, have a different origin, but must proceed from a like operation of the imagination upon like objects.

But lest this argument shou'd not convince the reader; tho' in my opinion perfectly decisive; let him weigh the following reasoning, which is still closer and more immediate. 'Tis evident, that the identity, which we attribute to the human mind, however perfect we may imagine it to be, is not able to run the several different perceptions into one, and make them lose their characters of distinction and difference, which are essential to them. 'Tis still true, that every distinct perception, which enters into the composition of the mind, is a distinct existence, and is different, and distinguishable, and separable from every other perception, either contemporary or successive. But, as, notwithstanding this distinction and separability, we suppose the whole train of perceptions to be united by identity, a question naturally arises concerning this relation of identity; whether it be something that really binds our several perceptions together, or only associates their ideas in the imagination. That is, in other words, whether in pronouncing concerning the identity of a person, we observe some real bond among his perceptions, or only feel one among the ideas we form of them. This question we might easily decide, if we wou'd recollect what has been already prov'd at large, that the understanding never observes any real connexion among objects, and that even the union of cause and effect, when strictly examin'd, resolves itself into a customary association of ideas. For from thence it evidently follows, that identity is nothing really belonging to these different perceptions, and uniting them together; but is merely a quality, which we attribute to them, because of the union of their ideas in the imagination, when we reflect upon them. Now the only qualities, which can give ideas an union in the imagination, are these three relations above-mention'd. These are the uniting principles in the ideal world, and without them every distinct object is separable by the mind, and may be separately consider'd, and appears not to have any more connexion with any other object, than if disjoin'd by the greatest difference and remoteness. 'Tis, therefore, on some of these three relations of resemblance, contiguity and causation, that identity depends; and as the very essence of these relations consists in their producing an easy transition of ideas; it follows, that our notions of personal identity, proceed entirely from the smooth and uninterrupted progress of the thought along a train of connected ideas, according to the principles above-explain'd.

The only question, therefore, which remains, is, by what relations this uninterrupted progress of our thought is produc'd, when we consider the successive existence of a mind or thinking person. And here 'tis evident we must confine ourselves to resemblance and causation, and must drop contiguity, which has little or no influence in the present case.

To begin with *resemblance*; suppose we cou'd see clearly into the breast of another, and observe that succession of perceptions, which constitutes his mind or thinking principle, and suppose that he always preserves the memory of a considerable part of past perceptions; 'tis evident that nothing cou'd more contribute to the bestowing a relation on this succession amidst all its variations. For what is the memory but a faculty, by which we raise up the images of past perceptions? And as an image

necessarily resembles its object, must not the frequent placing of these resembling perceptions in the chain of thought, convey the imagination more easily from one link to another, and make the whole seem like the continuance of one object? In this particular, then, the memory not only discovers the identity, but also contributes to its production, by producing the relation of resemblance among the perceptions. The case is the same whether we consider ourselves or others.

As to *causation*; we may observe, that the true idea of the human mind, is to consider it as a system of different perceptions or different existences, which are link'd together by the relation of cause and effect, and mutually produce, destroy, influence, and modify each other. Our impressions give rise to their correspondent ideas; and these ideas in their turn produce other impressions. One thought chaces another, and draws after it a third, by which it is expell'd in its turn. In this respect, I cannot compare the soul more properly to any thing than to a republic or commonwealth, in which the several members are united by the reciprocal ties of government and subordination, and give rise to other persons, who propagate the same republic in the incessant changes of its parts. And as the same individual republic may not only change its members, but also its laws and constitutions; in like manner the same person may vary his character and disposition, as well as his impressions and ideas, without losing his identity. Whatever changes he endures, his several parts are still connected by the relation of causation. And in this view our identity with regard to the passions serves to corroborate that with regard to the imagination, by the making our distant perceptions influence each other, and by giving us a present concern for our past or future pains or pleasures.

