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§1

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Treatise of Human Nature, Book 1

David Hume

1739

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[Brackets] enclose editorial explanations. Small ·dots· enclose material that has been added, but can be read as though it were part of the original text. Occasional •bullets, and also indenting of passages that are not quotations, are meant as aids to grasping the structure of a sentence or a thought. Every four-point ellipsis . . . . indicates the omission of a brief passage that seems to present more difficulty than it is worth.

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Part i: Ideas, their origin, composition, connection, abstraction, etc.

1: The origin of our ideas

All the perceptions of the human mind fall into two distinct kinds, which I shall call 'impressions' and 'ideas'. These differ in the degrees of force and liveliness with which they strike upon the mind and make their way into our thought or consciousness. The perceptions that enter with most force and violence we may name 'impressions'; and under this name I bring all our sensations, passions, and emotions, as they make their first appearance in the soul [= 'mind'; no religious implications]. By 'ideas' I mean the faint images of the others in thinking and reasoning: for example, all the perceptions aroused by your reading this book—apart from perceptions arising from sight and touch, and apart from the immediate pleasure or uneasiness your reading may cause in you. I don't think I need to say much to explain this distinction: everyone will readily perceive for himself the difference between feeling (·impressions·) and thinking (·ideas·). The usual degrees ·of intensity· of these are easily distinguished, though there may be particular instances where they come close to one another. Thus, in sleep, in a fever, in madness, or in any very violent emotions of soul, our ideas may become like our impressions; as on the other hand it sometimes happens that our impressions are so faint and low that we can't distinguish them from our ideas. But although ideas and impressions are fairly similar in a few cases, they are in general so very different that no-one can hesitate to classify them as different and to give to each a special name to mark the difference.[1] [In this work, 'name' is often used to cover not only proper names but also general terms such as 'idea'.]

Another division of our perceptions should be noted; this one cuts across the line between impressions and ideas. It is the division into *simple* and *complex*. Simple perceptions—that is, simple impressions and ideas—are ones that don't allow any distinction or separation ·among their parts·. Complex perceptions, on the contrary, can be distinguished into parts. Though a particular colour, taste, and smell, are qualities all united together in this apple, it's easy to perceive that they aren't the same as one another and can least be distinguished from each other—·and so one's total perception of the apple is *complex*·.

Having through these divisions ordered and arranged our subject-matter (·perceptions·), we can now set ourselves to consider more accurately their qualities and relations. The first fact that springs to my attention is that our impressions greatly *resemble* our ideas in every respect except their degree of force and liveliness. Perceptions of one kind seem to be, in a way, reflections of perceptions of the other kind; so that all the perceptions of the mind do double duty, appearing both as impressions and as ideas. When I shut my eyes and think of my study, the ideas I form are exact representations of the impressions I felt ·when I was in my study·; every detail in one is to be found in the other. And I

[1] I hope you will allow me to use the words 'impression' and 'idea' in senses different from their usual ones. Perhaps, indeed, I am restoring 'idea' to its original sense, from which Mr Locke has perverted it by making it stand for all our perceptions. By the term 'impression' I don't mean anything about *how* our lively perceptions are produced in the soul; I merely label the perceptions themselves; and for this I don't know any particular name, in English or any other language.

find the same resemblance and representation when I survey my other perceptions: ideas and impressions seem always to correspond to each other. This remarkable fact holds my attention for a moment.

Surveying the field more accurately, I find I have been swept along by how things first appeared to me, and that I must—with help from the simple/complex distinction—limit this general thesis that all our ideas and impressions are resembling. I observe that •many of our complex ideas never had impressions that corresponded to them: I can imagine a city such as the New Jerusalem, with golden pavements and ruby walls, though I never saw such a thing. And I observe that •many of our complex impressions are never exactly copied by ideas: I have seen Paris, but I can't form an idea of that city that perfectly represents all its streets and houses in all their detail.

So I perceive that although there is in general a great resemblance between our •complex impressions and ideas, it is not true across the board that they are exact copies of each other. Now let us consider how the case stands with our •simple perceptions. After the most accurate examination I am capable of, I venture to say that here the rule holds without exception: that *every* simple idea has a simple impression that resembles it, and *every* simple impression has a corresponding idea. The idea of red that we form in the dark differs only in •degree ·of intensity·, not in •nature, from the impression ·of red· that strikes our eyes in sunshine. You can satisfy yourself that I am right about this by going over as many of your simple impressions and ideas as you like; it's impossible to prove my point by going over all of them! But if anyone should deny this universal resemblance ·between simple impressions and simple ideas·, I don't know how to convince him except by asking him to show •a simple impression that *doesn't* have a corresponding idea, or •a simple idea that has no corresponding impression. If he doesn't answer this challenge—and it's certain that he can't—then his silence and our own observation will suffice to establish our conclusion.

Thus we find that all simple ideas and impressions resemble each other; and as the complex are formed from simple ones we can say generally that these two sorts of perception exactly correspond. Having uncovered this relation, which requires no further examination, I am curious to find some of the other qualities ·of impressions and ideas·. Let us consider what brings them into existence: as between impressions and ideas, which are causes and which are effects?

The *full* examination of this question is the subject of this book; so I shall here content myself with establishing one general proposition:

> **All our simple ideas, when they first appear, are derived from simple impressions which correspond to them and which they exactly represent.**

In looking for phenomena to support this proposition, I can find only two kinds; but the phenomena of each kind are obvious, numerous, and conclusive.

·As a preliminary to the first kind of phenomenon·, I first go over again in my mind, and make myself certain, of the proposition that I have already asserted, that every simple impression is •attended with a corresponding idea, and every simple idea is •attended with a corresponding impression. From this •constant conjunction of resembling perceptions I immediately conclude that there is a great *connection* between our corresponding impressions and ideas, and that the existence of the one has a considerable *influence* on the existence of the other. Such a constant conjunction in such an infinite number of instances can't arise from chance, but clearly proves *a dependence of the impressions on the ideas*

or *of the ideas on the impressions*. Wanting to know which way the dependence runs, I consider the order in which these ·simple impressions and ideas· first appear; and I find by constant experience that the simple impressions always come first—it is never the other way around. To give a child an idea of scarlet or orange, of sweet or bitter, I present objects ·that are that colour or taste·—that is, I give him those impressions. I don't do anything as absurd as trying to give the child the impression by arousing in him the idea! When our ideas occur they don't produce the corresponding impressions; we don't see any colour or feel any sensation merely by *thinking* of them. On the other hand we find that every impression— whether of mind or body—is followed by an idea that resembles it in every way except its degree 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 the fact that the impression always comes first is an equal proof that impressions are the causes of our ideas, not vice versa.

This is confirmed by another plain and convincing phenomenon, namely: whenever someone happens to lack the faculty that gives rise to impressions of some kind—e.g. when someone is born blind or deaf—he lacks not only impressions of that kind but also the corresponding ideas; so that his mind never shows the least traces of either of them. This holds not only where the relevant organs of sensation are entirely destroyed, but also when they haven't yet been put into action to produce a particular impression; we can't form an accurate idea of the taste of a pineapple without having actually tasted it.

But there is one phenomenon that goes the other way, and may prove that it is not absolutely impossible for ideas to occur in advance of their corresponding impressions. I think you'll agree that the various ideas of colours that enter by the eyes are really different from each other, though there are resemblances amongst them; similarly for ideas of sounds that are conveyed by the ·sense of· hearing. If this is true of •different colours, it must equally hold for the •different shades of the same colour that each of them produces a distinct idea that is independent of the others. (If not, then it is possible by the continual gradation of shades to run a colour imperceptibly into what is most remote from it. ·We can create a sequence of colours, each barely perceptibly different from its neighbours, with some colour at the start of the sequence and a totally different one at the end·. If you won't allow any of the intervening pairs of neighbours to be different, you can't without absurdity say that the colours at the ends of the sequence are different—·which they patently are·.) Now take the case of someone who has had the use of his eyesight for thirty years, and has become perfectly well acquainted with colours of all kinds except for one particular shade of blue, which he happens never to have encountered. Let all the different shades of blue except that single one be placed before him, descending gradually from the deepest to the lightest. Obviously, he will perceive a blank ·in the sequence· where that shade is missing, and will be aware that the qualitative gap between neighbours is greater at that place than anywhere else in the sequence. Now I ask:

> Can he fill this gap from his own imagination, raising up in his mind the idea of that particular shade, even though ·an impression of· it had never been conveyed to him by his senses?

I think most people will agree that he can; and this may serve as a proof that simple ideas are not *always* derived from corresponding impressions. But this instance is so particular and singular [those are Hume's adjectives] that it is hardly worth noticing, and isn't enough on its own to require us to alter our general maxim.

But I ought to mention that the principle that *impressions come before ideas* is subject not only to the exception (·about the missing shade of blue·) that I have just sketched but also to another limitation, namely: just as our ideas are images [= 'copies'] of our impressions, so we can form secondary ideas that are images of primary ones; and my own theory allows for this. This is not strictly speaking an *exception to* the rule ·that impressions come first·, but rather an *explanation of* it. Ideas produce the images of themselves in new ·secondary· ideas; but as the first ·or primary· ideas are derived from impressions, it still remains true that all our simple ideas come from their corresponding impressions—either immediately or ·as secondary ideas· through the mediation of primary ideas.

This, then, is the first principle I establish in the science of human nature. Don't despise it because it looks simple. It is a remarkable fact that the present question about •which comes first, impressions or ideas, is the very one that has created so much noise when expressed as the question of •whether there are any innate ideas, or whether all ideas are derived from sensation and reflection. Notice that when philosophers want to show the ideas of extension and colour not to be innate, all they do is to show that those ideas are conveyed by our senses. To show that the ideas of passion and desire are not innate they observe that we have a prior experience of these emotions in ourselves. Now, if we carefully examine these arguments we shall find that they prove only that ideas are preceded by other more lively perceptions, from which they are derived and which they represent. I hope this clear statement of the question will remove all disputes about it, and will render this principle of more use in our reasonings than it seems to have been up to now.

2: Division of the subject

Since it appears that our simple impressions come before their corresponding ideas, and that the exceptions to this are very rare, it seems that the methodical procedure would be to examine our impressions before turning to our ideas. Impressions can be divided into two kinds, those of *sensation* and those of *reflection*. •Impressions of sensation arise in the soul itself, from unknown causes. •Impressions of reflection are largely derived from our ideas, in the following way. An impression first strikes on the senses and makes us perceive heat or cold, thirst or hunger, pleasure or pain, of some kind or other. Of this impression the mind makes a copy which remains after the impression ceases; and we call this copy an 'idea'. When this idea of pleasure or pain recurs in the soul, it produces new impressions of desire and aversion, hope and fear, which may properly be called 'impressions of reflection' because they are derived from reflection. These impressions are in turn copied by the memory and imagination and become ·sources of· ideas, which in *their* turn may give rise to yet *other* impressions and ideas. Thus the impressions of reflection come before their corresponding ideas but come after impressions of sensation and are derived from them. The study of our sensations belongs more to anatomists and natural philosophers than to moral philosophers [= 'belongs more to anatomists and natural scientists than to philosophers and scientists interested in the human condition']; so I shan't go into it here. And as the impressions of reflection—that is, the passions, desires, and emotions—that mainly deserve our attention arise mostly from ideas,

we must reverse the method that seems most natural at first sight: in explaining the nature and principles of the human mind, we must deal in detail with ideas before we proceed to impressions. That is why I have chosen to begin with ideas. [**Important note:** Most of Hume's uses of 'principle' in *Treatise* I, including the one we have just met, give it a meaning that it often had in his day, namely that of 'source', 'cause', 'drive', 'mechanism' or the like. From now on, every occurrence of the word in that sense will be written as 'principle$_c$, suggesting 'principle = cause'. A 'principle' without the subscript is a proposition, usually a premise but sometimes a conclusion.]

3: Memory and imagination

We find by experience that when an impression has been present to the mind, it re-appears there later as an idea; and it can do this in either of two ways: •when in its new appearance it retains a good deal of its first liveliness and is intermediate between an impression and an idea; or •when it entirely loses that liveliness 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'. You can see at a glance that the ideas of the memory are much livelier and stronger than those of the imagination, and that the memory paints its objects in sharper colours than the imagination uses. When we remember a past event, the idea of it flows in on the mind in a forcible manner; whereas in the imagination the perception is faint and languid, and the mind can't easily keep it steady and uniform for any considerable time. Here, then, is a noticeable difference between one species of ideas and another. But of this more fully hereafter, in I.iii.5.

Another, equally obvious, difference between these two kinds of ideas is this: though neither the ideas of the memory nor those of imagination— neither the lively ideas nor the faint ones—can appear in the mind unless their corresponding impressions have gone before to prepare the way for them, the imagination isn't bound to keep the same order and form as the original impressions had, whereas the memory is in a way tied down in that respect, without any power of variation.

It is evident that the memory preserves the form in which its objects were originally presented, and that when we depart from that form in recollecting something, this comes from some defect or imperfection in that faculty. An historian may find it more convenient to relate one event before another which in fact occurred before it, but then, if he is careful, he comments on this re-ordering, and thereby puts the relevant ideas back in their right order. Similarly with our recollection of places and persons with which we were formerly acquainted: the chief exercise of the memory is not to preserve the simple ideas, but to preserve their order and ·temporal· position. In short, this principle is supported by so many common and everyday phenomena that I needn't trouble to insist on it any further.

Equally evident is the second principle, of the imagination's liberty to transpose and change its ideas. The fables we meet with in poems and romances put this quite beyond doubt. Nature there is totally confounded, with stories full of winged horses, fiery dragons, and monstrous giants. This liberty of the fancy [= 'imagination'] won't appear strange when we consider that all our ideas are copied from our impres-

sions, and that no two impressions are perfectly inseparable; ·so that there are no constraints on how freely ideas may be assembled and re-arranged·. Not to mention that this is an evident consequence of the division of ideas into simple and complex. Wherever the imagination perceives a difference among ideas it can easily produce a separation.

4: Association of ideas

The imagination, then, can separate ideas and then re-unite them in whatever form it pleases; so its operations would be perfectly inexplicable—·a meaningless jumble of random events·—if it weren't guided by some universal principles$_c$ that give some uniformity to its doings at different times. If ideas were entirely loose and unconnected, they would be joined ·in the imagination· purely by *chance*; and in that case it couldn't happen—as in fact it often does—that the same simple ideas regularly came together into complex ones. For that there needs to be some •bond of union among them, some •associating quality by which one idea naturally introduces another. This •uniting principle$_c$ among ideas is not an unbreakable connection, for *that* has been already excluded from the imagination; nor should we conclude that the mind cannot join two ideas without this uniting principle$_c$, for nothing is more free than the imagination, ·which can join any two ideas it pleases·. We should regard the uniting principle$_c$ only as •a gentle force that •usually dominates, ·not as an •irresistibly strong one that •always dominates·. Among the things it explains is the fact that languages so nearly correspond to one another: it is because Nature has (in a way) pointed out to everyone the simple ideas that are most suitable for being united into a complex one.

The relations that give rise to this association ·of ideas·, in this way carrying the mind from one idea to another, are these three: •resemblance, •contiguity [= 'nextness'] in time or place, and •cause and effect. [Hume calls the three relations 'qualities', but only in this paragraph.] I don't think I have much need to *show* that these ·three· relations produce an association between ideas such that when one appears it is naturally followed by another. It is plainly the case that in the course of our thinking and in the constant turn-over of our ideas our imagination runs easily from one idea to any other that •resembles it, and that this quality alone is for the imagination a sufficient bond and association. It is likewise evident that as the *senses* have to move from object to object in a regular manner, taking them as they lie •contiguous to each other, so the imagination also must become accustomed to following the same pattern in its *thinking*, and run along the parts of space and time in conceiving its objects. The •relation of cause and effect will be thoroughly examined later, so I shan't say much now about its role in creating associations of ideas. I merely say that there is no relation that produces a stronger connection in the fancy, and makes one idea more readily recall another, than the relation of cause and effect between their objects.

To understand the full extent of these ·three· relations, we must grasp that two objects are connected together in the imagination not only when •one is *immediately* related to the other by resemblance or contiguity or cause-effect, but also when •a third object comes between them and is related in one of the ways to them both. This can be carried on to a

great length, though each lengthening of the chain considerably weakens ·the association of ideas that comes from· the relation. Fourth-cousins are connected by causation (if I may so express myself), but not as closely as brothers are, let alone children and their parents. In general all the blood-relationships depend on cause and effect, and are regarded as close or distant according to how many connecting causes are interposed between the persons.

Of the three relations above mentioned, causation is the most extensive. Two objects can be considered as related by it not only when one is the cause of •the existence of the other but also when one is the cause of •some action or motion of the other. . . . This line of thought goes further: two objects are connected by the cause- effect relation not only when one •*does* produce a motion or action in the other but also when it •*has the power to* produce it. This, we can see, is the source of all the relations of ·self·-interest and duty by which men influence each other in society, leading to some being governors and others subordinates. A *master* is someone whose situation gives him—whether by force or by prior agreement—a power of directing some of the actions of someone else whom we call *servant*. A *judge* is one who can by his opinion settle questions of ownership that are disputed between members of the society. When someone has a power, all that is needed to turn it into action is the exercise of his will; and his exercising it is in every case regarded as possible, and in many cases as probable—especially in ones where there is *authority*, where the subject's obedience will bring pleasure and advantage to the master.

These, then, are the principles$_c$ of union or cohesion among our simple ideas, providing in our imagination a substitute for the tighter links that ideas have in our memory. This ·association of ideas· is a kind of *attraction*, which in the mental world will be found to have effects as extraordinary as ·those of attraction or gravity· in the physical world, and to show itself in as many and as various forms. Its effects are everywhere conspicuous; but its causes are mostly unknown, and must be assigned to basic qualities of human nature that I don't claim to explain. What a true philosopher needs most is to restrain the immoderate desire to search into causes; and, having established a doctrine on the basis of a sufficient number of experiments, to rest content with that when he sees that a further enquiry ·into *its* causes· would lead him into obscure and uncertain speculations. In that case he would spend his time and energy better in examining the •effects of his principle than in examining its •causes.

Among the effects of this union or association of ideas, none are more remarkable than the *complex ideas* that are the common subjects of our thoughts and reasoning, and that generally arise from some principle$_c$ of union among our simple ideas. These complex ideas can be divided into •relations, •modes, and •substances. I shall briefly examine these in order; and shall ·in section 7· add some considerations about our general and particular ideas. That will bring me to the end of ·Part i and of· the present subject, which can be considered as the elements of this philosophy.