As memory alone acquaints us with the continuance and extent of this succession of perceptions, 'tis to be consider'd, upon that account chiefly, as the source of personal identity. Had we no memory, we never shou'd have any notion of causation, nor consequently of that chain of causes and effects, which constitute our self or person. But having once acquir'd this notion of causation from the memory, we can extend the same chain of causes, and consequently the identity of our persons beyond our memory, and can comprehend times, and circumstances, and actions, which we have entirely forgot, but suppose in general to have existed. For how few of our past actions are there, of which we have any memory? Who can tell me, for instance, what were his thoughts and actions on the first of *January* 1715, the 11th of *March* 1719, and the 3d of *August* 1733? Or will he affirm, because he has entirely forgot the incidents of these days, that the present self is not the same person with the self of that time; and by that means overturn all the most establish'd notions of personal identity? In this view, therefore, memory does not so much *produce* as *discover* personal identity, by shewing us the relation of cause and effect among our different perceptions. 'Twill be incumbent on those, who affirm that memory produces entirely our personal identity, to give a reason why we can thus extend our identity beyond our memory.

The whole of this doctrine leads us to a conclusion, which is of great importance in the present affair, *viz.* that all the nice and subtile questions concerning personal identity can never possibly be decided, and are to be regarded rather as grammatical than as philosophical difficulties. Identity depends on the relations of ideas; and these relations produce identity, by means of that easy transition they occasion. But as the relations, and the easiness of the transition may diminish by insensible degrees, we have no just standard, by which we can decide any dispute concerning the time, when they acquire or lose a title to the name of identity. All the disputes concerning the identity of connected objects are merely verbal, except so far as the relation of parts gives rise to some fiction or imaginary principle of union, as we have already observ'd.

What I have said concerning the first origin and uncertainty of our notion of identity, as apply'd to the human mind, may be extended with little or no variation to that of *simplicity*. An object, whose different co-existent parts are bound together by a close relation, operates upon the imagination after much the same manner as one perfectly simple and indivisible, and requires not a much greater stretch of thought in order to its conception. From this similarity of operation we attribute a simplicity to it, and feign a principle of union as the support of this simplicity, and the center of all the different parts and qualities of the object.

Thus we have finish'd our examination of the several systems of philosophy, both of the intellectual and moral world; and in our miscellaneous way of reasoning have been led into several topics; which will either illustrate and confirm some preceding part of this discourse, or prepare the way for our following opinions. 'Tis now time to return to a more close examination of our subject, and to proceed in the accurate anatomy of human nature, having fully explain'd the nature of our judgment and understanding.

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1. If the reader is desirous to see how a great genius may be influenc'd by these seemingly trivial principles of the imagination, as well as the mere vulgar, let him read my Lord *Shaftbury*'s reasoning: concerning the uniting principle of the universe, and the identity of plants and animals. See his *Moralists:* or, *Philosophical rhapsody*.

# Section VII. Conclusion of this book

But before I launch out into those immense depths of philosophy, which lie before me, I find myself inclin'd to stop a moment in my present station, and to ponder that voyage, which I have undertaken, and which undoubtedly requires the utmost art and industry to be brought to a happy conclusion. Methinks I am like a man, who having struck on many shoals, and having narrowly escap'd ship-wreck in passing a small frith, has yet the temerity to put out to sea in the same leaky weather-beaten vessel, and even carries his ambition so far as to think of compassing the globe under these disadvantageous circumstances. My memory of past errors and perplexities, makes me diffident for the future. The wretched condition, weakness, and disorder of the faculties, I must employ in my enquiries, encrease my apprehensions. And the impossibility of amending or correcting these faculties, reduces me almost to despair, and makes me resolve to perish on the barren rock, on which I am at present, rather than venture myself upon that boundless ocean, which runs out into immensity. This sudden view of my danger strikes me with melancholy; and as 'tis usual for that passion, above all others, to indulge itself; I cannot forbear feeding my despair, with all those responding reelections, which the present subject furnishes me with in such abundance.

I am first at frighted and confounded with that forelorn solitude, in which I am plac'd in my philosophy, and fancy myself some strange uncouth monster, who not being able to mingle and unite in society, has been expell'd all human commerce, and left utterly abandon'd and disconsolate. Fain wou'd I run into the crowd for shelter and warmth; but cannot prevail with myself to mix with such deformity. I call upon others to join me, in order to make a company apart; but no one will hearken to me. Every one keeps at a distance, and dreads that storm, which beats upon me from every side. I have expos'd myself to the enmity of all metaphysicians, logicians, mathematicians, and even theologians; and can I wonder at the insults I must suffer? I have declar'd my dis-approbation of their systems; and can I be surpriz'd, if they shou'd express a hatred of mine and of my person? When I look abroad, I foresee on every side, dispute, contradiction, anger, calumny and detraction. When I turn my eye

inward, I find nothing but doubt and ignorance. All the world conspires to oppose and contradict me; tho' such is my weakness, that I feel all my opinions loosen and fall of themselves, when unsupported by the approbation of others. Every step I take is with hesitation, and every new reflection makes me dread an error and absurdity in my reasoning.

For with what confidence can I venture upon such bold enterprizes, when beside those numberless infirmities peculiar to myself, I find so many which are common to human nature? Can I be sure, that in leaving all establish'd opinions I am following truth; and by what criterion shall I distinguish her, even if fortune shou'd at last guide me on her foot-steps? After the most accurate and exact of my reasonings, I can give no reason why I shou'd assent to it; and feel nothing but a *strong* propensity to consider objects *strongly* in that view, under which they appear to me. Experience is a principle, which instructs me in the several conjunctions of objects for the past. Habit is another principle, which determines me to expect the same for the future; and both of them conspiring to operate upon the imagination, make me form certain ideas in a more intense and lively manner, than others, which are not attended with the same advantages. Without this quality, by which the mind enlivens some ideas beyond others (which seemingly is so trivial, and so little founded on reason) we cou'd never assent to any argument, nor carry our view beyond those few objects, which are present to our senses. Nay, even to these objects we cou'd never attribute any existence, but what was dependent on the senses; and must comprehend them entirely in that succession of perceptions, which constitutes our self or person. Nay farther, even with relation to that succession, we cou'd only admit of those perceptions, which are immediately present to our consciousness, nor cou'd those lively images, with which the memory presents us, be ever receiv'd as true pictures of past perceptions. The memory, senses, and understanding are, therefore, all of them founded on the imagination, or the vivacity of our ideas.

No wonder a principle so inconstant and fallacious shou'd lead us into errors, when implicitly follow'd (as it must be) in all its variations. 'Tis this principle, which makes us reason from causes and effects; and 'tis the same principle, which convinces us of the continu'd existence of external objects, when absent from the senses. But tho' these two operations be equally natural and necessary in the human mind, yet in some circumstances they are [1] directly contrary, nor is it possible for us to reason justly and regularly from causes and effects, and at the same time believe the continu'd existence of matter. How then shall we adjust those principles together? Which of them shall we prefer? Or in case we prefer neither of them, but successively assent to both, as is usual among philosophers, with what confidence can we afterwards usurp that glorious title, when we thus knowingly embrace a manifest contradiction?

This [2] contradiction wou'd be more excusable, were it compensated by any degree of solidity and satisfaction in the other parts of our reasoning. But the case is quite contrary. When we trace up the human understanding to its first principles, we find it to lead us into such sentiments, as seem to turn into ridicule all our past pains and industry, and to discourage us from future enquiries. Nothing is more curiously enquir'd after by the mind of man, than the causes of every phænomenon; nor are we content with knowing the immediate causes, but push on our enquiries, till we arrive at the original and ultimate principle. We wou'd not willingly stop before we are acquainted with that energy in the cause, by which it operates on its effect; that tie, which connects them together; and that efficacious quality, on which the tie depends. This is our aim in all our studies and reflections: And how must we be disappointed, when we learn, that this connexion, tie, or energy lies merely in ourselves, and is nothing but that determination of the mind, which is acquir'd by custom, and causes us to make a transition from an object to its usual attendant, and from the impression of one to the lively idea of the other? Such a discovery not only cuts off all hope of ever attaining satisfaction, but even prevents our very

wishes; since it appears, that when we say we desire to know the ultimate and operating principle, as something, which resides in the external object, we either contradict ourselves, or talk without a meaning.