5: Relations

The word 'relation' is commonly used in two senses considerably different from each other: either for a •quality by which two ideas are connected in the imagination so that one naturally introduces the other, in the way I have explained; or for a •particular basis on which we may see fit to compare two ideas which we *choose* to bring together in the fancy (·without either of them naturally leading to the other·). [In Hume's time, 'comparing' two things could be simply *bringing them together in a single thought*, not necessarily a thought about their being alike. (We still have that usage in the expression 'Let's get together and compare notes'.) That broader, weaker sense of 'compare' seems clearly to be sometimes at work in the present section, but in the paragraph labelled '1.' our more usual narrower sense seems to be assumed.] What is called a 'relation' in common speech is always the former; only in philosophy do we extend the word to cover any particular basis of comparison when there is no connecting principle$_c$. For example, *distance* will be classified by philosophers as a true relation, because we acquire an idea of it by comparing objects; but in everyday speech we say things like 'Nothing can be more distant than the furthest star and the earth; no two things can have less relation', as if *distance* and *relation* were incompatible. [For Hume, relations don't divide into •philosophical and •natural; and when he writes as though they do, he is using 'philosophical' as short-hand for '*only* philosophical' or 'philosophical and not natural'.] It may be thought an endless task to enumerate all the qualities that make objects admit of comparison, and by which the ideas of philosophical relation are produced. But if we look carefully we shall find that they can easily be put into seven kinds, which can be considered as the sources of all *philosophical relation* ·and thus of all *relation*·.

I. The first is •resemblance. This is a relation without which no philosophical relation can exist, for no objects can be compared unless they have some degree of resemblance. But though resemblance is necessary for all philosophical relation, it doesn't follow that it always produces a connection or association of ideas. When a quality becomes very general, and is common to a great many individuals, it doesn't lead the mind directly to any one of them, because there is too great a choice for the imagination to fix on any single object.

2. •Identity can be counted as a second kind of relation. This relation I here consider as applied in its strictest sense to constant and unchanging objects, without examining the nature and foundation of personal identity, which will be discussed later (·in I.iv.6·). Identity is the most universal of all relations, because it is common to every thing that stays in existence for any period of time.

3. The next most universal and comprehensive relations, after identity, are those of •space and time, which are the sources of an infinite number of comparisons, such as distant, contiguous, above, below, before, after, etc.

4. All objects that admit of •quantity or number can be compared in that respect, which is another very fertile source of relation.

5. When two objects have a quality in common, the •degrees to which they have it form a fifth species of relation. Thus, of two objects that both have weight, one may be lighter or heavier than the other. Two colours of the same kind may be of different shades, and in that respect admit of comparison.

6. The relation of •contrariety might at first be regarded as an exception to the rule that no relation of any kind

can hold between two things without some degree of resemblance between them. But bear in mind that no two ideas are in themselves ·flatly and absolutely· contrary except those of *existence* and *non-existence*; and it is clear that ·even· these—·contrary though they are·—are resembling, because each of them conveys an idea of the object, though the latter *excludes* the object from times and places at which it is supposed not to exist.

7. All other objects—such as fire and water, heat and cold—are found to be contrary only by experience, and from the contrariety of their causes or effects; and this relation of •cause and effect is a seventh philosophical relation, as well as a natural one. The resemblance implied in this relation will be explained later.

You might naturally have expected me to include *difference* among the relations; but I regard difference as a *negation* of relation rather than as anything real or positive. Difference is of two kinds, as opposed either to identity or resemblance. The first is called difference of number, the other difference of kind.

6: Modes and substances

I have a question for those philosophers who base so much of their reasoning on the distinction between substance and accident [= 'quality'], and who imagine that we have clear ideas of each. Is the idea of substance—I ask—derived from impressions of sensation or of reflection? If ·the former, that is, if· it is conveyed to us by our senses, I ask: Which of our senses, and how? If it is perceived by the eyes, it must be a colour; if by the ears, a sound; if by the palate, a taste; and so on with the other senses. But I don't think anyone will say that substance is a colour, a sound, or a taste! So the idea of substance must be derived from an impression of reflection, if it really exists. But the impressions of reflection come down to our passions and emotions, and none of those can possibly represent a substance. So we have *no* idea of substance other than the idea of a collection of particular qualities, and such collections are all we can meaningfully refer to when we talk or think about 'substance'.

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 assigned a particular name by which we can recall that collection to ourselves or to others. But the difference between these two sorts of ideas comes from the following facts about the ideas of •substances. The particular qualities that form a substance are commonly referred to an unknown ·and fictional· *something* in which they are supposed to inhere; or, when this fiction doesn't occur, the qualities in the collection are at least supposed to be closely and inseparably connected by the relations of contiguity and causation. The effect of this is that when we discover some new simple quality to have the same connection with the rest ·as they have with one another·, we immediately include it among them, even though it didn't enter into our first conception of the substance. Thus our idea of *gold* may at first be a yellow colour, weight, malleableness, and fusibility; but when we learn that it is soluble 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 been part of the compound one from the outset. The uniting force of the qualities is regarded as the chief part of the complex idea, so it provides a way into the complex idea for any quality that turns up later—

letting that quality in along with the ones that first presented themselves.

To see that this can't happen with •modes, consider their nature. The simple ideas out of which modes are formed either represent

> qualities that are not united by contiguity and causation, but are scattered through different subjects;

or, if they *are* all united together,

> the uniting principle$_c$ is not regarded as the foundation of the complex idea.

The idea of a *dance* is an instance of the first kind of mode; the idea of *beauty* an example of the second. It is obvious why complex ideas of *this* kind can't admit any new idea without changing the name that has been given to the mode.

7: Abstract ideas

An important question has been raised about abstract or general ideas, namely: Are they general or particular in the mind's conception of them? A great philosopher—Dr Berkeley—has challenged the usual opinion about this, and has asserted that a general idea is nothing but a particular idea attached to a certain word that gives it a wider application and makes it recall (when needed) other individuals that are similar to it. As I regard this as one of the greatest and most valuable scholarly discoveries that has been made in recent years, I shall try here to confirm it by some arguments that I hope will put it beyond all doubt and controversy.

It is evident that in forming most (if not all) of our general ideas we abstract from every particular degree of quantity and quality, and that objects aren't prevented from belonging to the same species by small differences in size, duration, or other properties. It might be thought that we are here confronted by a plain dilemma, which will let us settle the nature of those 'abstract ideas' that philosophers have speculated about so much. ·Here is how the argument runs·:

> The abstract idea of *man* represents men of all sizes and all qualities, and there are only two ways it might do that: by •representing *all* possible sizes and all possible qualities at once, or by •representing *no* particular sizes or qualities at all. The former of these is absurd, because it implies an infinite capacity in the mind. So we must opt for the latter, and suppose that our abstract ideas represent no particular degree of quantity or quality.

I shall try to show that this inference is erroneous, by arguing •that it is utterly impossible to conceive any quantity or quality without forming a precise notion of its degrees; and secondly •that though the capacity of the mind is not infinite we *can* form—all at once—a notion of all possible degrees of quantity and quality. However imperfect our way of doing this may be, it may at least ·be good enough to· serve all the purposes of thought and conversation. (·My first point challenges the argument's conclusion; my second undercuts one of its premises·.)

To begin with the first proposition, that the mind can't form any notion of quantity or quality without forming a precise notion of degrees of each, we can prove this by the following three arguments. **Firstly**, I have observed that

> whatever objects are different are distinguishable, and that whatever objects are distinguishable are separable by the thought and imagination.

Now we should bring in the converse propositions:

> whatever objects are separable are also distinguishable, and whatever objects are distinguishable are also different.

For how could we separate what is not distinguishable, or distinguish what is not different? With this in hand, let us examine whether all the circumstances that we abstract *out of* a general idea are distinguishable and different from those that we retain as essential parts of the idea. It is clear straight off that •the precise length of a line is not different or distinguishable from •the line itself; ·and more generally that· the precise degree of any quality is not different or distinguishable from the quality. Since these don't admit of distinction and difference, they don't admit of separation either (·following the second of the propositions displayed above·). So they are ·inseparably· conjoined with each other in the conception: our 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. Even if it is made to represent other lines that have different degrees of both, ·it doesn't do this by *not having* any degree of either·.

Secondly, it is admitted that no object can appear to the senses— i.e. that no impression can become present to the mind—without being determinate in its degrees both of quantity and quality. Impressions are sometimes confused, but only because they are faint or unsteady, not because the mind can receive any impression that in itself has no particular degree nor proportion! Such an impression would be a contradiction in terms, and even implies the flattest of all contradictions, namely that it is possible for something both to be and not to be.

Now, since all ideas are •derived from impressions and are nothing but •copies and •representations of them, whatever is true of the one must be admitted to hold also for the other. Impressions and ideas differ only in their strength and liveliness. What I have said ·about impressions' having to be determinate in quantity and quality· wasn't based on their having a certain degree of liveliness, so it must hold equally for perceptions that are less lively. So: an idea is a weaker impression; and, as a strong impression must necessarily have a determinate quantity and quality, the same must hold for its copy or representative.

Thirdly, it is a principle generally accepted in philosophy that every thing in Nature is individual, and that it is utterly absurd to suppose (for instance) a really existent triangle that has no precise proportion of sides and angles. If this is absurd *in fact and reality*, therefore, it must also be absurd *in idea*, since nothing of which we can form a clear and distinct idea is absurd and impossible. But *forming the idea of an object* and *forming an idea* is the same thing; describing the idea as 'of an object' merely relates it to something outside it and says nothing about its own character. Now, as it is impossible to

> form an idea *of an object that has* quantity and quality but no precise degree of either,

it follows that it is equally impossible to

> form an idea that *itself has* quantity and quality but no precise degree of either.

So abstract ideas are •in themselves individual, even when they become •general in their representation. The image in the mind is only that of a particular object, though the application of it in our reasoning may be the same as if it were universal. ·Now I turn to the question of *how* we apply such ideas in our reasoning·.

This application of ideas beyond their nature—·that is, their being *used* universally although in their own nature they are particular·—comes from our bundling together all their possible degrees of quantity and quality, in a rough and ready way that serves for everyday purposes. This is the sec-

ond proposition I proposed to explain ·in my initial criticism of the 'dilemma' argument· . When we have found a resemblance among a number of objects that we often encounter, we apply a single 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.[2]

After we have become accustomed to using the word in that way, the hearing of it revives ·in our mind· the idea of one of these objects, and makes the imagination conceive it in all its particular detail. But the same word is supposed to have been frequently applied to other individuals that are different in many respects from the idea that is immediately present to the mind, and the word can't revive the idea of all these individuals; so all it does is to touch the soul (if I may put it like that) and revive the custom that we have acquired by surveying them. Those individuals are present to the mind not •actually but •only potentially. We don't portray them all distinctly in the imagination, but keep ourselves ready to survey any of them when we are so prompted by a present plan or by necessity. The word raises up an •individual idea along with a certain •custom, and that custom produces any other individual idea that comes to be appropriate. But as the production of *all* the ideas to which the name may be applied is in most cases impossible, we shorten the work by a more partial consideration, and we find few inconveniences arising in our reasoning from that abridgment.

For this is one of the most extraordinary aspects of this business, that after we have done some reasoning with an individual idea in our mind, the associated custom—revived by the general or abstract word ·that we use to name the original idea·—readily brings to mind any other individual ·to which the word also applies·, if by chance we have gone wrong in our reasoning. For example, if we used the word 'triangle' and formed the idea of a particular *equilateral* one to correspond to it, and if we went on to assert that the three angles of a triangle are equal to each other, all the individual triangles that we have overlooked—the ones that are not equilateral—would immediately crowd in on us and make us see the falsehood of what we had just said, even though it was true in relation to the idea we ·first· formed. If the mind doesn't always suggest these ideas when it would be appropriate to do so, that comes from some imperfection in its faculties—an imperfection that is often the source of false reasoning and sophistry. But this is principally the case with ideas that are abstruse and compounded. On other occasions the custom is more entire [= 'holds together more firmly'], and we don't often run into such errors.

Indeed, so entire is the custom that the very same idea may be attached to several different words and used in different reasonings, with no danger of mistake. Thus the idea of *an equilateral triangle of an inch perpendicular* may serve us when we are talking of a

[2] It is obvious that different ideas—even simple ones—can have a similarity or resemblance to each other; and the respect in which they are alike need not be distinct or separable from respects in which they differ. *Blue* and *green* are different simple ideas, but they are more alike than are *blue* and *scarlet*; though their perfect simplicity makes it impossible to separate or distinguish their respect of similarity. The same holds for particular sounds, tastes, and smells. These can be alike in countless ways, taking them as wholes, without having any ·separable· feature in common. And we can be sure of this general point by considering the very abstract phrase 'simple idea'. This covers all simple ideas, and these •resemble each other in that they are all *simple*. Yet precisely because they *are* simple, and thus have no complexity or compoundedness about them, this •respect in which they are all alike is not distinguishable or separable from the rest. It is the same case with the different degrees of a quality: they are all alike, yet the quality in any individual is not distinct from the degree—·we can't, even in thought, separate a thing's bright-blueness into two components of which one is mere blueness·.

'figure',
'rectilinear figure',
'regular figure',
'triangle', or
'equilateral triangle'.

In this case all these terms are associated with the same idea; but as the terms are standardly applied to smaller or larger ranges of particulars, each arouses its special habit ·and no confusion need arise·. . . . Before those habits have become entirely perfect, the mind may sometimes not be content with forming the idea of only one individual, and may instead run over several ideas so as to make itself grasp its own meaning and the range of the collection that it intends to express by the general term. Wanting to fix the meaning of the word 'shape', we may revolve in our mind the ideas of circles, squares, parallelograms, triangles of different sizes and proportions, not resting on one image or idea. Still, it is certain that •when we use any general term we form the idea of *individuals*, that •we can seldom if ever bring all these individuals to mind, and that •the ones we don't bring to mind are represented only by means of the *habit* by which we recall them when there is a need to. This then is the nature of our abstract ideas and general terms; and this is how I deal with the foregoing paradox, that some ideas are particular in their nature but general in their representation. *A particular idea becomes general by being attached to a general term*; i.e. to a term that is related by a customary conjunction to many other particular ideas which it readily recalls in the imagination.

If there remains any difficulty in this subject, it must concern the *custom* that so readily recalls every particular idea for which we may have need, and is triggered by any word or sound to which we commonly attach it. The most proper method of explaining this act of the mind, I think, is by producing other instances that are analogous to it, and other forces that help it to operate. It is impossible to explain the *ultimate* causes of our mental actions; it's enough to give a 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 through its adequate idea of the decimals under which the number is comprehended. This imperfection in our ideas, however, never affects our reasonings; so this seems to be an instance parallel to the one about universal ideas that I have been discussing.

Secondly, we have several instances of habits that can be revived by a single word; as when a person who has learned by rote a speech or poem, and then can't remember it, will call the whole thing to mind once he is given the single word or phrase with which it begins.

Thirdly, if you examine what goes on in your mind in reasoning, I think will agree with me that we don't attach distinct and complete ideas to every term we use: in talking of 'government', 'church', 'negotiation', 'conquest', we seldom spread out in our minds *all* the simple ideas of which these complex ones are composed. Despite this imperfection, however, we can avoid talking nonsense on these subjects and can perceive any conflicts among the ideas as well as if we had them fully in our minds. Thus, if instead of saying that *in war the weaker always have recourse to negotiation* we should say that they always have recourse to *conquest*, the custom we have acquired of attributing certain relations to ideas still follows the words and makes us immediately perceive the absurdity of that proposition. This is like the way in which one particular idea can serve us in reasoning concerning other ideas, however much they differ from it in some respects.

Fourthly, when the individuals are collected together and put under a general term on the basis of their resemblance to one another, this relation must •make it easier for them to enter the imagination, and •make them more likely to be suggested when there is a need for them. And, indeed, if we consider the usual way our thoughts move in private thought and in conversation, we shall find good reason to be convinced of this. The imagination has an *admirable* readiness to suggest its ideas and to present them at the very instant when they are necessary or useful. In collecting the ideas that belong to a subject, the fancy runs from one end of the universe to the other: one might think that we could see the whole intellectual world of ideas all at once, and that all we did was to *pick out* the ideas that best suited our purpose. But it may be that really the only ideas that we have ·at such a moment· are the ·seemingly 'picked out' ones·—the very ideas that are thus collected by a kind of magical faculty in the soul. This faculty is always most perfect in the greatest geniuses—and is properly what we call 'genius'—but it can't be explained by the utmost efforts of human understanding.

Perhaps these four reflections will help to remove the obstacles to accepting my hypothesis about abstract ideas, contrary as it is to what has previously prevailed in philosophy. But to tell the truth, my chief source of confidence lies in what I have already proved about the impossibility of general ideas according to the usual account of them. ·Because of that proof·, we have to look for *some* other account of general ideas, and clearly mine is the only candidate. If ideas are •particular in their nature and •finite in their number, the only way they can become•general in their representation and •contain infinitely many other ideas under them is through *custom*.

Before I leave this subject, I shall employ the same principles to explain that 'distinction of reason' that is so much talked of, and so little understood, in the schools [= (roughly) 'philosophy departments dominated by Aristotelian ideas']. Examples of this are the distinctions •between *shape* and *the body that has the shape*, and •between *motion* and *the body that moves*. It is hard to make sense of this 'distinction' in light of the principle— explained above—that all ideas that are different are separable. For *it* implies that if the shape is different from the body ·that has it·, their ideas must be separable as well as distinguishable, ·which plainly they are not·. . . . What then is meant by a 'distinction of reason', since it implies neither a difference nor separation? To remove this difficulty, we must rely on the account I have given of abstract ideas. It is certain that nobody would ever have dreamed of distinguishing a shape from the shaped body—from which it is in reality not distinguishable or different or separable—if it hadn't been noticed that even this simple shaped body (·which is 'simple' in the sense that it can't be divided into two elements, the shape and the body·) has many different resemblances and relations ·to other things·. For example, when we see a globe of white marble, we receive only the impression of a white colour laid out in a certain shape, and we can't separate and distinguish the colour from the shape. But when we later see a globe of black marble and a cube of white, and compare them with our former object, we find *two separate resemblances* in something that formerly seemed, and really was, quite incapable of being separated out into two components. After a little more practice of this kind, we begin to distinguish the shape from the colour by a *distinction of reason*; that is, we consider the shape and colour together, since they are in effect the same and undistinguishable; but still we view them in different aspects, according to the resemblances they can enter into. Wanting to consider only the shape of the globe of white marble, we actually form an idea of both the shape and the

colour, but we have our eye on its resemblance to the globe of black marble; and when we want to consider its colour only, we look to its resemblance to the cube of white marble. In this way we accompany our ideas with a kind of reflection of which custom makes us largely unaware. Someone who asks us to consider the shape of a globe of white marble without thinking of its colour is asking for an impossibility; but what he *means* to ask is that we consider the colour and shape together, but still keep our eye on the resemblance to the globe of black marble or to any other globe of whatever colour or substance.

Part ii: The ideas of space and time

1: The infinite divisibility of our ideas of space and time

When a philosopher comes up with something that looks like a paradox and is contrary to basic beliefs of ordinary folk, ·it often fares better than it deserves, for two reasons·. •It is greedily embraced by philosophers, who think it shows the superiority of their discipline that could discover opinions so far from common beliefs. •When something surprising and dazzling confronts us, it gives our minds a pleasurable sort of satisfaction that we can't think is absolutely baseless. These dispositions in •philosophers and •their disciples give rise to a relation of mutual comfort between them: •the former furnish many strange and unaccountable opinions, and •the latter readily believe them. I can't give a plainer example of this symbiosis than the doctrine of *infinite divisibility*. It will be the first topic in my discussion of the ideas of space and time.

Everyone agrees—and the plainest observation and experience makes it obvious—that the capacity of the mind is limited, and can never attain a full and adequate conception of infinity. It is also obvious that whatever is capable of being divided in infinitum must consist of an infinite number of parts: if you limit the number of parts, you thereby limit the ·possible· division. It doesn't take much work to conclude from this that the idea we form of any finite quality is *not* infinitely divisible, and that by proper distinctions and separations we can reduce it to lesser ideas that are perfectly simple [= 'without parts'] and indivisible. In denying that the mind's capacity is infinite we are supposing that it will *come to an end* in the division of its ideas; and there is no possible escape from this conclusion. ['Infinite' comes from Latin meaning 'no end'.] So it is certain that the imagination reaches a minimum, and can form in itself an idea of which it can't conceive any subdivision—one that can't 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 I form in my mind to represent the *things* themselves are not different from each other and are not smaller than the that image by which I represent •the grain of sand itself, which is supposed to be so much bigger. 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 or separable into twenty different ideas—much less into a thousand, ten thousand, or an infinite number of them! The impressions of the senses are the same in this respect as the ideas of the imagination. Put a spot of ink on paper, fix your eye on that spot, and move away just far enough so that you lose sight of it: it is obvious that the moment before it vanished the image or impression ·of the spot· was perfectly indivisible. Why do small parts of distant bodies not convey any sensible impression to us? It is not for lack of rays of light ·from them· striking our eyes. Rather, it is because they are further away than the distance at which their impressions •were reduced to a minimum and •couldn't be diminished any further. A telescope that makes them visible doesn't produce any new rays of light, but merely *spreads out* the rays that always flowed from them: in that way the telescope •gives parts to impressions

that had appeared simple and uncompounded to the naked eye, and •advances to a minimum what was formerly imperceptible. The explanation of what a microscope does is essentially the same.

From this we can discover the error of the common opinion that the capacity of the mind is limited on both sides, and that the imagination can't possibly form an adequate idea of anything below a certain size or above a certain size. Nothing can be more minute than some ideas that we form in the imagination, and some images that appear to the senses, for there are ideas and images that are perfectly simple and indivisible, ·and nothing can be smaller than that·. The only defect of our senses is that they give us wrongly proportioned images of things, representing as tiny and uncompounded what is really large and composed of a vast number of parts. We aren't aware of this mistake. ·Take the example of a very tiny insect such as a mite·. When we see a mite we take that impression to be equal or nearly equal in size to the mite itself; then finding by reason that there are objects much smaller than that—·for example, the small parts of the mite·—we rashly conclude that these things are smaller than any idea of our imagination or impression of our senses. But it is certain that we can form ideas that are no bigger than the smallest atom of the animal spirits of an insect a thousand times smaller than a mite. [‘Animal spirits’ were thought to be extremely finely divided fluids in animal bodies —more fluid and finely divided than air or water.] We ought rather to conclude that the difficulty lies in enlarging our conceptions enough 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 each part of them; and that, according to the system of infinite divisibility, is utterly impossible, and according to the system of indivisible parts or atoms it is extremely difficult because of the vast number and multiplicity of these parts.

2: The infinite divisibility of space and time

When ideas adequately represent objects, the relations, contradictions, and agreements among the ideas all hold also among the objects; and we can see this to be the general foundation of all human knowledge. But our ideas *are* adequate representations of the tiniest parts of extended things, so no parts of the things—through whatever divisions and subdivisions we may suppose them to be arrived at—can be smaller than some ideas that we form. The plain consequence, to be drawn with no shuffling or dodging, is that whatever appears impossible and contradictory in relation to these •ideas must be really impossible and contradictory ·in relation to the •things·.

Everything that is capable of being infinitely divided contains an infinite number of parts; otherwise the division would be stopped short by the indivisible parts that we would arrive at. So

> if •anything of finite size is infinitely divisible, then •it can't be a contradiction to suppose that an extended thing of finite size contains an infinite number of parts;

and, putting the same thing the other way around,

> if •it *is* a contradiction to suppose that a finite thing contains an infinite number of parts, then •no finitely extended thing can be infinitely divisible.

The thesis that a finite thing can be infinitely divided is absurd, as I easily convince myself by considering my clear ideas. I first take the smallest idea I can form of a part of the extended world, and being certain that there is nothing smaller than this idea, I conclude that whatever I discover by means of *it* must be a real quality of extended things. I then repeat this idea once, twice, thrice, and so on; this repetition brings it about that my compound idea of *extension* grows larger and larger, becoming double, triple, quadruple, etc. what it was before, until eventually it swells up to a considerable size—larger or smaller depending on how often I repeat the same idea. When I stop adding parts, the idea of extension stops enlarging; and if I continued the addition in infinitum, my idea of extension—this is clear—would have to become infinite. From all this I infer that the idea of •an infinite number of parts is just the idea of •an infinite extension; that no finite extension can contain an infinite number of parts; and, consequently that no finite extended thing is infinitely divisible.[3]

Let me add another argument, proposed by a noted author (Monsieur Malezieu), which seems to me very strong and beautiful. It is obvious that *existence* in itself belongs only to *unity*, and is applicable to number only on the strength of the units of which the number is composed. Twenty men may be said to exist; but it is only because one, two, three, four, etc. are existent; and if you deny the existence of the individual men the existence of the twenty automatically falls. So it is utterly absurd to suppose that a number ·of items· exists and yet deny the existence of individual items. Now, according to the common opinion of metaphysicians ·who believe that whatever is extended is divisible·, what is extended is always a number of items and never resolves itself into a unit or indivisible quantity; from which it follows that what is extended can never exist! It is no use replying that a determinate quantity of extension *is* a unit, though one that admits of an infinite number of fractions and can be subdivided without limit. For by that standard these twenty men can be considered as a unit. The whole planet earth, indeed the whole universe, can be considered as a unit. *That* kind of 'unity' involves a merely fictitious label that the mind can apply to any quantity of objects that it collects together; that sort of 'unity' can no more exist alone than number can, because really it is a true number ·masquerading under a false label· .The unity that can exist alone and whose existence is necessary to that of all number is of another kind; it must be perfectly indivisible and incapable of being resolved into any lesser unity.

All this reasoning applies also to ·the infinite divisibility of· *time*, along with a further argument that we ought to take notice of. A property of time that it cannot lose—it is in a way time's *essence*—is that its parts come in *succession*, and that no two of them, however close, can exist *together*. Every •moment must be distinct from—later or earlier than—each other •moment, for the same reason that the •year 1737 cannot coexist with the present •year 1738. This makes it certain that time, because it exists, must be composed of indivisible moments. For if we could never arrive at an end of the division of time, 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*,

[3] It has been objected to me that infinite divisibility requires only an infinite number of *proportional* parts, ... and that an infinite number of proportional parts does not form an infinite extension. (·The objector is thinking of things like the division of a line into a half, followed by a quarter, followed by an eighth, . . . and so on·.) But this is entirely frivolous. Whether or not the parts are proportional, they can't be smaller than the minute parts I have been talking about, and so the conjunction of them can't generate a smaller extension.

·namely the parts of the *moment*·; and I think this will be agreed to be an outright contradiction.

The infinite divisibility of space implies that of time, as is evident from the nature of motion. So if time can't be infinitely divisible, space can't be either.

Even the most obstinate defender of infinite divisibility will surely concede that these arguments are 'difficulties', and that no perfectly clear and satisfactory answer can be given to them. Let me point out here the absurdity of this custom of trying to evade the force and evidentness of something that claims to be a demonstration [= 'a logically rigorous proof'] by calling it a 'difficulty'. It doesn't happen with demonstrations, as it does with probabilities, that *difficulties* crop up and one argument counterbalances another and lessens its force. If a demonstration is sound, it can't admit of an opposing difficulty; and if it is not sound it is nothing—a mere trick—and can't itself *be* a difficulty. It is either •irresistible or •without any force at all. If in a topic like our present one you talk of 'objections' and 'replies', and of 'balancing' arguments ·pro and con·, you are either accepting that human reasoning is nothing but word-play or showing that you don't have the intellectual capacity needed for such subjects. A demonstration may be difficult to understand because of the abstractedness of its subject; but it can't have difficulties that will weaken its authority once it has been understood.

It is true that mathematicians are given to saying that there are equally strong arguments on the other side of our present question, and that the doctrine of indivisible points is also open to unanswerable objections. I shall examine these arguments and objections in detail ·in sections 4 and 5·; but first I will take them all together and try to prove through a short and decisive reason that it is utterly impossible for them to have a sound basis. ·This will occupy the remainder of this section; in section 3 I shall present some further doctrine about the ideas of space and (especially) time, and sections 4–5 will address objections to this further doctrine as well as objections to my view about divisibility·. It is an established maxim in metaphysics that

> Whatever the mind clearly conceives includes the idea of possible existence—that is, nothing that we imagine is absolutely impossible.

We can form the idea of a golden mountain, from which we conclude that such a mountain could actually exist. We can form no idea of a mountain without a valley, and therefore regard it as impossible.

Now, it is certain that we have an idea of extension, for how otherwise could we talk and reason about it? It is also certain that this idea as conceived by the imagination, though divisible into parts or smaller ideas, is not *infinitely* divisible and doesn't consist of an infinite number of parts; for that would exceed the grasp of our limited capacities. So there we have it: an idea of extension consisting of parts or lesser ideas that are perfectly indivisible; so this idea implies no contradiction: so it is •possible for extension reality also to be like that; so all the •arguments that have been brought against the •possibility of mathematical points are mere scholastic quibbles that don't deserve our attention.

We can carry this line of argument one step further, concluding that all the purported demonstrations of the infinite divisibility of the extended are equally invalid; because it is certain that these demonstrations cannot be sound without proving the impossibility of mathematical points; which it is an evident absurdity to claim to do.

3: The other qualities of our ideas of space and time

For deciding all controversies regarding ideas, no discovery could have been more fortunate than the one I have mentioned, that

> impressions always precede ideas, and every ·simple· idea that comes into the imagination first makes its appearance in a corresponding impression.

These •impressions are all so clear and evident that they there is no argument about them, though many of our •ideas are so obscure that it is almost impossible even for the mind in which they occur to say exactly what they are like and how they are made up. Let us apply this principle with a view to revealing more about the nature of our ideas of space and time.

On opening my eyes and turning them to the surrounding objects, I see many visible bodies; and when I shut my eyes again and think about the distances between these bodies, I acquire the idea of extension. As every idea is derived from some impression that is exactly like it, this idea of extension must come from some impression, which can only be either some sensation derived from sight or some internal impression arising from these sensations.

Our internal impressions are our passions, emotions, desires, and aversions; and I don't think you'll say that *they* are the model from which the idea of space is derived! So there remain only the ·external· senses as sources for this original impression. Well, what impression *do* our senses here convey to us? This is the main question, and it decisively settles what the idea is like.

My view of the table in front of me is alone sufficient to give me the idea of extension. So this idea is borrowed from, and represents, some impression that appears to my senses at this moment. But my senses convey to me only the impressions of coloured points arrayed in a certain manner. If you think the eye senses anything more than that, tell me what! And if it is impossible to show 'anything more', we can confidently conclude that •the idea of extension is nothing but •a copy of these coloured points and of the manner of their appearance.

Suppose that when we first received the idea of extension it was from an extended object—or composition of coloured points—in which all the points were of a purple colour. Then in every repetition of that idea we would not only place the points in the same order with respect to each other, but would also bestow on them that precise colour which was the only one we had encountered. But afterwards, having experience of other colours —violet, green, red, white, black, and all the different combinations of these—and finding a resemblance in the layout [Hume's word is 'disposition'] of coloured points of which they are composed, we omit the peculiarities of colour as far as possible, and establish an abstract idea based merely on the layout of points—the manner of appearance that is common to them all. Indeed, even when the resemblance is carried beyond the objects of one sense, ·and the sense of *touch* comes into the story·, the impressions of touch are found to be similar to those of sight in the layout of their parts, and because of this resemblance the abstract idea can represent both. All abstract ideas are really nothing but particular ones considered in a certain light; but being attached to general terms they can represent a vast variety, and can apply to objects which are alike in some respects and vastly unalike in others.

The idea of time is derived from the succession of our

perceptions of *every* kind—ideas as well as impressions, and impressions of reflection as well as of sensation. So it's an example of an abstract idea that covers a still greater variety than does the idea of space, and yet is represented in the imagination by some particular individual idea of a determinate quantity and quality.

As we receive the idea of space from the layout of visible and tangible objects, so we form the idea of time from the succession of ideas and impressions ·in our minds·. Time cannot *all on its own* make its appearance or be taken notice of by the mind. A man in a sound sleep, or strongly occupied with one thought, is unaware of time; the same duration appears longer or shorter to his imagination depending on how quickly or slowly his perceptions succeed each other. A great philosopher (Mr Locke) has remarked that our perceptions have certain limits in this respect— limits that are fixed by the basic nature and constitution of the mind— beyond which no influence of external objects on the senses can ever speed up our thought or slow it down. If you quickly whirl around a burning coal, it will present to the senses an image of a circle of fire, and there won't seem to be any interval of time between its revolutions. That is simply because our perceptions can't succeed each other as quickly as motion can be communicated to external objects. When we have no successive perceptions, we have no notion of time, even though there is a real succession in the objects—·as when in a single circling of the burning coal, the second quarter of the journey follows the first quarter·. From these phenomena, as well as from many others, we can conclude that time can't make its appearance to the mind •alone or •accompanied by a steady unchanging object, but is always revealed by some perceivable succession of changing objects.

To confirm this we can add the following argument, which strikes me as perfectly decisive and convincing. It is evident that time or duration consists of different parts; for otherwise we couldn't conceive a longer or shorter duration. It is also evident that these parts are not coexistent: for the quality of *having parts that coexist* belongs to •extension, and is what distinguishes it from •duration. Now as time is composed of parts that don't coexist, an unchanging object, since it produces only coexistent impressions, produces none that can give us the idea of time; and consequently that idea must be derived from a succession of changing objects, and time in its first appearance can never be separated from such a succession.

Having found that time in its first appearance to the mind is always joined with a succession of changing objects, and that otherwise we can never be aware of it, we now have to ask whether •time can be *conceived* without our conceiving any succession of objects, and whether •there can be a distinct stand-alone idea of time in the imagination.

To know whether items that are joined in an impression are separable in ·the corresponding· idea, we need only to know whether the items are different from one another. If they are, it is obvious that they can be conceived apart: things that are different are distinguishable, and things that are distinguishable can be separated, according to the maxims I have explained. If on the contrary they are not different they are not distinguishable, in which case they can't be separated. But this ·latter state of affairs· is precisely how things stand regarding •time in relation to •succession in our perceptions. The idea of time is not derived from a particular impression mixed up with others and plainly distinguishable from them; its whole source is *the manner in which* impressions appear to the mind—it isn't *one of them*. Five notes played on a flute give us the impression and idea of time, but time is not a sixth impression that presents itself to the hearing or to any other of the senses. Nor is it a sixth

impression that the mind finds in itself by reflection, ·thus yielding *time* as an idea of reflection·. To produce a new idea of reflection the mind must have some new inner impression: it can go over all its ideas of sensation a thousand times without extracting from them any *new* original idea, unless it feels some *new* original impression arise from this survey. ·And, returning now to our flute·, *these five sounds making their appearance in this particular manner* don't start up any emotion or inner state of any kind from which the mind, observing it, might derive a new idea. All the mind does in this case is to notice *the manner* in which the different sounds make their appearance, and ·to have the thought· that it could afterwards think of it as the *manner* in which other things—·other than the five flute-notes·—might appear. ·For the mind to have the idea of time·, it must certainly have the ideas of some objects [here = 'events'], for without these it could never arrive at any conception of time. Time doesn't appear as a primary distinct impression, so it has to consist in different ideas or impressions or objects disposed in a certain manner—the manner that consists in their succeeding each other.

Some people, I know, claim that the idea of duration is applicable in a proper sense to objects that are perfectly unchanging; and I think this is the common opinion of philosophers as well as of ordinary folk. To be convinced of its falsehood, however, reflect on the above thesis that

> the idea of duration is always derived from a succession of changing objects, and can never be conveyed to the mind by anything steadfast and unchanging.

It inevitably follows from this that since the idea of duration can't be *derived from* such an object it can't strictly and accurately be *applied to* such an object either, so that no unchanging thing can ever be said to have duration, ·i.e. to last through time·. Ideas always represent the objects or impressions from which they are derived, and it is only by a fiction that they can represent or be applied to anything else. We *do* engage in a certain fiction whereby we apply the idea of time to unchanging things and suppose that duration is a measure of rest as well as of motion. I shall discuss this fiction in section 5.

There is another very decisive argument that establishes the present doctrine about our ideas of space and time; it relies merely on the simple principle that our ideas of space and time are compounded of parts that are indivisible. This argument may be worth examining.

Every idea that is distinguishable is also separable; so let us take *one of those simple indivisible ideas of which the compound idea of extension is formed*, separate it from all others, and consider it on its own. What are we to think are its nature and qualities? Clearly *it* isn't the idea of extension; for the idea of extension consists of parts, and we have stipulated that the idea we are considering is perfectly simple and indivisible ·and therefore has no parts·. Is it nothing, then? That is absolutely impossible. The compound idea of extension is real, and is composed of ideas just like this one we are considering; if they were all nonentities, there would be an existing thing composed of nonentities, which is absurd. So I have to ask: What *is* our idea of a simple and indivisible point? If my answer seems somewhat new, that is no wonder, because until now the question has hardly ever been thought of. We are given to arguing about the nature of mathematical points, but seldom about the nature of the ideas of points.