This deficiency in our ideas is not, indeed, perceiv'd in common life, nor are we sensible, that in the most usual conjunctions of cause and effect we are as ignorant of the ultimate principle, which binds them together, as in the most unusual and extraordinary. But this proceeds merely from an illusion of the imagination; and the question is, how far we ought to yield to these illusions. This question is very difficult, and reduces us to a very dangerous dilemma, whichever way we answer it. For if we assent to every trivial suggestion of the fancy; beside that these' suggestions are often contrary to each other; they lead us into such errors, absurdities, and obscurities, that we must at last become asham'd of our credulity. Nothing is more dangerous to reason than the flights of the imagination, and nothing has been the occasion of more mistakes among philosophers. Men of bright fancies may in this respect he compar'd to those angels, whom the scripture represents as cowering their eyes with their wings. This has already appear'd in so many instances, that we may spare ourselves the trouble of enlarging upon it any farther.

But on the other hand, if the consideration of these instances makes us take a resolution to reject all the trivial suggestions of the fancy, and adhere to the understanding, that is, to the general and more established properties of the imagination; even this resolution, if steadily executed, wou'd be dangerous, and attended with the most fatal consequences. For I have already shewn,[3] that the understanding, when it acts alone, and according to its most general principles, entirely subverts itself, and leaves not the lowest degree of evidence in any proposition, either in philosophy or common life. We save ourselves from this total scepticism only by means of that singular and seemingly trivial property of the fancy, by which we enter with difficulty into remote views of things, and are not able to accompany them with so sensible an impression, as we do those, which are more easy and natural. Shall we, then, establish it for a general maxim, that no refin'd or elaborate reasoning is ever to be receiv'd? Consider well the consequences of such a principle. By this means you cut off entirely all science and philosophy: You proceed upon one singular quality of the imagination, and by a parity of reason must embrace all of them: And you expresly contradict yourself; since this maxim must be built on the preceding reasoning, which will be allow'd to be sufficiently refin'd and metaphysical. What party, then, shall we choose among these difficulties? If we embrace this principle, and condemn all refin'd reasoning, we run into the most manifest absurdities. If we reject it in favour of these reasonings, we subvert entirely the human understanding. We have, therefore, no choice left but betwixt a false reason and none at all. For my part, I know not what ought to be done in the present case. I can only observe what is commonly done; which is, that this difficulty is seldom or never thought of; and even where it has once been present to the mind, is quickly forgot, and leaves but a small impression behind it. Very refin'd reflections have little or no influence upon us; and yet we do not, and cannot establish it for a rule, that they ought not to have any influence; which implies a manifest contradiction.

But what have I here said, that reflections very refin'd and metaphysical have little or no influence upon us? This opinion I can scarce forbear retracting, and condemning from my present feeling and experience. The *intense* view of these manifold contradictions and imperfections in human reason has so wrought upon me, and heated my brain, that I am ready to reject all belief and reasoning, and can look upon no opinion even as more probable or likely than another. Where am I, or what? From what causes do I derive my existence, and to what condition shall I return? Whose favour shall I court, and whose anger must I dread? What beings surround me? and on whom have I any influence, or who have

any influence on me? I am confounded with all these questions, and begin to fancy myself in the most deplorable condition imaginable, inviron'd with the deepest darkness, and utterly depriv'd of the use of every member and faculty.

Most fortunately it happens, that since reason is incapable of dispelling these clouds, nature herself suffices to that purpose, and cures me of this philosophical melancholy and delirium, either by relaxing this bent of mind, or by some avocation, and lively impression of my senses, which obliterate all these chimeras. I dine, I play a game of back-gammon, I converse, and am merry with my friends; and when after three or four hours' amusement, I wou'd return to these speculations, they appear so cold, and strain'd, and ridiculous, that I cannot find in my heart to enter into them any farther.