The idea of space is conveyed to the mind by two senses, sight and touch; nothing ever appears to us as extended unless it is either visible or tangible. The compound impression that represents *extension* consists of several smaller impressions that are indivisible to the eye or feeling, and

may be called

impressions of atoms or corpuscles endowed with colour and solidity.

But this is not all. For these atoms to reveal themselves to our senses, it is not enough merely that they be coloured or tangible; we have to *preserve the idea* of their colour or tangibility, if we are to grasp them by our imagination. The idea of their colour or tangibility is *all there is* that can make them conceivable by our mind. Deprive the ideas of these sensible qualities and you annihilate them so far as thought or imagination is concerned Now, as the parts are, so is the whole. If a point is not considered as coloured or tangible, it can't convey any idea to us, in which case there can't be an idea of extension that is composed of the ideas of these points. If the idea of extension really can exist, as we are aware it does, its parts must also exist, which requires them to be considered as coloured or tangible. So we have no idea of space or extension as anything except an object either of our sight or feeling.

The same reasoning will prove that the indivisible moments of time must be filled with some real object, some existing item, whose succession forms the duration and makes it conceivable by the mind.

4: Objections answered

My system about space and time consists of two intimately connected parts. •The first depends on this chain of reasoning.

- •The capacity of the mind is not infinite. So
- •any idea of extension or duration consists not of an infinite number of parts or smaller ideas, but of a finite number that are simple and indivisible. So
- •it is possible for space and time to exist conformable to this idea, i.e. as only finitely divisible. So
- •space and time actually do exist in that form, since their infinite divisibility is utterly impossible and contradictory.

•The other part of my system is a consequence of this. Dividing ideas of space and time into their parts, one eventually reaches parts that are indivisible; and these indivisible parts, being nothing *in themselves*, are inconceivable unless they are *filled with* something real and existent. So the ideas of space and time are not separate or distinct ideas, but merely ideas of the manner or order in which objects exist ·or in which events occur·. This means that it is impossible to conceive either •a ·spatial· vacuum, extension without matter, or •·a temporal vacuum, so to speak·, a time when there is no succession or change in any real existence. Because these parts of my system are intimately connected, I shall examine together the objections that have been brought against both of them, beginning with those against the finite divisibility of extension.

1. The objection that I shall take first really has the effect of showing that the two parts of my system depend on one another, rather than of destroying either of them. In the schools they have often argued like this:

- •A mathematical point is a nonentity; so
- •no assemblage of such points can constitute a real existence; so
- •the whole system of mathematical points is absurd; ·so

•there is no coherent account of where the division of extended things would end if it *did* end; so
•such a division doesn't end·; so
•anything extended must be infinitely divisible.

This would be perfectly decisive if there were no middle way between •the infinite divisibility of matter and •the nonentity of mathematical points. But there *is* such a way, namely conferring colour or solidity on these points; and the absurdity of the two extremes is a demonstration of the truth and reality of this middle way. (The system of physical points, which is an alternative middle way, is too absurd to need a refutation. A real extension such as a physical point is supposed to be must have can't exist without parts that are different from each other; and when objects are different they are distinguishable and separable by the imagination, ·which means that the supposed physical point isn't a *point* after all·.)

2. The second objection to the view that extension consists of mathematical points is that this would necessitate *penetration*. A simple and indivisible atom that touches another (the argument goes) must penetrate it; for it can't touch the other only at its external parts because it, being simple, doesn't *have* parts. So one atom has to touch the other intimately, in its whole essence, [then some Latin phrases], which is the very definition of 'penetration'. But penetration is impossible; so mathematical points are impossible too.

I answer this objection by substituting a sounder idea of penetration. What we must mean when we talk of penetration is this:

> two bodies containing no empty space within them come together and unite in such a way that the body resulting from their union is no bigger than either of them.

Clearly this penetration is nothing but the annihilation of one of the bodies and the preservation of the other, without our being able to tell which is which. Before the contact we have the idea of two bodies; after it we have the idea only of one. ·This is the only way we can make sense of 'penetration', for· the mind can't possibly preserve any notion of difference between two bodies of the same nature existing in the same place at the same time.

Taking 'penetration' in this sense, now, as meaning the annihilation of one body on its contact with another, I ask: Does anyone see a necessity that a coloured or tangible point should be annihilated upon the approach of another coloured or tangible point? On the contrary, doesn't everyone see clearly that from the union of these points there results an object that is compounded and divisible and can be distinguished into two parts—each part preserving its existence, distinct and separate, despite its being right next to the other? ·If help is needed·, aid your imagination by conceiving these points to be of different colours, to help you keep them distinct. Surely a blue and a red point can lie next to one another without any penetration or annihilation. For if they can't, what can possibly become of them? 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 makes it so hard to answer them satisfactorily, is the natural infirmity and unsteadiness of our imagination *and* our senses when employed on such tiny objects. Put a spot of ink on paper and back away to a place from which the spot is altogether invisible: you will find that as you move back towards the spot it at first •becomes intermittently visible, then •becomes continuously visible, and then •acquires a new force only in ·the intensity of· its colouring, without getting any bigger; and afterwards, when it has increased enough to be really extended, it will still be hard for your

imagination to break it into its component parts, because of the uneasiness you will experience in the conception of such a tiny object as a single point. This infirmity affects most of our reasonings on the present subject, and makes it almost impossible to answer intelligibly and accurately the many questions that can arise about it.

3. Many objections to the thesis of the indivisibility of the parts of extension have been drawn from mathematics, though at first sight that science seems favourable to my doctrine. Anyway, although it is contrary in its demonstrations, it perfectly agrees with me in its definitions. My present task, then, is to defend the definitions and to refute the demonstrations.

A surface is defined 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. It is evident that all this is perfectly unintelligible on any other supposition than that of the composition of extension by indivisible points or atoms. How else could anything exist without length, without breadth, or without depth? Two different answers, I find, have been made to this argument ·of mine·, neither of them satisfactory in my opinion. •The first answer is that the objects of geometry—those surfaces, lines, and points whose proportions and positions it examines—are mere ideas in the mind; they never *did* and indeed never *can* exist in nature. They never *did* exist, because no-one will claim to draw a line or make a surface that perfectly fits the definition; and they never *can* exist, because we can produce demonstrations from these very ideas to prove that they are impossible.

But can anything be imagined more absurd and contradictory than this reasoning? Whatever can be conceived by a clear and distinct idea necessarily implies the possibility of existence; and someone who claims to prove the impossibility of its existence by any argument derived from the clear idea is really saying that we have no clear idea of it because we have a clear idea! It is pointless to search for a contradiction in something that is distinctly conceived by the mind. If it implied a contradiction, it couldn't possibly be conceived.

So there is no middle way between allowing at least the possibility of indivisible points and denying that there is any idea of them. And that principle is the basis for •the second answer to the argument of mine that I have been defending. It has been claimed that though it is impossible to *conceive* a length without any breadth, we can *consider* one without bringing in the other, doing this by means of an abstraction without a separation. It is in this way (they say) that we can think the length of the road between two towns while ignoring its breadth. The length is inseparable from the breadth both in Nature and in our minds; but that doesn't rule out ·our giving the length· a partial consideration, thereby making a distinction of reason.

In refuting this answer I shan't again press the argument that I have already sufficiently explained, namely that if the mind can't reach a minimum in its ideas, its capacity must be infinite in order to take in the infinite number of parts of which its idea of any extension would be composed. Instead, I'll try 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 contend that if the ideas of a point, line, or surface were not indivisible we couldn't possibly conceive these terminations. ·Here is how I argue for that·. Suppose that the ideas in question *are* infinitely divisible, and then let your mind try to fix itself on the idea of *the last* surface, line, or point; it will immediately find this idea to break into parts; and when your mind seizes on the last of these parts it will ·again· lose its hold because of a new division—and so on ad infinitum, with no possibility of

arriving at a terminating idea. The number of fractions bring it no nearer the last division than the first idea it formed. Every particle eludes the grasp by a new fraction, like quicksilver when we try to take hold of it. But as in fact •there *must* be something that terminates the idea of any finite quantity, and as •this terminating idea can't itself consist of parts or smaller ideas (otherwise the terminating would be done not by this idea but by the last of its parts, and so on), this is a clear proof that •the ideas of surfaces don't admit of any division in depth, those of lines can't be divided in breadth or depth, and those of points can't be divided in any dimension.

The schoolmen [= roughly 'mediaeval Aristotelians'] were so well aware of the force of this argument that some of them maintained that, mixed in with •particles of matter that are infinitely divisible, Nature has a number of ·indivisible· •mathematical points, so as to provide terminations for bodies; and others dodged the force of this reasoning—·the reasoning of the preceding paragraph·—by a heap of unintelligible point-scorings and distinctions. Both these adversaries equally yield the victory: a man who hides himself admits the superiority of his enemy just as clearly as does one who fairly hands over his weapons.

Thus it appears that the •definitions of mathematics destroy the purported •demonstrations: if we have ideas of indivisible points, lines, and surfaces that fit their definitions, their existence is certainly possible; but if we have no such ideas, it is impossible for us ever to conceive the termination of any figure, and without that conception there can be no geometrical demonstration.

But I go further, and maintain that none of these demonstrations can carry enough weight to establish such a principle as that of infinite divisibility. Why? Because when they treat of such minute objects they are built on ideas that are not exact and maxims that are not precisely true, so that they are not properly *demonstrations*! When geometry decides anything concerning the proportions of quantity, we shouldn't expect the utmost precision and exactness—none of its proofs yield that. Geometry takes the dimensions and proportions of figures accurately—but *roughly*, with some give and take. Its errors are never considerable, and it wouldn't it err at all if it didn't aim at such an absolute perfection.

I first ask mathematicians what they mean when they say that one line or surface is 'equal to', or 'greater than', or 'smaller than' another. This question will embarrass any mathematician, no matter which side of the divide he is on: maintaining that what is extended is made up of •indivisible points or of •quantities that are divisible in infinitum.

The few mathematicians who defend the hypothesis of indivisible points (if indeed there are any) have the readiest and soundest answer to my 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 so does the proportion of the lines and surfaces. But though this answer is sound, as well as obvious, I declare that this standard of equality is entirely useless and that it is never from *this* sort of comparison that we determine objects to be equal or unequal with respect to each other. The points that make up any line or surface, whether seen or felt, are so tiny and so jumbled together that it is utterly impossible for the mind to compute how many there are; so such a computation can't provide us with a standard by which we may judge proportions. No-one will ever be able to determine, by a precise count ·of constituent points·, that an inch has fewer points than a foot, or a foot fewer than a yard; which is why we seldom if ever consider this as the standard of equality or inequality.

As for those who imagine that extension is divisible in infinitum, they can't possibly give *this* answer to my question, or fix the equality of lines or surfaces by counting their component parts. According to their hypothesis •*every* figure—large or small—contains an infinite number of parts; and •infinite numbers, strictly speaking, can't be either equal or unequal to one another; so •the equality or inequality of any portions of space can't depend on proportions in the numbers of their parts. It can of course be said that the inequality of a mile and a kilometre consists in the different numbers of the feet of which they are composed, and that of a foot and a yard in their different numbers of inches. But the quantity we call 'an inch' in the one is supposed to be equal to what we call 'an inch' in the other, *this* equality has to be fixed somehow. ·Perhaps by sameness of numbers of millimetres·! If we are not to embark on an infinite regress, we must eventually fix some standard of equality that doesn't involve counting parts.

There are some who claim that equality is best defined by *congruence*, and that two figures are equal if when they are placed one on the other all their parts correspond to and touch each other. To evaluate this definition I must first make this preliminary point: equality is a *relation*; it isn't a property in the figures themselves, but arises merely from the comparison the mind makes between them. So if equality consists in this imaginary application and mutual contact of parts, we must at least have a clear notion of these parts, and must conceive their contact. In this conception, obviously, we would follow these parts down to the tiniest that can possibly be conceived, because the contact of *large* parts would never make the figures equal. But the tiniest parts we can conceive are mathematical points! So this standard of equality is the same as the one based on the equality of the number of points, which we have already seen to be a sound but useless. We must therefore look elsewhere for an answer to my question.

Many philosophers refuse to assign any *standard* of equality. To give us a sound notion of equality, they say, it is sufficient to present two objects that are equal. They hold that without the perception of such objects all definitions are fruitless, and when we *do* perceive such objects we don't need any definition. I entirely agree with all this. I contend that the only useful notion of equality or inequality is derived from the whole united appearance and the comparison of particular objects.

It is evident that the eye—or rather the mind—is often able at one view to compare the size of bodies, and pronounce them equal or unequal to each other without examining or comparing the numbers 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 the most clear and self-evident principles.

So there are three proportions that the mind distinguishes in the general appearance of its objects, and labels as 'larger', 'smaller', and 'equal'. But though its decisions regarding proportions are sometimes infallible, they aren't always so; our judgments of this kind are as open to doubt and error as those on any other subject. We frequently correct our first opinion •by a review and reflection, and judge objects to be equal that we at first thought unequal, or regard an object as smaller than another though it had formerly seemed to be larger. And that isn't the only way in which we correct these judgments of our senses: we often discover our error •by putting the objects side by side; or, where that is impracticable, •by applying some common and invariable measure ·such as a yardstick· to each, learning

in that way of their different proportions. And these corrections themselves are subject to further correction, and to different degrees of exactness depending on the nature of the measuring-instrument we use and the care with which we use it.

So when the mind •has become accustomed to making these judgments and to correcting them, and •has found that when two figures appear to the eye to be equal they are also equal by our other standards, •we form a *mixed* notion of equality derived from both the looser and the stricter methods of comparison. But we are not content with this. Sound reason convinces us that there are bodies vastly smaller than those that appear to the senses (and false reason tries to convince us that there are bodies *infinitely* smaller!); so we clearly perceive that we have no instrument or technique of measurement that can guarantee us against all error and uncertainty. We are aware that the addition or removal of one of these tiny parts won't show up either in the appearance or in the measuring; and we imagine that two figures that were equal before can't be equal after this removal or addition; so we suppose some imaginary standard of equality by which the appearances and measuring are *exactly* corrected, and the figures are related by *that* standard. This standard is plainly imaginary. For as the idea of *equality* is the idea of

> a specific appearance, corrected by placing the things side by side or applying to each a common measure,

the notion of any correction that is finer than we have instruments and techniques to make is a mere fiction of the mind, and is useless as well as incomprehensible. Although this standard is merely imaginary, however, the fiction is very natural: the mind often continues in this way with some procedure, even after the reason that started it off has ceased to apply. This appears very conspicuously with regard to time. Obviously we have no exact method of comparing periods of time—not even ones as good as we have for parts of extension—yet the various corrections of our ·temporal· measures, and their different degrees of exactness, have given us an obscure unexpressed notion of *perfect and entire equality*. The same thing happens in many other subjects as well. A musician, finding that his ear becomes every day more delicate, and correcting himself by reflection and attention, continues with the same act of the mind—·the same thought of progressive refinement·—even when the subject fails him ·because he is thinking of refinements that he can't actually *make*·; and so he is led to entertain a notion of a *perfect* major third or octave, without being able to tell where his standard for that comes from. A painter creates the same fiction with regard to colours; a mechanic with regard to motion. To the former *light and shade*, to the latter *swift and slow*, are imagined to be capable of exact comparison and equality beyond the judgments of the senses.

We can apply the same reasoning to curves and straight lines. Nothing is more apparent to the senses than the difference between a curved line and a straight one, and our ideas of these are as easy to form as any ideas that we have. But however easily we may form these ideas, it is impossible to produce any definition of them that will fix the precise boundary between them. When we draw a line on paper it runs from point to point in a certain manner that determines whether the line as a whole will look curved or straight; but ·this 'manner·, this order of the points, is perfectly unknown; all we see is the over-all appearance ·that results from it·. Thus, even on the system of indivisible points we can form only a distant notion of some unknown standard to these objects. On the system of infinite divisibility we can't go even this far, and are left with merely the *general appearance* as the basis on which to settle whether lines are curved or straight. But though we can't give a perfect defini-

tion of 'curved' or 'straight', or come up with any very exact method of distinguishing curved lines from straight ones, this doesn't prevent us from correcting ·our judgment based on· the first appearance by •a more accurate consideration and by •applying some standard of whose accuracy we are more sure of because of its past successes. It is from these corrections, and by carrying on the same ·correcting· action of the mind past where there is any basis for it, that we form the loose idea of *a perfect standard for straight and curved*, without being able to explain it or grasp what it is.

Mathematicians, it is true, claim to give an exact definition of a straight line when they say that *it is the shortest distance between two points*. ·I have two objections to this supposed definition·. First: this is a statement of the *properties* of a straight line, not a sound *definition* of 'straight'. When you hear 'a straight line' mentioned, don't you think immediately of •a certain appearance, without necessarily giving any thought to •this property? 'Straight line' can be understood *on its own*, but this 'definition' is unintelligible without a comparison with *other* lines that we conceive to be longer. Also, in everyday life it is established as a maxim that the straightest journey is always the shortest; but if our idea of a straight line *was* just that of the shortest distance between two points, that maxim would be as absurd as 'The shortest journey is always the shortest'! Secondly, I repeat what I showed earlier, that we have no precise idea of equality and inequality, shorter and longer, any more than we do of straight and curved; so the former can never yield a perfect standard for the latter. An exact idea can't be built on ideas that are loose and indeterminate.

The idea of a *plane surface* is no more susceptible of a precise standard than that of a *straight line*; we have no means of distinguishing such a surface other than its general appearance. It is useless for mathematicians to represent a plane surface as *produced by the flowing of a straight line*. This is immediately open to ·three· objections: (1) that •our idea of a surface is as independent of •this way of forming a surface as •our idea of an ellipse is of •the idea of a cone (·though mathematicians 'define' an ellipse as something made by cutting a cone in a certain way·); (2) that the idea of a straight line is no more precise than that of a plane surface; (3) that a straight line can flow irregularly and thus form a figure quite different from a plane, so that ·for purposes of the mathematicians' definition· we must suppose the straight line to flow along two straight lines parallel to each other and *on the same plane*, which makes the definition circular.

So it seems that the ideas that are most essential to geometry—namely the ideas of

equality and inequality,
straight line, and
plane surface

—are far from being exact and determinate, according to our common method of conceiving them. We are not only incapable of *telling* in difficult particular cases whether these figures are equal, whether this line is straight, whether that surface is plane; we can't even have a firm and invariable *idea* of equality or straightness or planeness. Our appeal is still to the weak and fallible judgment that we make from •the appearance of the objects and correct by •a compass or ·other· everyday device or technique; and if we bring in the supposition of •some further correction, it will be either useless or imaginary. It is pointless to resort to the usual line of thought that brings in God, supposing that his omnipotence enables him to form a perfect geometrical figure, and draw a straight line without any curve or inflection. As the ultimate *standard* of these figures is derived from nothing but the senses and imagination, it is absurd to talk of any perfection

beyond what sense and imagination can determine, because the true perfection of *anything* consists in its conformity to its *standard*.

Since these ideas are so loose and uncertain, I want to ask any mathematician:

> What entitles you to be so utterly sure of plainest and most obvious principles of your science (let alone of the more intricate and obscure ones)? How can you prove to me, for instance, that two straight lines can't have a segment in common? Or that it is impossible to draw more than one straight line between any two points?

If he replies that these opinions are obviously absurd, and in conflict with our clear ideas, I answer:

> I don't deny that. When two straight lines approach each other •with a perceptible angle between them, it is absurd to imagine them to have a common segment. But suppose two lines to approach at the rate of •one inch in sixty miles, I see no absurdity in asserting that when they meet they become one. Please tell me what rule or standard you are going by when you assert that the line in which I have supposed them to come together can't make the same straight line as those two that form so small an angle between them? Presumably you have some idea of a straight line to which this line doesn't conform. Well, then, do you mean that the line in question doesn't take the points in the same order and by the rule that is special and essential to a straight line? In judging in this way you are allowing that extension is composed of indivisible points, which may be more than you intend; but let that pass. My present point is just that •this is *not* the standard by which we form the idea of a straight line; and that •even if it were, our senses and imagination don't provide anything firm enough to determine when such an order is violated or preserved. The original standard of a straight line is in reality nothing but *a certain general appearance*; and it is evident that straight lines can be made to coincide and yet correspond to this standard, even if it is corrected by all the means either practicable or imaginable.

Whichever way they turn, mathematicians are still caught in this dilemma. ·On one side of it·: If they judge of equality etc. by the accurate and exact standard of the enumeration of the minute indivisible parts, they •employ a standard that is useless in practice, and •they rely on the truth of something they have been trying to explode, namely the doctrine of indivisible parts of extension. ·On the other side of the dilemma·: If they employ (as they usually do) the inaccurate standard derived from the general appearance of objects when they are considered together, corrected by measuring and putting the objects side by side, their first principles are too coarse to afford any such subtle inferences as they commonly draw from them. The first principles are certain and infallible; but they are based on imagination and the senses, so what is ·soundly· inferred from them can never go beyond those faculties, much less contradict them.

This may open our eyes a little, and let us see that no geometrical 'demonstration' of the infinite divisibility of extension can have as much force as we naturally attribute to every argument supported by such magnificent claims. At the same time we may learn why it is that geometry fails to convince us on this single point, while all its other reasonings command our fullest assent and approval. And indeed there seems to be more need to explain *why* this exception exists than to show *that* it really is an exception and that all the mathematical arguments for infinite divisibility are utterly

sophistical. For it is obvious that as no *idea of quantity* is infinitely divisible it is a glaring absurdity to try to prove that *quantity itself* admits of such a division, arguing for this by means of ideas that are directly opposite to that conclusion. And as this absurdity is very glaring in itself, so every argument based on it is accompanied by a new absurdity and involves an obvious contradiction.

I could cite as instances those arguments for infinite divisibility that are derived from *the point of contact*—·that is, the *point* at which, supposedly, a circle is in contact with a straight line that is tangential to it·. I know no mathematician will agree to be judged by the diagrams he draws on paper, these being rough sketches (he will tell us) that serve only to convey more easily certain *ideas* that are the true basis of all our reasoning. I accept this, and am willing to base the controversy merely on these *ideas*. So I ask our mathematician to form as accurately as possible the ideas of a circle and a straight line; and then I ask whether in his conception of their contact he can conceive them as touching at a mathematical point, or whether instead he has to imagine them to coincide for some space. Whichever side he chooses, he runs himself into equal difficulties. •If he says that in tracing these figures in his imagination he can imagine them as *touching only at a point*, he allows the possibility of the idea of a point, and thus the possibility of points. •If he says that in his conception of the contact of those lines he must make them coincide ·for some tiny distance·, he is implicitly admitting the fallacy of geometrical demonstrations that are carried beyond a certain degree of minuteness; for he certainly *has* such demonstrations against a circle's coinciding ·for any distance· with a straight line. . . .

5: The same subject continued

·At the start of section 4, I pointed out that my account of space and extension has two parts. I devoted that section to the first part, namely the thesis that what is extended consists of indivisible parts. Now we come to· the second part of my system, namely that the idea of space or extension is nothing but the idea of visible or tangible points distributed in a certain order. If that is true, it follows that *we can form no idea of a vacuum, or space where there is nothing visible or tangible*. This is met by three objections that I shall examine together, because my answer to one of them is a consequence of my answer to the other two.

First, it may be said that men have disputed for ages about a vacuum and a plenum [= 'space that is entirely full'] without being able to reach a final decision, and even today philosophers and scientists think they are free to join either side in this controversy, as their fancy leads them. But whatever basis there may be for a controversy about vacuum and plenum themselves, it may be claimed—·and by Locke it *was* claimed·—that the very ·existence of the· dispute is decisive concerning the idea: men couldn't possibly argue for so long about a vacuum, and either oppose or defend it, without having a notion of *what* they refuted or defended.

Secondly, if this argument should be rejected, the reality or at least the possibility of *the idea of a vacuum* can be proved by the following reasoning. Every idea is possible that is a necessary and infallible consequence of ones that are possible. Now, even if we suppose the world to be at present a plenum, we can easily conceive it to be deprived

of motion —this idea must be allowed as possible. It must also be allowed as possible to conceive that God in his omnipotence annihilates some portion of matter while nothing else moves. [For the rest of this paragraph Hume continues to expound (in very Humean terms) this argument for the possibility of vacuum; and to *defend* it against a certain reply (that of Descartes), in order to set it up for his own reply.] For as every idea that is distinguishable is separable by the imagination, and as every idea that is separable by the imagination may be conceived to be separately existent, it is evident that •the existence of one particle of matter no more implies •the existence of another than •one body's having a square shape implies that •every body is square. This being granted, I now ask what results from the concurrence of these two possible ideas of *rest* and *annihilation*—what must we conceive to follow from •the annihilation of all the air and subtle matter [= 'matter that is finer than air'] in a room, supposing the walls to remain the same, without any motion or alteration? There are some metaphysicians—·such as Descartes·—who answer that since •matter and •extension are the same, the annihilation of one necessarily implies that of the other; so ·if there is now •no matter· between the walls of the room there is now •no distance ·between them either·; that is, they *touch* each other, just as my hand touches the paper I am writing on. But though this answer is very common, I defy these metaphysicians to conceive the matter according to their hypothesis, or to imagine the floor touching roof and the opposite walls touching each other *while nothing moves*! . . . . If you change the position of the roof, floor, and walls, you suppose •a motion; if you conceive anything between them, you suppose •a new creation. But keeping strictly to the two ideas of •rest and •annihilation, it is obvious that the idea resulting from them is not that of a contact of parts, but something else that is concluded to be the idea of a vacuum.

The third objection carries the matter still further, and contends not only that the idea of a vacuum is real and possible but that it is necessary and unavoidable. This assertion is based on the *motion* we observe in bodies: this, it is maintained, would be impossible and inconceivable without a vacuum into which one body must move in order to make way for another. I shan't expound this objection at length, because it principally belongs to physics, which lies outside our present sphere.

In order to answer these objections I must dig pretty deep and consider the nature and origin of various ideas, lest we argue without perfectly understanding what we are arguing about. The idea of *darkness* is obviously not a •positive one, but merely the •negation of . . . . coloured and visible objects. When a sighted man looks around him in complete darkness, he receives no perceptions except ones he shares with someone born blind; and it is certain the latter has no idea either of light or darkness. So the impression of extension without matter couldn't come from the mere removal of visible objects; the idea of *utter darkness* can never be the same as the idea of *vacuum*. Now, suppose a man to be supported in the air and to be—·without seeing or feeling anything·—gently carried along by some invisible power; it is obvious that this invariable motion doesn't make him aware of anything, and doesn't give him the idea of extension or indeed any other idea. Even if he moves his limbs to and fro, this can't convey that idea to him. He feels a certain sensation or impression, the parts of which are successive to each other; they may give him the idea of *time*, but certainly they are not laid out in a way that could convey the idea of *space or extension*.

So it appears that darkness and motion, •in the absence of everything visible and tangible, can't give us the idea of extension without matter, i.e. of a vacuum. So now we must

ask: can they convey this idea •when mixed with something visible and tangible? .... If we are to know whether *sight* can convey the impression and idea of a vacuum, we must suppose that in a complete darkness there are luminous bodies presented to us, their light revealing only these bodies themselves and giving us no impression of surrounding objects. And we have to form a parallel supposition about *touch*. It won't do to suppose a perfect absence of all tangible objects: we must suppose that something is perceived by the sense of touch. then after an interval and motion of the hand or other sense-organ another tangible object is met with, then another, and so on, as often as we please. The question is: do these intervals give us the idea of extension without body? To begin with the case of sight: it is obvious that when only two luminous bodies appear to the eye we can see whether they are conjoined or separate, and whether the distance between them is large or small; and if that distance changes, we can perceive it getting larger or smaller as the bodies move. But in this case the distance is not anything coloured or visible, so it may be thought that what we have here is a vacuum or pure extension, not only intelligible to the mind but obvious to the senses.

This is our natural and most familiar way of thinking, but if we think a little we'll learn to correct it. Notice that when there is perfect darkness in which two ·luminous· bodies present themselves, the only change that is revealed is the appearance of these two objects; all the rest continues to be, as before, a perfect negation of light and of every coloured or visible object. This is true not only of what may be said to be far away from these bodies but also of the very distance that interposes between them; for all that consists of nothing but darkness, or the negation of light—without parts, without composition, unchanging and indivisible. Now, since this distance causes no perception different from what a blind man gets from his eyes or what is conveyed to us in the darkest night, it must have the same properties; and as •blindness and darkness give us no ideas of extension, it is impossible that the dark and undistinguishable •distance between two bodies can ever produce that idea.

The sole difference between absolute darkness and the appearance of two or more visible luminous objects consists, as I said, in the objects themselves and how they affect our senses. ·Don't think that the *distances* are also perceived·. Philosophers commonly agree that it is reason, more than the senses, that .... tells us how far away from us a given body is. The only perceptions from which we can (·by reasoned inference·) judge the distances are

- •the angles that the rays of light flowing from the objects form with each other,
- •the motion the eye has to make when it goes from looking at one object to looking at the next, and
- •the different parts of the organs that are affected by the light from each object.

But as each of these perceptions is simple and indivisible, they can never give us the idea of extension.

We can illustrate this by considering the sense of touch, and the imaginary distance or interval between tangible or solid objects. I have supposed two cases:

- •a man supported in the air and moving his limbs to and fro without meeting anything tangible;
- •a man who feels something tangible, leaves it, and after a movement of which he is aware feels another tangible object.

What is the difference between these two cases? No-one will hesitate to reply that it consists merely in the perceiving of those objects, and that the sensation arising from the movement is the same in both cases. Well, that sensation can't give us an idea of extension when it isn't accompanied

by some other perception, so it can't give us that idea when mixed with impressions of tangible objects, because that mixture does not alter the sensation.

But although motion and darkness—alone or accompanied by tangible and visible objects—don't convey •any idea of *vacuum* or *extension without matter*, they are the causes for •our falsely imagining we can form such an idea. For that motion and darkness are *closely related to* a real extension, a real complex of visible and tangible objects. ·There are three components to this relation·.

First, we may observe that two visible objects appearing in the midst of utter darkness •affect the senses in the same way, •form the same angle by the rays that flow from them, and •meet in the eye ·in the same way·, as if the distance between them were filled with visible objects that would give us a true idea of extension. Similarly, the sensation of motion when there is nothing tangible between two bodies is the same as when we feel a complex body whose different parts are outside one another.

Secondly, we find by experience that when •two bodies so placed as to affect the senses in the same way as •two others that have a certain extent of visible objects between them, the former two can come to have the same extent of visible objects between *them* without anything's perceptibly bumping into or penetrating anything else and without any change in the angle they subtend at the eye. Similarly, when there are •two objects of which we can't feel both unless, between the two feelings, time elapses and there is a sensation of movement in our hand, experience shows us that •the two objects could be felt with the intervening time being filled by that same sensation of hand-movement together with impressions of solid and tangible objects. Summing up these two points: an invisible and intangible distance can be converted into a visible and tangible one without any change in the distant objects.

Thirdly, these two kinds of distance have nearly the same effects on every natural phenomenon. All qualities—heat, cold, light, attraction, etc.— grow weaker as the distance increases; and we observe little difference ·in this effect· when the distance is •marked out by compounded and perceptible objects from what it is when the distance is •known only by how the distant objects affect the senses.

So here are three relations between the distance that conveys the idea of extension and that other distance that isn't filled with any coloured or solid object. •The distant objects affect the senses in the same way, whether separated by one distance or the other; •the second species of distance is found to be capable of receiving the first; and •they both equally lessen the strength of every quality.

These relations between the two kinds of distance easily explain why one has so often been mistaken for the other, and why we *imagine* we have an idea of extension without the idea of any object either of sight or feeling. For we can accept it as a general maxim in this science of human nature that

> whenever there is a close relation between two ideas, the mind is very apt to mistake them, and to use one in place of the other in all its discourses and reasonings.

This phenomenon occurs so often, and is so important, that I can't resist stopping for a moment to examine its causes. Let me say in advance that *the phenomenon* mustn't be confused with *my account of its causes*: if you have doubts about my explanation of the phenomenon, don't let them become doubts about the phenomenon itself. *It* may be real even if my explanation of it is chimerical. Though it is complete wrong to do so, it is very *natural* for us to infer that something doesn't exist from the falsity of a purported explanation

of it; and the naturalness of that error is a clear *instance* of the very principle that I am now about the explain! When ·in section 4_i· I accepted the relations of resemblance, contiguity, and causation as sources of union among ideas, doing this without looking into their causes, I was busy pressing my first maxim, that we must in the end rest contented with experience; it wasn't that I had nothing attractive and plausible to say on the subject of the causes. It would have been easy to make an imaginary dissection of the brain, and to show why on our conception of any idea the animal spirits run into all the nearby channels and rouse up the other ideas that are related to it. But though I passed up any advantage that I might have gained from this line of thought in explaining the relations of ideas, I'm afraid that I must now have recourse to it so as to account for the *mistakes* that arise from these relations.

The mind is endowed with a power of arousing any idea it pleases: whenever it despatches the spirits into the region of the brain containing a certain idea, they always arouse the idea when they run precisely into the proper channels and rummage the cell that belongs to it. But their motion is seldom direct, and naturally turns a little to one side or the other; and for this reason the animal spirits, falling into nearby channels, present other related ideas instead of the one the mind at first wanted to look at. Sometimes we aren't aware of this switch; we continue the same train of thought, make use of the related idea that is presented to us, employing it in our reasoning as if it were the one we asked for. This is the cause of many mistakes and sophisms in philosophy, as you can imagine; and it would be easy to show this, if there were any need to do so.

Of the three relations I have mentioned, resemblance is the most fertile source of error; and indeed most mistakes in reasoning owe a lot to that source. Not only are •resembling ideas related together, but •the actions of the mind that we employ in considering them are so alike that we can't distinguish *them*. This fact is of great importance. Quite generally we can say that whenever the actions of the mind in forming any two ideas are the same or very alike, we are apt to confound these ideas and take the one for the other. We'll see many examples in the course of this book. But though resemblance is the relation that most easily produces a mistake in ideas, the other two—causation and contiguity—can also contribute to it. We could prove this with the examples of poets and orators, if it were thought proper (it is certainly *reasonable*) to draw arguments from that quarter in metaphysical subjects. But metaphysicians may think this to be beneath their dignity, so I shall get a proof from an observation that can be made about most of the metaphysicians' own discourses—namely that it is usual for men to use •words instead of •ideas, and to •talk instead of •thinking in their reasonings. We use words in place of ideas because they are commonly so closely connected that the mind easily mistakes them. This also explains why we substitute the idea of a *distance that is not taken to be visible or tangible* for the idea of *extension*, which is nothing but a complex of visible or tangible points arrayed in a certain order. The relations of causation and resemblance both contribute to this mistake. As the first sort of distance is found to be convertible into the second, it is in this respect a kind of cause; and the relation of resemblance comes in through the similarity in how the two sorts of distance affect the senses and diminish other qualities.

After this chain of reasoning and explanation of my principles, I am now prepared to answer all the objections that have been offered, whether derived from metaphysics or physics. •The frequent disputes about vacuum, or extension without matter, don't prove the reality of the idea on which

the dispute turns; for there is nothing more common than to see men deceive themselves in this regard, especially when some close relation presents them with *another* idea which may be the occasion of their mistake.

We can make almost the same answer to •the second objection, derived from the conjunction of the ideas of rest and annihilation. When everything in the room is annihilated, and the walls don't move, the chamber must be conceived in much the same way as at present, when the air that fills the room is not an object of the senses. This annihilation leaves the eye with the fictitious distance that is revealed by the different parts of the organ that are affected, and by the degrees of light and shade; and it leaves to the sense of touch the fictitious distance that consists in a sensation of motion in the hand or other member of the body. It is no use our looking further. On whichever side we turn this subject, we shall find that these are the only impressions such an object can produce after the supposed annihilation; and I have already pointed out that impressions can give rise only to ideas that resemble them.

Since we can suppose a body to be annihilated without producing any change in its neighbours, we can easily conceive how a body might be created anew without affecting anything else. Now, the motion of a body has much the same effect as its creation: the distant bodies are no more affected in one than in the other. This suffices to satisfy our conceptual demands, and proves that there is no inconsistency in supposing such a motion. Afterwards experience comes in play to persuade us that two bodies situated in the manner described above really *can* receive ·a new· body between them, and that there is no obstacle to converting the invisible and intangible distance into one that is visible and tangible. However natural that conversion may seem, we can't be sure that it is practically possible until we have experience of it.

Thus I seem to have answered the three objections mentioned above [on pages 23– 25], though I realize that few people will be satisfied with these answers, and most will immediately propose new objections and difficulties. It will probably be said that my reasoning is irrelevant to the real question, and that I explain only •how objects affect the senses, without trying to account for •their real nature and operations. What I have said goes like this:

> When there is nothing visible or tangible between two bodies, we find by experience that the bodies can be placed in the same manner, with regard to the eye and hand-movement, as if they were divided by something visible and tangible. This invisible and intangible distance is also found by experience to contain a capacity of receiving body, i.e. of becoming visible and tangible.