Here then I find myself absolutely and necessarily determin'd to live, and talk, and act like other people in the common affairs of life. But notwithstanding that my natural propensity, and the course of my animal spirits and passions reduce me to this indolent belief in the general maxims of the world, I still feel such remains of my former disposition, that I am ready to throw all my books and papers into the fire, and resolve never more to renounce the pleasures of life for the sake of reasoning and philosophy. For those are my sentiments in that splenetic humour, which governs me at present. I may, nay I must yield to the current of nature, in submitting to my senses and understanding; and in this blind submission I shew most perfectly my sceptical disposition and principles. But does it follow, that I must strive against the current of nature, which leads me to indolence and pleasure; that I must seclude myself, in some measure, from the commerce and society of men, which is so agreeable; and that I must torture my brain with subtilities and sophistries, at the very time that I cannot satisfy myself concerning the reasonableness of so painful an application, nor have any tolerable prospect of arriving by its means at truth and certainty. Under what obligation do I lie of making such an abuse of time? And to what end can it serve either for the service of mankind, or for my own private interest? No: If I must be a fool, as all those who reason or believe any thing *cenrtainly* are, my follies shall at least be natural and agreeable. Where I strive against my inclination, I shall have a good reason for my resistance; and will no more be led a wandering into such dreary solitudes, and rough passages, as I have hitherto met with.

These are the sentiments of my spleen and indolence; and indeed I must confess, that philosophy has nothing to oppose to them, and expects a victory more from the returns of a serious good-humour'd disposition, than from the force of reason and conviction. In all the incidents of life we ought still to preserve our scepticism. If we believe, that fire warms, or water refreshes, 'tis only because it costs us too much pains to think otherwise. Nay if we are philosophers, it ought only to be upon sceptical principles, and from an inclination, which we feel to the employing ourselves after that manner. Where reason is lively, and mixes itself with some propensity, it ought to be assented to. Where it does not, it never can have any title to operate upon us.

At the time, therefore, that I am tir'd with amusement and company, and have indulg'd a *reverie* in my chamber, or in a solitary walk by a river-side, I feel my mind all collected within itself, and am naturally *inclin'd* to carry my view into all those subjects, about which I have met with so many disputes in the course of my reading and conversation. I cannot forbear having a curiosity to be acquainted with the principles of moral good and evil, the nature and foundation of government, and the cause of those several passions and inclinations, which actuate and govern me. I am uneasy to think I approve of one object, and disapprove of another; call one thing beautiful, and another deform'd; decide concerning truth and falshood, reason and folly, without knowing upon what principles I proceed. I am concern'd for the condition of the learned world, which lies under such a

deplorable ignorance in all these particulars. I feel an ambition to arise in me of contributing to the instruction of mankind, and of acquiring a name by my inventions and discoveries. These sentiments spring up naturally in my present disposition; and shou'd I endeavour to banish them, by attaching myself to any other business or diversion, I *feel* I shou'd be a loser in point of pleasure; and this is the origin of my philosophy. But even suppose this curiosity and ambition shou'd not transport me into speculations without the sphere of common life, it wou'd necessarily happen, that from my very weakness I must be led into such enquiries. 'Tis certain, that superstition is much more bold in its systems and hypotheses than philosophy; and while the latter contents itself with assigning new causes and principles to the phænomena, which appear in the visible world, the former opens a world of its own, and presents us with scenes, and beings, and objects, which are altogether new. Since therefore 'tis almost impossible for the mind of man to rest, like those of beasts, in that narrow circle of objects, which are the subject of daily conversation and action, we ought only to deliberate concerning the choice of our guide, and ought to prefer that which is safest and most agreeable. And in this respect I make bold to recommend philosophy, and shall not scruple to give it the preference to superstition of every kind or denomination. For as superstition arises naturally and easily from the popular opinions of mankind, it seizes more strongly on the mind, and is often able to disturb us in the conduct of our lives and actions. Philosophy on the contrary, if just, can present us only with mild and moderate sentiments; and if false and extravagant, its opinions are merely the objects of a cold and general speculation, and seldom go so far as to interrupt the course of our natural propensities. The Cynics are an extraordinary instance of philosophers, who from reasonings purely philosophical ran into as great extravagances of conduct as any *Monk* or *Dervise* that ever was in the world. Generally speaking, the errors in religion are dangerous; those in philosophy only ridiculous.