That is the whole of my system; and nowhere in it (the complaint runs) have I tried to explain the *cause* that separates bodies in this way, *making them able* to receive others between them, without any collision or penetration.

I answer this objection by pleading guilty, and by admitting that I never intended to penetrate into the nature of bodies or explain the secret causes of their operations. This is no part of my present purpose, and anyway I am afraid that such an enterprise is beyond the reach of human understanding, and that we shall never be able to claim to know body otherwise than by the external properties that reveal themselves to the senses. As for those who try to go further: I can't approve of their ambition until I see at least one example of success in it. But at present I content myself with knowing perfectly how objects affect my senses, and knowing what experience tells me about their connections with one another. This suffices for the conduct of life, and it also suffices for my philosophy, which claims only to explain

the nature and causes of our perceptions, i.e. impressions and ideas.[4]

I shall conclude this subject of extension with a paradox that the arguments I have given will easily explain. This paradox is that •if you choose to give the name 'vacuum' to distance of the invisible and intangible sort—in other words, to the ability to become a visible and tangible distance—then extension and matter are the same, and yet there is a vacuum! •If you choose not to give it that name, then motion is possible in a plenum without collisions running on to infinity or returning in a circle, and without penetration. But however we express ourselves, we must always admit that we have no idea of any real extension without filling it with perceptible objects and conceiving them as visible or tangible.

As for the doctrine that time is nothing but the manner in which some real objects ·or events· exist: this is open to the same objections as the similar doctrine regarding extension. If our disputing and reasoning about •·spatial· vacuum is a sufficient proof that we have the idea of it, we must for the same reason have the idea of time when nothing happens—·that is, of •temporal vacuum·—because there is no commoner subject of dispute. But it is certain that we really *don't* have any such idea. For where could it come from? Does it arise from an impression of sensation or of reflection? Point the source- impression out distinctly to us, so that we can know its nature and qualities! But if you can't point out any such impression you may be certain that you are mistaken in thinking you have any such idea.

But although it is impossible to show an impression from which an idea of *time without something that changes* could be derived, we can easily point out the appearances that make us *fancy* we have that idea. We may observe that there is a continual succession of perceptions in our mind, so that the idea of time is always present to us; and when we consider an unchanging object at five o'clock and then again at six •we are apt to apply our idea of time to it in the same way as if the object had been moving or altering throughout. The first and second appearances of the object, being compared with the succession of our perceptions, seem as far apart ·in time· as if the object had really altered. To this we may add, what experience shows us, •that between these appearances the object was *capable of* such a number of changes ·as we fictionally imagine it to have undergone·; as •also that the unchanging or rather fictitious duration has the same effect on every quality increasing or lessening it—as does the succession that is ·real, because it is· obvious to the senses. Because of 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.

[4] As long as we confine our theorizing to the sensory appearances of objects, without getting into their real natures and operations, we are safe from all difficulties and can never be embarrassed by any question. For example, if we are asked 'Is the invisible and intangible *distance* between two objects *something* or *nothing*?' we can easily answer that it is *something*, namely a property of the objects that affect the senses in such and such a way. If we are asked 'When two objects have an invisible and intangible distance between them, do they touch or not?', we can answer that this depends on the definition of 'touch'. If objects are said to touch when there is nothing perceptible placed between them, then these two objects touch. If objects are said to touch when their images affect adjoining parts of the eye, and when the hand feels both objects successively without any interposed motion, these objects do not touch. The appearances of objects to our senses are all consistent; and no difficulties can ever arise except from the obscurity of the terms we employ.

6: The ideas of existence and of external existence

It may be a good idea, 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. This will help to prepare us for the examination of knowledge and probability, when we understand perfectly all the particular ideas that can enter into our reasoning.

Every impression or idea of every kind, in consciousness and in memory, is conceived as *existent*; and obviously the most perfect idea . . . . of *being* is derived from this consciousness. This gives rise to a splendidly clear and conclusive dilemma: that since we never remember any idea or impression without attributing existence to it, the idea of existence must either be •derived from a distinct impression that is conjoined with every perception or object of our thought or be •the very same as the idea of the perception or object.

This dilemma is an obvious consequence of the principle that every idea arises from a similar impression, so there is no doubt about how we should choose between the horns of the dilemma. So far from there being any distinct impression attending every ·other· impression and every idea, I don't think that *any* two distinct impressions are inseparably conjoined. Though certain sensations may at one time be united, we quickly find they can be separated and can appear apart. And thus, though every impression and idea we remember is considered as existent, the idea of existence is not derived from any particular impression.

The •idea of existence, then, is identical with •the idea of whatever it is that we conceive to be existent. To reflect on something •simply, and to reflect on it •as existent, are exactly the same procedure. When the idea of existence is conjoined with the idea of an object, it adds nothing 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.

If you oppose this, you are obliged to point out the distinct impression from which your idea of entity [= 'existing thing'] is derived, and to prove that this impression is inseparable from every perception we believe to be existent. This, we can say without hesitation, is impossible.

My reasoning ·in section 7_i· about ·the so-called 'distinction of reason'·—the distinction of ideas without any real difference—won't do anything for us here. That kind of distinction is based on the fact that a single simple idea may resemble several different ideas ·in different respects·. But no object can resemble a second object with respect to its existence while differing from a third in that respect, since every object that is presented ·as a candidate for comparison· must necessarily be existent.

Similar reasoning will account for the idea of *external existence*. It is a philosophical commonplace as well as a pretty obvious truth that nothing is ever really present to the mind except its perceptions—its impressions and ideas—and that external objects become known to us only through the perceptions they give rise to. To hate, to love, to think, to feel, to see—all this is just to perceive.

Now, since nothing is ever present to the mind but perceptions, and since every idea is derived from something that was previously present to the mind; it follows that we can't so much as *conceive* or *form an idea of* anything that is specifically different [= 'different in fundamental kind'] from ideas and impressions. Look outside yourself as much as you can; chase your imagination to the heavens or to the outer limits

of the universe; you'll never really advance a step beyond *yourself*, and you can't conceive any kind of existent other than the perceptions that have appeared within the narrow compass ·of your mind·. This is the universe of the imagination, and we have no ideas of anything that is not produced there.

The furthest we can go towards a conception of external objects, taking them to be specifically different from our perceptions, is to form a relative idea of them without claiming to comprehend the objects themselves. Generally speaking, we *don't* suppose them to be specifically different; we take them to differ from our perceptions only in respect of some of their relations, connections, and durations. But of this more fully hereafter—·in 2_{iv}·.

Part iii: Knowledge and probability

1: Knowledge

There are (as I said in section 5_i) seven different kinds of philosophical relation:

resemblance
identity
relations of time and place
proportion in quantity or number
degrees in any quality
contrariety
causation.

These relations can be divided into two classes. •In one class are the ones that depend entirely on the ideas that we compare together, ·so that the relation can change only if the ideas change·. •In the other class are relations that can be changed without any change in the ideas. •The idea of a triangle shows us the relation of *equality* that its three angles have to two right angles, and this relation is invariable as long as our idea remains the same. On the other side, the relations of *contiguity* and *distance* between two objects can be changed merely by moving the objects, without any change *in* them or in their ideas; and how things move depends on a hundred different events that can't be foreseen by the mind. Similarly with *identity*: two objects can be numerically different from each other—·that is, can really be *two*·—even though they perfectly resemble each other, and even if they appear at different times in the very same place. And with *causation*: the power by which one object produces another can never be discovered merely from the ideas of the objects; so it is evident that cause and effect are relations that we learn about from experience and not from any abstract reasoning or reflection. Not even the simplest phenomenon can be explained purely in terms of the qualities of the objects as they appear to us, or be foreseen by us without the help of our memory and experience.

It seems, then, that of these seven philosophical relations there remain only four that can be the objects of knowledge and certainty because they depend solely on ideas, . These four are *resemblance*, *contrariety*, *degrees in quality*, and *proportions in quantity or number*. Three of these relations are discoverable at first sight, and belong in the province of intuition rather than of demonstration. [In Hume's day, 'intuition' stood for 'seeing something, straight off, as self-evidently true'; while 'demonstration' is the procedure of proving something by rigorously valid argument, *each step in which* is warranted by intuition.] When two objects *resemble* each other, the resemblance will immediately strike the eye, or rather the mind, and seldom needs a second look. Similarly with *contrariety*: no-one can doubt for a moment that existence and non- existence destroy each other and are perfectly incompatible and contrary. And with the *degrees of any quality*: although it is impossible to judge exactly concerning degrees of a quality—such as colour, taste, heat, cold—when the difference between them is very small, it is easy to decide which is the more intense when their difference is considerable. And we pronounce this decision at first sight, without any enquiry or reasoning.

We can proceed in the same way in fixing the proportions of quantities or numbers: where the difference is very great and remarkable, we can see at a glance which figure or number is the larger of two. As to equality or any exact

proportion—·that is, any judgment about *exactly* how much larger one item is than another·—a single look will yield us only a guess, except with very small numbers or very limited portions of extension, which can be taken in all at once and where we perceive that we can't fall into any considerable error. In all other cases we must settle for approximations, or else proceed in a more artificial manner.

I have already observed, ·near the middle of 4_{ii}·, that geometry, or the technique by which we fix the proportions of figures, never achieves perfect precision and exactness (though its results are much more general and exact than the loose judgments of the senses and imagination). Its first principles are drawn from the general appearance of the objects, and when we know something of the prodigious minuteness of which Nature is susceptible we can't feel secure about general appearances! Our ideas seem to give us a perfect assurance that no two straight lines can have a common segment; but if you attend to the ideas that we have when we think this you'll find that they always suppose the two lines to be inclining *perceptibly* towards one another, ·so that the angle between them is fairly large·. When the angle they form is extremely small we have no standard of *straight line* precise enough to assure us of the truth of this proposition. It is the same with most of the primary decisions [Hume's phrase] of 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 while preserving perfect exactness and certainty. We have a precise standard by which to judge concerning the equality and proportion of numbers; and on the basis of that standard we can determine the relations between numbers without any possibility of error. When two numbers are brought together so that each always has a unit answering to every unit of the other, we pronounce them 'equal'. The reason why geometry doesn't quite qualify as a perfect and infallible science is that it doesn't have a comparable standard of equality in size.

But it may be as well here to remove a difficulty that could arise from my asserting that, though geometry falls short of the perfect precision and certainty that arithmetic and algebra have, it still excels the imperfect judgments of our senses and imagination. The reason why I attribute *any* defect to geometry is that its first basic principles are derived merely from appearances; and you might think that this defect must follow it all the way through, preventing it from ever being able to compare objects or ideas more exactly than we can by relying purely on our eye or imagination. I accept that this defect follows it far enough to prevent it from ever aspiring to full ·exactness or· certainty: but since its basic principles depend on the easiest and least deceitful appearances, they give to their consequences a degree of exactness that the consequences couldn't have if they were taken singly. It is impossible to *see by looking* that the angles of a thousand-sided figure are equal to 1996 right angles, or to guess at anything remotely like this result; but when the eye determines that straight lines cannot coincide, and that we can't draw more than one straight line between two given points, its mistakes can never be of any consequence. And this is the nature and use of geometry, to take us back to appearances which, because of their simplicity, can't lead us into any considerable error.

I shall take this opportunity to offer a second observation about our demonstrative reasonings. . . . It is usual with mathematicians to claim that the ideas that are *their* objects are so refined and spiritual that they can't •be conceived in the imagination but must •be comprehended by a pure and intellectual view of which only the higher faculties of the soul are capable. The same notion runs through most parts of

philosophy, and is principally made use of to explain our abstract ideas, and to show how we can form an idea of a triangle, for instance, which is to be neither isosceles nor scalar, nor confined to any particular length or proportion of sides. It is easy to see why philosophers are so fond of this notion of 'spiritual and refined' perceptions, since it helps them to cover up many of their absurdities, and lets them refuse to submit to the decisions of clear ideas by appealing to ideas that are obscure and uncertain ·though 'spiritual and refined'·! To destroy this trick we need only to reflect on the principle I have stressed so often, that *all our ideas are copied from our impressions*. From that we can immediately conclude that since all impressions are clear and precise, the ideas copied from them must be clear and precise too, so that it's our own fault if they ever contain anything dark and intricate. An idea is by its very nature weaker and fainter than an impression; but being in every other respect the same, it can't bring with it any very great mystery. If its weakness makes it obscure, it is our business to remedy that defect as much as possible by keeping the idea steady and precise; and till we have done *that* it's pointless for us to engage in reasoning and philosophy.

2: Probability, and the idea of cause and effect

I think that's all I need to say about those four relations that are the foundation of science; but there is more to be said in detail about the other three—the ones that don't depend on the ideas, and can be absent or present even while the ideas remain the same. These three relations are *identity*, *situations in time and place*, and *causation*.

All kinds of reasoning consist in nothing but a comparison, and a discovery of the relations—constant or changing—that two or more objects have to one another. [In Hume's time, 'comparing' two things could be simply *bringing them together in a single thought*, not necessarily thinking about their being alike. The present section seems to use the word sometimes in that broader, weaker sense of 'compare' and sometimes in the narrower sense that is common today.] We can make such a comparison when both the objects are present to the senses, or when neither is present, or when only one is. When both the objects are present to the senses along with the relation ·that holds between them·, we call this 'perception' rather than 'reasoning': in this case there is no exercise of thought, no action properly so-called, but only a passive allowing in of the impressions through the organs of sensation. According to this way of thinking, we ought not to classify as 'reasoning' any observations we make about identity or relations of time and place; for in none of those does the mind go beyond what is immediately present to the senses, whether to discover the real existence of ·other· objects or to discover the relations between them. Only *causation* produces a connection that can assure us, on the basis of the existence or action of one object, that some *other* existence or action followed or preceded it. And the other two relations—identity, and location in time and space—can be used in reasoning only to the extent that they affect or are affected by causation. •There is nothing in any objects to persuade us that they are either always distant or always close; and when from experience and observation we discover that their spatial relation doesn't change, we always conclude that some secret cause is separating or uniting them. The same reasoning extends to identity. •We readily suppose that an object can continue individually the same—

·that is, can continue to be that very same object·—even if in our perception it comes and goes; we attribute to it an *identity*, despite the interruption of the perception, as long as we conclude that if we *had* kept our eye or hand constantly on it *would* have given us an invariable and uninterrupted perception. But this conclusion ·about what *would* have happened· goes beyond the impressions of our senses and has to be based on the connection of cause and effect; and we need cause and effect if we are to be sure that the object has not been switched on us, however much the new object may resemble the one that formerly appeared to the senses. Whenever we discover such a perfect resemblance, we consider whether it is common in that *kind* of object; whether possibly or probably any cause could be at work producing the switch and the resemblance; and our judgment about the identity of the object is based on the answers to these questions concerning causes and effects.

So we find that of the three relations that don't depend purely on the ideas, the only one that can be traced beyond our senses, and that informs us of existences and objects that we don't see or feel, is *causation*. So I shall try to explain this relation fully before we leave the subject of the understanding. ·This explanation will occupy most of the remainder of Part iii of this work·.

To begin in an orderly fashion, we must consider the idea of causation and see from what origin it is derived. It is impossible •to reason soundly without understanding perfectly the idea about which we reason; and it is impossible •to understand an idea perfectly without tracing it back to its origin and examining the primary impression from which it arises. •The examination of the impression gives clearness to the idea, and •the examination of the idea gives a similar clearness to all our reasoning.

Take any pair of objects that we call *cause* and *effect*, and turn them on all sides in order to find the impression that produces this prodigiously important idea. I see straight off that I mustn't search for it in any of the particular qualities of the objects: whichever of these qualities I pick on, I find some object that *doesn't* have it and yet *does* fall under the label of 'cause' or 'effect'. And indeed everything that exists, whether externally or internally, can be considered as either a 'cause' or an 'effect', though it is plain that no one *quality* universally belongs to all beings and gives them a title to that label.

So the idea of causation, ·since it doesn't come from any •quality·, must be derived from some •relation among objects; and that relation is what we must now try to discover. The first thing I find is that only *contiguous* pairs of objects [= 'immediate neighbours'] are considered as cause- effect related, and that nothing can •operate at a time or in a place other than—even if extremely close to—the time and place that it •exists in. It sometimes seems that one object acts on another that is at a distance from it, but they are commonly found on examination to be linked by a chain of causes, with each link contiguous to the next, and the end links contiguous to the distant objects; and in any particular case where we can't discover such a chain we still presume it to exist. So we can take it that contiguity is essential to causation; at least we can suppose it to be so, according to the general opinion, until we can find a better occasion—in section 5_{iv}—to clear up this matter by examining what objects are and what are not capable of being brought together and conjoined.

The second relation that I shall claim to be essential to causes and effects is not so universally acknowledged ·as contiguity·, being a subject of some controversy. It is the relation of the cause's *priority in time* to the effect. Some claim that it is not absolutely necessary for a cause to precede its

effect, and that any object or action can in the very first moment of its existence exert its productive quality, giving rise to another object or action that is absolutely simultaneous with it. But experience in most instances seems to contradict this opinion, and anyway we can may establish ·the essentialness of· the relation of priority by a kind of inference or reasoning, ·as follows·. It is an established maxim, both in physics and the human sciences, that

> an object O_1 that exists for some time in its complete state without producing another object O_2 is not the sole cause of O_2 ·when it *does* occur·, but is assisted by some other factor that pushes O_1 from its state of inactivity and makes it exert the energy which it secretly possessed.

Now if any cause could be absolutely simultaneous with its effect, it is certain, according to this maxim, that all causes must be simultaneous with their effects; for any one of them that holds back its operation for a single moment doesn't exert itself at the very time at which it might have operated, and so it is not the whole cause of the effect. The consequence of this would be nothing less than the destruction of the succession of causes that we observe in the world—indeed, the utter annihilation of time. For if one cause were simultaneous with its effect, and this effect with *its* effect, and so on, there would plainly be no such thing as succession, and all objects would be coexistent.

If you find this argument satisfactory, good! If not, I ask you to allow me the same liberty that I took in the preceding case, of *supposing* it to be satisfactory. You will find that the affair is of no great importance.

Having thus discovered or supposed the two relations of *contiguity* and *succession* to be essential to causes and effects, I find myself stopped short: this is as far as I can go if I attend only to single instances of cause and effect. When bodies collide, we think that the motion in one causes motion in the other; but when we consider these objects with the utmost attention, we find only that one body *comes up to* the other, and that the former's motion *precedes* the latter's, though without any interval that we can perceive. It does no good for us to rack ourselves with further thought and reflection on this individual case: we have said all we can about it.

You might want to stop looking at particular cases and define 'cause' as 'something that is productive of something else'; but this doesn't say anything. For what would you mean by 'production'? Could you define it except in terms of causation? If you can, please produce the definition. If you can't, you are here going in a circle, producing merely *one synonymous term* instead of *a definition*.

Shall we then rest contented with •*contiguity* and •*succession* as providing a complete idea of causation? By no means! One object can be contiguous and prior to another without being thought to be its cause. There is also a •*necessary connection* to be taken into account, and that relation is much more important than either of the others.

So I return to the particular case—·for example, the collision·—and look at it from all angles trying to discover the nature of this necessary connection by finding the impression(s) from which the idea of it could be derived. When I cast my eye on the known •qualities of objects, I immediately find that the relation of cause and effect doesn't depend in the least on them. When I consider the •relations between them I can find only contiguity and succession, which I have already regarded as imperfect and unsatisfactory. Should I despair of success, and accept that what I have here is an idea that is not preceded by any similar impression? That would be strong evidence of light-mindedness and instability, given that the contrary principle has already been so firmly

established as to admit of no further doubt—at least until we have more fully examined the present difficulty.

So we must proceed like someone who, having searched for something and not found it where he expected, beats about all the neighbouring fields with no definite view or plan, hoping that sheer good luck will eventually guide him to what he is looking for. We have to leave the direct survey of this question about the nature of the necessary connection that enters into our idea of cause and effect (·returning to it at the start of section 14·), and try instead to find some other questions the answering of which may afford a hint on how to clear up the present difficulty. I shall examine two such questions [the second question is here considerably expanded from Hume's formulation of it]:

What is our reason for holding it to be necessary that everything whose existence has a beginning also has a cause?

Why do we conclude that causes of kind K_1 must necessarily have effects of kind K_2, and what is going on when from the occurrence of a K_1 we infer that a K_2 will occur, and how does it happen that we believe the predictions generated by such inferences?

Before going further, I should remark that although the ideas of cause and effect are derived from impressions of reflection as well as of sensation, for brevity's sake I usually mention only the latter as the origin of these ideas. Whenever I say anything about impressions of sensation, please take it to be said about impressions of reflection as well. Passions are connected with their objects and with one another just as much as external bodies are connected together. So the same relation of cause and effect that belongs in the external world belongs in the mind as well.

3: Why a cause is necessary

To begin with the first question, about the necessity of a cause ·of coming into existence·: It is a general maxim in philosophy that whatever begins to exist must be caused to do so. This is commonly taken for granted in all reasonings, without any proof being given or asked for. It is supposed to be based on *intuition*, and to be one of those ·immediately self-evident· maxims that men can't really doubt in their hearts, even if they deny them with their lips. But if we examine this maxim in terms of the idea of knowledge that I have explained, we shan't discover in it any mark of any such intuitive certainty. Quite the contrary: we'll find that it is of a nature quite foreign to what can be known intuitively.

All certainty arises from the comparison of ideas, and from the discovery of such relations as don't change so long as the ideas don't change. These relations are *resemblance*, *proportions in quantity and number*, *degrees of any quality*, and *contrariety*, none of which is involved in the proposition *Whatever has a beginning has also a cause of existence*. So that proposition is not intuitively certain. At any rate, if you want to maintain that it *is* intuitively certain you must deny that these four are the only infallible relations, and must find some *other* infallible relation to be involved in the proposition we are examining. When you do that, we can look at it! Anyway, here is an argument that proves at one blow that our proposition is not intuitively *or demonstrably* certain. To demonstrate that **(1)** there must be a cause for every new coming-into-existence and for every alteration of something already in existence, we would have to show that **(2)** it is en-

tirely impossible for anything to begin to exist without some productive force ·making it do so·; so if **(2)** can't be proved, we have no hope of ever being able to prove **(1)**. And **(2)** *is* utterly incapable of demonstrative proof, as we can assure satisfy ourselves by considering that as •all *distinct* ideas are separable from each other, and as •the ideas of ·a given· cause and ·of its· effect are evidently *distinct*, we can easily conceive an object coming into existence without bringing in the *distinct* idea of a cause or productive principle$_c$. So the separation 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 items is possible to the extent that it doesn't imply any contradiction or absurdity; and so it can't be refuted by any reasoning from mere ideas, without which it is impossible to demonstrate the necessity of a cause.

Accordingly, when we look into the demonstrations that have been adduced to show the necessity of a cause we shall find them all to be fallacious and sophistical. ·I shall show this with respect to the three main ones·. Some philosophers (including Mr Hobbes) argue like this: all the points of time and place in which we can suppose any object to come into existence are in themselves equal; and unless there is some cause that is special to one time and to one place, and by that means determines and fixes the coming- into-existence, the 'Where?' question must remain eternally unanswered, and the object can't come into existence because there is nothing to fix where and when it will do so. But I ask: Is it any harder to suppose *the time and place* to be fixed without a cause than to suppose the *coming into existence of the object* to be determined without a cause? The first question that comes up on this subject is always *Will the object come into existence or not?*, and the second is *When and where will it come into existence?* If the removal of a cause is intuitively absurd in the one case, it must be so in the other; and if the absurdity isn't clear without a proof in the one case, it will equally require a proof in the other. So there can be no question of showing the absurdity of one supposition and *inferring* from that the absurdity of the other; for they are both on the same footing and must stand or fall by the same reasoning.

The second argument that is used on this topic (by Dr Clarke and others) runs into similar trouble. It goes like this:

> Everything must have a cause; for if anything lacked a cause it would produce itself, i.e. exist before it existed, which is impossible.

But this reasoning is plainly invalid, because it assumes that something's *lacking* any cause involves it *having* a cause, namely itself. No doubt the notion of a thing's bringing itself into existence is an evident contradiction. But to say that something comes into existence without a cause is not to say that it is itself its own cause! On the contrary, in excluding all external causes the statement excludes the thing itself that comes into existence. An object that exists absolutely without any cause is certainly not its own cause; and when you assert that the one follows from the other you are taking for granted the very point that is in question . . . . Exactly the same trouble infects the third argument that has been used by Mr Locke to demonstrate the necessity of a cause:

> Whatever is produced without any cause is *produced by nothing*, i.e. has nothing for its cause. But *nothing* can never be a cause, any more than it can be something, or be equal to two right angles. By the same intuition that we perceive that nothing is not equal to two right angles, and that nothing is not something, we perceive that nothing can never be a cause; and this forces us to see that every object has a real cause of its existence.

I don't think I need employ many words in showing the weakness of this argument, after what I have said of the other two. All three are based on the same fallacy, and are derived from the same turn of thought. I need only to point out that when we exclude all causes we really do exclude them: we don't suppose that *nothing* or *the object itself* causes of the object to come into existence; so we can't argue from the absurdity of those suppositions to the absurdity excluding all causes. . . . Even more frivolously, some say that every effect must have a cause because having-a-cause it is implied in the very idea of *effect*. It is true that every effect must have a cause, because 'effect' is a relative term of which 'cause' is the correlative. But this doesn't prove that everything real must be preceded by a cause, any more than it follows from 'Every husband must have a wife' that every man must be married. The right question to be asking is: Must every item that begins to exist owe its existence to a cause? I hope that by the foregoing arguments I have shown well enough that the answer Yes is neither intuitively nor demonstratively certain.

So the opinion of the necessity of a cause for every new production isn't based on ·a priori· knowledge or scientific reasoning, and must therefore arise from observation and experience. The natural next question is: *how* does it arise from experience? But I shall postpone that for a while, because I find it more convenient to sink this question in two others:

- Why do we conclude that such-and-such particular causes must necessarily have such-and-such particular effects?
- Why do we form an inference from cause to effect?

It may turn out eventually that a single answer will serve for both questions.

4: The component parts of our reasonings about cause and effect

Although the mind in its reasonings from causes or effects carries its view beyond the objects that it sees or remembers, it must never lose sight of them entirely; it mustn't reason merely on 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 the causes; which we have only two ways of doing. We can do it either by •an immediate perception of our memory or senses, or by •an inference from other causes; but then we must ascertain the existence of *these* in the same way, either by a present impression ·or memory· or by an inference from *their* causes, and so on ·backwards· until we arrive at some object that we see or remember. We can't carry on our inferences ad infinitum; and the only thing that can stop them is an impression of the memory or senses. Beyond that there is no room for doubt or enquiry.

For an example, choose any point of history, and consider why we either believe or reject it. Thus, we believe that *Caesar was killed in the senate-house on the ides of March*, because this is established on the unanimous testimony of historians, who agree in assigning this precise time and place to that event. Here are certain words that we see or remember, words that we remember to have been used as the signs of certain ideas; and these ideas—·the ones in the minds of writers of the history books·—were those of people

who •were immediately present at assassination and received their ideas directly from it, or who •got their ideas from the testimony of others, who relied on yet earlier testimony, and so on backwards until the slope stops at those who saw the assassination. It is obvious that all this chain of argument or connection of causes and effects is initially based on words that are seen or remembered, and that without the authority of either the memory or senses our whole reasoning would be chimerical and without foundation: every link of the chain would hang on another; but there would be nothing fixed to one end of it that could support the whole chain, and so there would be no belief. And this is actually the case with all hypothetical arguments, or reasonings from a supposition, for in them there is no present impression and no belief about a matter of fact.

You may want to object: 'We can reason from our past conclusions or principles without having recourse to the impressions from which they first arose.' This is true, but not a sound objection; for even if those impressions *were* entirely wiped from the memory, the belief they produced may still remain. All reasonings about causes and effects *are* originally derived from some impression; just as one's confidence in a demonstration always comes from a comparison of ideas, though the confidence may continue after the comparison has been forgotten.

5: The impressions of the senses and memory

In this kind of reasoning from causation, then, we use materials that are of a mixed and heterogeneous nature: however inter- connected they are, they are still essentially different from each other. All our arguments about causes and effects consist of •an impression of the memory or senses, and of •the idea of the real object or event that ·we think· caused or was caused by the object of the impression. So we have here three things to explain: •the original impression, •the transition ·from that· to the idea of the connected cause or effect, and •the nature and qualities of that idea.

As for the impressions that arise from the senses: in my opinion their ultimate cause is utterly inexplicable by human reason; we will never be able to decide with certainty whether •they arise immediately from the object, or •are produced by the creative power of the mind, or •are caused by God. But this question doesn't affect our present purpose. We can draw inferences from the coherence of our perceptions, whether they are true or false, whether they represent Nature justly or are mere illusions of the senses.

When we search for the feature that distinguishes memory from imagination, we see straight off that it can't lie in the simple ideas they present to us; for both these faculties borrow their simple ideas from •impressions, and can't ever get beyond •those original perceptions. Nor are memory and imagination distinguished from one another by how their complex ideas are arranged. It is indeed a special property of the memory to preserve the original order and position of its ideas—·or, more strictly speaking, to preserve its ideas in the order of the original corresponding impressions·—whereas the imagination transposes and changes its ideas as it pleases. But this difference is not sufficient to tell us whether in any given case we have memory or imagination; for it is impossible to *bring back* the past impressions in order to compare them with our present ideas and see whether

the arrangements are exactly alike. So the memory is not known by •the nature of its simple ideas or •the order of its complex ones; so the difference between it and imagination must lie in •memory's greater force and liveliness. You can indulge your fancy by *imagining* a past scene of adventures; and you couldn't distinguish this from a *memory* of those events if it weren't that the ideas of the imagination are fainter and more obscure.

It often happens that when two men have been involved in a course of events, one remembers it much better than the other and has great trouble getting his companion to recollect it. He recites various details—the time, the place, who was there, what they said, what they did—all with no result, until finally he hits on some lucky circumstance that revives the whole affair and gives his friend a perfect memory of everything. Here the person who forgets receives all his ideas ·of the event· at first from what his friend says; he has the right ideas of the circumstances of time and place ·and so on·, though to him they are mere fictions of the imagination. But as soon as the detail is mentioned that triggers his memory, those very same ideas now appear in a new light, and in a way *feel* different from how they did before. Without altering in any way except in how they feel, they immediately become ideas ·not of imagination but· of memory, and are assented to.

Since the imagination can represent all the same objects that the memory can offer to us, and since those ·two· faculties are distinguished only by how the ideas they present *feel*, we ought to consider what the nature is of that feeling. I think everyone will readily agree with me that the ideas of the memory are *stronger and livelier* than those of the imagination.

A painter wanting to represent a passion or emotion of some kind would try to get a sight of a person in the grip of that emotion, in order to enliven his ideas of it and give them more force and liveliness than is found in ideas that are mere fictions of the imagination. The more recent this memory is, the clearer is the idea; and when after a long time he wants to think again about that passion, he always finds his idea of it to be much decayed if not wholly obliterated. We are frequently in doubt about ideas of the memory when they become very weak and feeble; and can't decide whether an image comes from the imagination or from the memory when it is not drawn in colours that are lively enough to point ·certainly· to the latter faculty. . . . .

As an idea of the memory can by losing its force and liveliness degenerate so far that it is taken to be an idea of the imagination, so on the other hand an idea of the imagination can acquire such force and liveliness that it passes for an idea of the memory and has a counterfeit effect on belief and judgment. We see this in liars who by frequently repeating their lies eventually come to believe them, 'remembering' them as realities. In this case, as in many others, •custom and habit have the same influence on the mind as •Nature does, and implant the idea with the same force and vigour.

It appears, then, that the •belief or assent that always accompanies the memory and senses is nothing but the •liveliness of the perceptions they present, and that this is all that distinguishes them from the imagination. In such cases, *believing* is *feeling an immediate impression of the senses* or a repetition of that impression in memory. It is simply *the force and liveliness of the perception* that constitutes the basic act of judgment, laying the foundation for the reasoning that we build on it when we track the relation of cause and effect.

6: The inference from the impression to the idea

It is easy to see that when we think our way along this relation, the inference we make from cause to effect is *not* based merely on probing these particular objects and learning enough about their inner natures to see why one depends on the other. If we consider these objects in themselves and never look beyond the ideas we form of them, we shall find that none of them implies the existence of anything else. Such an inference—·based purely on the ideas·—would amount to *knowledge*, and would imply the absolute contradiction and impossibility of conceiving anything different, ·that is, of conceiving the predicted effect *not* to follow·. But clearly there can't be any impossibility of that kind, because all distinct ideas are separable. Whenever we pass ·inferentially· from a present impression to the idea of some other object, we *could* have separated the idea from the impression and have substituted any other idea in place of it.

So it is purely by experience that we can infer the existence of one object from that of another. The experience goes like this. We remember having had frequent instances of the existence of one sort of object, and also remember that individuals of another sort have always gone along with them, regularly occurring just after them and very close by. Thus we remember seeing the sort of object we call 'flame' and feeling the sort of sensation that we call 'heat'. We recall also their constant conjunction in all past instances—·always flame-then-heat·. Without more ado we call the one 'cause' and the other 'effect', and infer the existence of the heat from that of the flame. In all the instances from which we •learn the conjunction of particular causes and effects, both the causes and effects have been perceived by the senses and are remembered; but whenever we •reason about them, only one is perceived or remembered, and the other is supplied on the basis of our past experience.

Thus, in moving on through our topic we have suddenly come upon a new relation between cause and effect—finding this when we least expected it and were entirely employed on another subject. This relation is the *constant conjunction* of cause with effect. *Contiguity* and *succession* are not sufficient to make us regard two objects as cause and effect unless we see that these two relations are preserved in a number of instances. Now we can see the advantage of leaving the direct survey of the cause-effect relation in order to discover the nature of the *necessary connection* that is such an essential part of it. Perhaps by this means we may at last arrive at our goal! But, to tell the truth, this newly discovered relation of *constant conjunction* doesn't seem to take us far along our way. ·Here is an expansion of that pessimistic thought·:

> The fact of constant conjunction implies only that similar objects have always been placed in similar relations of contiguity and succession; and it seems evident that *this* can't reveal any new idea; it can make our ideas more numerous, but can't make them richer. What we don't learn from one object we can't learn from a hundred that are all of the same kind and are perfectly alike in every detail. Our senses show us in one instance two bodies (or motions or qualities) in certain relations of succession and contiguity, and our memory presents us with a multitude of cases where we have found similar bodies (or motions or qualities) related in the same ways. The mere repetition of a

> past impression—even to infinity—won't give rise any new original idea such as that of a necessary connection; and the sheer *number* of impressions has in this case no more effect than if we confined ourselves to one only.

But although this reasoning seems sound and obvious, it would be folly for us to despair too soon. So I shall continue the thread of my discourse: having found that after the discovery of the constant conjunction of any objects we always draw an inference from one object to another, I shall now examine *the nature of that inference*, and of the transition from the impression to the idea. Perhaps we shall eventually find that •the necessary connection depends on the inference rather than •the inference's depending on the necessary connection! It appears that the transition from an impression that is present to the memory or senses (and said to be of a 'cause') to the idea of an object (which is said to be an 'effect') is founded on past experience, and on our memory of their constant conjunction. So the next question is: *how* does experience produce the idea ·of the effect·? Is it done by the •understanding or by the •imagination? Are we caused to make the transition by •our reason or by •some ·non-reasoned· association and relation of perceptions? ·I shall start with the former suggestion, giving it about a couple of pages·.

If reason did the work, it would have to be relying on the principle that

> Instances of which we haven't had experience must resemble those of which we have; the course of Nature continues always uniformly the same.

In order to clear this matter up, therefore, let us consider all the arguments that might be given to support such a proposition. They will have to be based either on •·absolutely certain· knowledge or on •probability; so let us look into each of these degrees of certainty, to see whether either provides us with a sound conclusion along these lines.

My previous line of reasoning will easily convince us that no demonstrative arguments could prove that 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 proves that such a change is not absolutely impossible. To form a clear idea of anything is an undeniable argument for its possibility, and can all on its own refute any claimed demonstration against it.

Probability doesn't concern the relations of ideas as such, but rather the relations among objects; so it must be based in some way on the impressions of our memory and senses, and in some way on our ideas. If our probable reasonings didn't have any •impressions mixed into them, their conclusions would be entirely chimerical: and if there were there no •ideas in mixture, the action of the mind in observing the relation—·that is, in taking in that such-and-such makes so-and-so *probable*·—would strictly speaking be sensation, not reasoning. In all probable reasonings, therefore, there is •something present to the mind that is either seen or remembered, and from this we infer •something connected with it that is not seen nor remembered.