I am sensible, that these two cases of the strength and weakness of the mind will not comprehend all mankind, and that there are in England in particular, many honest gentlemen, who being always employ'd in their domestic affairs, or amusing themselves in common recreations, have carried their thoughts very little beyond those objects, which are every day expos'd to their senses. And indeed, of such as these I pretend not to make philosophers, nor do I expect them either to be associates in these researches or auditors of these discoveries. They do well to keep themselves in their present situation; and instead of refining them into philosophers, I wish we cou'd communicate to our founders of systems, a share of this gross earthy mixture, as an ingredient, which they commonly stand much in need of, and which wou'd serve to temper those fiery particles, of which they are compos'd. While a warm imagination is allow'd to enter into philosophy, and hypotheses embrac'd merely for being specious and agreeable, we can never have any steady principles, nor any sentiments, which will suit with common practice and experience. But were these hypotheses once remov'd, we might hope to establish a system or set of opinions, which if not true (for that, perhaps, is too much to be hop'd for) might at least be satisfactory to the human mind, and might stand the test of the most critical examination. Nor shou'd we despair of attaining this end, because of the many chimerical systems, which have successively arisen and decay'd away among men, wou'd we consider the shortness of that period, wherein these questions have been the subjects of enquiry and reasoning. Two thousand years with such long interruptions, and under such mighty discouragements are a small space of time to give any tolerable perfection to the sciences; and perhaps we are still in too early an age of the world to discover any principles, which will bear the examination of the latest posterity. For my part, my only hope is, that I may contribute a little to the advancement of knowledge, by giving in some particulars a different turn to the speculations of philosophers, and pointing out to them more distinctly those subjects, where alone they can expect assurance and conviction. Human Nature is the only science of man; and yet has been hitherto the most neglected. 'Twill be sufficient for me, if I can bring it a little more into fashion; and the hope of this serves to compose my temper from that spleen, and invigorate

it from that indolence, which sometimes prevail upon me. If the reader finds himself in the same easy disposition, let him follow me in my future speculations. If not, let him follow his inclination, and wait the returns of application and good humour. The conduct of a man, who studies philosophy in this careless manner, is more truly sceptical than that of one, who feeling in himself an inclination to it, is yet so over-whelm'd with doubts and scruples, as totally to reject it. A true sceptic will be diffident of his philosophical doubts, as well as of his philosophical conviction; and will never refuse any innocent satisfaction, which offers itself, upon account of either of them.

Nor is it only proper we shou'd in general indulge our inclination in the most elaborate philosophical researches, notwithstanding our sceptical principles, but also that we shou'd yield to that propensity, which inclines us to be positive and certain in *particular points*, according to the light, in which we survey them in any *particular instant.* 'Tis easier to forbear all examination and enquiry, than to check ourselves in so natural a propensity, and guard against that assurance, which always arises from an exact and full survey of an object. On such an occasion we are apt not only to forget our scepticism, but even our modesty too; and make use of such terms as these, *'tis evident, 'tis certain, 'tis undeniable;* which a due deference to the public ought, perhaps, to prevent. I may have fallen into this fault after the example of others; but I here enter a *caveat* against any objections, which may be offer'd on that head; and declare that such expressions were extorted from me by the present view of the object, and imply no dogmatical spirit, nor conceited idea of my own judgment, which are sentiments that I am sensible can become no body, and a sceptic still less than any other.

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1. Sect. 4 (p. 231).
2. Part. III. sect. 14.
3. Sect. 1 (p. 182 f.).