The only connection or relation of objects that can lead us beyond the immediate impressions of our memory and senses is that of cause and effect, because it is the only one on which we can base a sound inference from one object to another. The idea of cause and effect is derived from experience, which informs us that certain specific ·kinds of· objects have always been constantly conjoined with each other; and as an object of one of these kinds is supposed to be immediately present through an impression of it, we on that basis expect there to be an object of the other kind. According to this account of things—which I think is entirely

unquestionable—•probability *is based on* •the presumption that the objects of which we have had experience resemble those of which we have had none; so •this presumption can't possibly *arise from* •probability. One principle can't be both the cause and the effect of another. This may be the only proposition about the causal relation that is either intuitively or demonstratively certain!

You may think you can elude this argument. You may want to claim that all conclusions from causes and effects are built on solid reasoning, saying this without going into the question of whether our reasoning on this subject is derived from demonstration or from probability. Well, please produce this reasoning so that we can examine it. You may say that after experience of the constant conjunction of certain ·kinds of· objects we reason as follows:

> This kind of object is always found to produce an object of that kind. It couldn't have this effect if it weren't endowed with a power of production. The power necessarily implies the effect; and therefore there is a valid basis for drawing a conclusion from the existence of one object to the existence of another. 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.

It would be easy for me to show the weakness of this reasoning •if I were willing to appeal to the observations I have already made, that the idea of *production* is the same as the idea of *causation*, and that no existence certainly and demonstratively implies a power in any other object; or •if it were proper to bring in here things I shall have occasion to say later about the idea we form of power and efficacy. But these approaches might seem •to weaken my system by resting one part of it on another, or •to create confusion in my reasoning ·by taking things out of order·; so I shall try to maintain my present thesis without either of those kinds of help.

Let it be temporarily granted, then, 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 has already been proved that the power doesn't lie in the perceptible qualities of the cause, yet all we have present to us are its perceptible qualities. So I ask: why, in other instances where those qualities have appeared, do you presume that the same power is also there? Your appeal to past experience gives you no help with this. The most *it* can prove is that *that very object* which produced a certain other object was *at that very instant* endowed with a power to do this; but it can't prove that the same power must continue in the same object (collection of perceptible qualities) ·at other times·, much less that a similar power is always conjoined with similar perceptible qualities ·in other objects·. You might say: 'We have experience that the same power continues ·through time· to be united with the same object, and that similar objects are endowed with similar powers'; but then I renew my question about why from this experience we form any conclusion that goes beyond the past instances of which we have had experience. If you answer this in the same way that you did the previous question, your answer will raise a new question of the same kind, and so on ad infinitum; which clearly proves that this line of reasoning had no solid foundation.

Thus, not only does •our reason fail to reveal to us the ultimate connection of causes and effects, but even after experience has informed us of their constant conjunction we can't through •our reason satisfy ourselves concerning why we should extend that experience beyond the particular instances that we have observed. We suppose, but can never prove, that objects of which we have had experience must

resemble the ones that lie beyond the reach of our discovery.

I have called attention to •certain relations that make us pass from one object to another even when no *reason* leads us to make that transition; and we can accept as a general rule that *wherever the mind constantly and uniformly makes a transition without any reason, it is influenced by •these relations*. That is exactly what we have in the present case. Reason can never show us a connection of one object with another, even with the help of experience and the observation of the objects' constant conjunction in all past instances. So when the mind passes from the idea or impression of one object to the idea of or belief in another, it isn't driven by reason but by certain forces that link the ideas of these objects and unite them in our imagination. If among •ideas in the •imagination there were no more unity than the •understanding can find among •objects, we could never draw any inference from causes to effects, or believe in any matter of fact. The inference, therefore, depends solely on the ·unreasoned· union of ideas.

The principles$_c$ of union among ideas come down to three general ones, I maintain; and I have said 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 are neither the infallible nor the sole causes of union among ideas. They are not infallible causes, because someone may fix his attention for a while on one object, without looking further. They are not the sole causes, because ·some of our transitions from impressions to ideas owe nothing to these three relations·: our thought has a very irregular motion in running along its objects, and can leap from the heavens to the earth, from one end of the creation to the other, without any certain method or order. But though I concede this weakness in these three relations (·'not infallible'·), and this irregularity in the imagination (·'not the sole causes'·), I still contend that the only *general* factors that associate ideas are •resemblance, •contiguity, and •causation.

Ideas are indeed subject to a uniting force that may at first sight seem different from any of these, but will be found ultimately to depend on the same origin. When every individual of some kind of objects is found by experience to be constantly united with an individual of another kind, the appearance of any new individual of either kind naturally conveys our thought to its usual attendant. Thus, because a particular idea is commonly attached to a particular word, nothing is required but the hearing of that word to produce the corresponding idea; and this transition will be one that the mind is hardly able to prevent, however hard it tries. In this case it is not absolutely necessary that on hearing the sound we should reflect on past experience and consider what idea has usually been connected with the sound. The imagination, unaided, takes the place of this reflection; it is so accustomed to pass from the word to the idea that it doesn't delay for a moment between hearing the word and conceiving the idea.

But though I acknowledge this to be a true principle$_c$ of association among ideas, I contend that it is the very same as that between the ideas of cause and effect, and is an essential part of all our causal reasonings. The only notion of cause and effect that we have is that of *certain objects that have been always conjoined together, and in all past instances have been found inseparable*. We can't penetrate into the reason for that conjunction. We only observe the fact itself: from constant conjunction, objects acquire a union in the imagination. When the impression of one becomes present to us, we immediately form an idea of whatever usually accompanies it; and consequently we can lay this down as one part of the definition of *opinion* or *belief*, that it is *an*

idea related to or associated with a present impression.

Thus, though causation is a •philosophical relation—because it involves contiguity, succession, and constant conjunction—it's only in its role as a •natural relation that it produces a union among our ideas and enables us to reason on it and draw inferences from it. [See note on page 8.]

7: The nature of the idea or belief

The •idea of an object is an essential *part* of the •belief in it—·of the belief that it exists·—but not the *whole*. We •conceive many things that we don't •believe. Let us now investigate more fully the nature of belief, or the qualities of the ideas that we assent to.

Obviously, all reasonings from causes or effects end in conclusions about matters of fact—that is, about the existence of objects or of their qualities. It is also obvious that the •idea of existence is not different from the •idea of any object, and that when after •simply conceiving something we want to •conceive it as existent, this actually doesn't add to or alter anything in the first idea. For example, when we affirm that *God is existent* we simply form the idea of such a being as he is represented to us, and the existence we attribute to him is *not* conceived by a particular idea which we join to the idea of his other qualities and could again separate and distinguish from them. But I go further than this. I say not only that •the conception of the existence of an object adds nothing to •the simple conception of it, but also that •the belief in its the existence doesn't add any new ideas either. When I

> think of God, then
> think of God as existent, then
> believe God to be existent,

my idea of him neither grows nor shrinks. Still, a simple conception of the existence of an object certainly differs greatly from a belief in it; and as this difference doesn't consist in the parts or structure of the relevant idea, it follows that it must consist in *how* we conceive it.

Suppose that someone in conversation says things to which I don't assent— that Caesar died in his bed, that silver is more fusible than lead, that mercury is heavier than gold. It is obvious that despite my incredulity I clearly understand his meaning, and form all the same ideas as he does. My imagination has the same powers as his: he can't conceive any idea that I can't conceive, or conjoin any ideas that I can't conjoin. So I ask: what makes the difference between believing a proposition and disbelieving it? The answer is easy with regard to •propositions that are proved by intuition or demonstration. In that case, the person who assents not only conceives the ideas according to the proposition but is forced—either immediately or by the interposition of other ideas—to conceive them in just that way. Whatever is absurd is unintelligible, and the imagination *cannot* conceive anything contrary to a demonstration. But in •reasonings from causation, and about matters of fact, this sort of necessity isn't present and the imagination is *free* to conceive both sides of the question; so I ask again, what makes the difference between incredulity and belief?. . . . Here is a bad answer:

> A person who doesn't assent to a proposition that you advance first conceives the object in the same way as you, and then immediately goes on to conceive it in a different way and to have different ideas of it; ·and

this different conception is his disbelief·.

This answer is unsatisfactory—not because it contains any falsehood but because it doesn't reveal the whole truth. Whenever we dissent from what someone says, we do indeed conceive both sides of the question, ·and that is the truth in the 'bad answer'·; but we can *believe* only one side, so it evidently follows that *belief* must make some difference between the conception to which we assent and the one from which we dissent. We may mingle, unite, separate, run together, and vary our ideas in a hundred different ways; but until there appears some principle$_c$ that fixes one of these different combinations ·as the one we believe·, we have in reality no opinion. And this principle$_c$, as it plainly adds nothing to our previous ideas, can only change *how* we conceive them. All the perceptions of the mind are of two kinds, impressions and ideas, which differ from each other only in their different degrees of force and liveliness. Our ideas are copied from our impressions and represent them in every detail. When you want somehow to vary your idea *of a particular object*, all you can do is to make it more or less strong and lively. If you change it in any other way it will come to represent *a different object* or impression. (Similarly with colours. A particular shade of a colour may acquire a new degree of liveliness or brightness without any other variation; but if you produce any other change it is no longer the same shade or colour.) Therefore, as belief merely affects *how* we conceive any object, all it can do—·the only kind of variation that won't change the subject, so to speak·—is to make our ideas stronger and livelier. So an opinion or belief can most accurately defined as: *a lively idea related to or associated with a present impression.*[5]

Here are the main points of the arguments that lead us to this conclusion. When we infer the existence of one object from the existence of others, some object must always be present either to the memory or senses to serve as the foundation of our reasoning (the alternative being a regress ad

[5] I take this opportunity to comment on a very remarkable error which, because it is frequently taught in the schools [= 'Aristotelian philosophy departments'], has become a kind of established maxim and is accepted by all logicians. This error consists in the division of the acts of the understanding into

conception, judgment, and reasoning,

and in the definitions given of them. •Conception is defined as the simple survey of one or more ideas, •judgment as the separating or uniting of different ideas, and •reasoning as the separating or uniting of different ideas by the interposition of others which show how they are related to one another. But these distinctions and definitions are seriously faulty. (1) It is far from being true that in every judgment that we form we unite two different ideas. In the proposition *God is*—or indeed any other proposition about existence—the idea of *existence* is not a distinct idea that we unite with that of the thing that is said to exist, forming a compound idea by the union. (2) Just as we can thus form a proposition containing only one idea—·as the idea of God is the only idea in the proposition *God exists*·—so we can exercise our reason employing only two ideas, not bringing in a third to serve as an intermediary between them. We infer a cause *immediately* from its effect; and this inference is not only a true example of reasoning, but is the strongest of all, and is more convincing than when we interpose another idea to connect the two extremes. What we can in general affirm regarding these three acts of the understanding is that properly understood they all come down to the first of the three, 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 doesn't go beyond a simple conception, and the only remarkable difference that sometimes occurs is when we join *belief* to the conception and are convinced of the truth of what we conceive. Belief is an act of the mind that has never yet been explained by any philosopher; so I am at liberty to propose my hypothesis about it, which is that belief is only a strong and steady conception of an idea—one that approaches in some degree to an immediate impression.

infinitum). Reason can never satisfy us that the existence of any one object ever implies the existence of another; so when we pass from an impression of one to an idea of or belief in another, we are driven not by reason but by custom, or an associative force. But belief is something more than a simple idea. It is a particular manner of forming an idea; and as an idea can be varied—·without being turned into *another* idea·—only by a variation of its degree of force and liveliness, it follows from all this that belief is *a lively idea produced by a relation to a present impression*, which is the definition I gave.

This operation of the mind that forms the belief in any matter of fact seems to have been until now one of the greatest mysteries of philosophy, though no-one has so much as suspected that there was any difficulty in explaining it. For my part, I have to admit that I find a considerable difficulty in this, and that even when I think I understand the subject perfectly I am at a loss for words in which to express my meaning. A line of thought that seems to me to be very cogent leads me to conclude that an •opinion or belief is nothing but an idea that differs from a •fiction not in the nature or the order of its parts but in how it is conceived. But when I want to explain this 'how', I can hardly find any word that fully serves the purpose, and am obliged to appeal to your *feeling* in order to give you a perfect notion of this operation of the mind. An •idea assented to *feels* different from a •fictitious idea that the imagination alone presents to us; and I try to explain this difference of feeling by calling it 'a superior force', or 'liveliness', or 'solidity', or 'firmness', or 'steadiness'. This variety of terms, which may seem so unphilosophical, is intended only to express the act of the mind that makes realities more *present* to us than fictions, causes them to *weigh more* in thought, and gives them a *superior influence* on the passions and the imagination. Provided we agree about the thing, we needn't argue about the labels. . . . I admit that it is impossible to explain perfectly this feeling or manner of conception ·that marks off belief·. We can use words that express something near it. But its true and proper name is 'belief', which is a term that everyone sufficiently understands •in common life. And •in philosophy we can go no further than to say that it is something felt by the mind which distinguishes the ideas of *the judgment* from the fictions of *the imagination*. It gives them more force and influence, makes them appear of greater importance, anchors them in the mind, and makes them the governing forces of all our actions.

This definition will also be found to fit perfectly with everyone's feeling and experience. Nothing is more obvious than that the ideas to which we assent are more strong, firm, and vivid, than the loose dreams of a castle- builder. If one person sits down to read a book as a romance, and another ·reads the same book· as a true history, they plainly receive the same ideas in the same order; and they attach the very same sense to what their author writes, despite the incredulity of one and the belief of the other. His words produce the same ideas in both, but his testimony doesn't have the same influence on them. The believing reader has a livelier conception of all the incidents. He enters deeper into the concerns of the persons; he represents to himself their actions and characters, their friendships and enmities; he even goes so far as to form a notion of their features and manners. While the disbelieving reader, who gives no credit to the testimony of the author, has a more faint and languid conception of all these particulars, and can't be much entertained by it unless he is held by the style and ingenuity of the composition.

8: The causes of belief

Having thus explained the nature of belief, and shown that it consists in a lively idea related to a present impression, I now enquire into what forces produce belief—·that is·, what gives the idea its liveliness.

I would like to have it established as a general maxim in the science of human nature that when an impression becomes present to us it not only •carries the mind to such ideas as are related to it but also •passes on to those ideas a share of its force and liveliness. All the operations of the mind depend to a large extent on its state at the time when it performs them; and the action will always have more or less vigour and liveliness according to whether the energy-level is high or low and the attention more or less fixed. So when an object is presented which •elevates and enlivens the thought, *every* action the mind performs will be stronger and more vivid as long as •that state continues. Now, it is obvious that how long the state continues depends entirely on what the mind is thinking about, and that •any *new* object ·of thought· naturally draws the energies in a new direction and changes the mind's state; while on the other hand when the mind fixes constantly on •the same object, or passes easily along related objects without being aware that they are different, the state lasts much longer. So it comes about that when the mind is enlivened by a present impression it proceeds to form a livelier idea of the related objects, by a natural transition of the state—·the level of liveliness·—from one to the other. The change of the objects is so easy that the mind is hardly aware of it, and applies itself to the conception of the related idea with all the force and liveliness it acquired from the present impression.

It would be nice if we could satisfy ourselves that I am right about this just by considering what it is for things to be ·naturally· related, and the ease of transition that is essential to this. But I have to say that ·we can't, and that· my confidence in my account comes mainly from experience. As the first experience that is relevant to our topic, I note that when we see a picture of an absent friend our idea of him is plainly enlivened by the resemblance ·of the picture to the friend·, and that every passion that the idea of our friend gives us—whether of joy or of sorrow—acquires new force and vigour ·because we see the picture·. This effect comes from the joint operation of •a relation and •a present impression. ·The relation·: if the picture isn't at all like the friend, or at least wasn't intended to be a picture of him, it doesn't so much as carry our thought to him. And ·the present impression·: if the picture is absent as well as the friend, the mind may pass from the thought of the picture to that of the friend, but in this case it feels its idea ·of the friend· to be weakened rather than enlivened by that transition. We enjoy *seeing* a picture of our friend when it is set before us; but when the picture is removed, we prefer thinking about him *directly* to thinking about him as reflected in a picture which is as distant and dark to us as he is.

The ceremonies of the Roman Catholic religion may be considered as events of this sort. The devotees of that strange superstition usually plead, in excuse of the weird rituals they are scolded for, that they feel the good effect of those external movements, postures and actions in enlivening their devotion and their fervour, which would decay if they were directed entirely to distant and immaterial objects. They say:

> We represent the objects of our faith in perceptible symbols and images, and make them more *present* to

> us by the immediate presence of these symbols than we could make them merely by an intellectual view and contemplation. Perceptible objects always have a greater influence on the imagination than anything else, and they readily pass this influence along to the ideas to which the objects are related and which they resemble.

I shall only infer from these practices and this defence of them that the effect of resemblance in enlivening the idea is very common; and as in every case a resemblance and a present impression must work together, we are abundantly supplied with phenomena to prove the reality of the ·idea-enlivening· force of which I have spoken.

We may reinforce these phenomena by ·bringing in· others of a different kind, noting the effects of *contiguity* as well as of *resemblance*. Distance certainly lessens the intensity of every idea; and when we are getting near to an object, even though it isn't yet present to our senses, it operates on our mind with an influence that imitates ·that of· an immediate impression. *Thinking* about an object readily carries the mind to things that are contiguous to it; but only the object's actual *presence* carries the mind ·to an idea of contiguous objects· with a superior liveliness. ·Here is an example of what happens where there isn't a relevant present impression·. When I am a few miles from home, whatever relates to it touches me more nearly than when I am six hundred miles away, though even at that distance reflecting on anything in the neighbourhood of my friends and family naturally produces an idea of them. But as in this latter case both the relevant objects of the mind are *ideas*, the easy transition between them can't heighten the liveliness of either, because there is no immediate *impression* at work.

No-one can doubt that •causation has the same influence as do •resemblance and •contiguity. Superstitious people are fond of the relics of saints and holy men, for the same reason that they want symbols and images, in order to enliven their devotion and give them a stronger and more intimate conception of the exemplary lives they want to imitate. It is clear that one of the best relics a devotee could get would be something made by the saint ·and thus causally related to him·; and if his clothes and furniture are ever considered as especially desirable in the same way, that is because they were once at his disposal and were moved and affected by him, which makes them partial effects of the saint, and connected with him by a shorter chain of consequences than any of the ones from which we learn that he really existed. This phenomenon clearly proves that a present impression with a relation of causation can enliven any idea, and consequently produce belief or assent; which fits my definition of 'belief'.

But we needn't search out *other* arguments to prove that a present impression with a relation or transition of the imagination can enliven an idea, because this very example—our reasonings from cause and effect— suffice for that purpose all on its own! Here are three certainties:

- •We must have an idea of every matter of fact that we believe.
- •This idea arises only from a relation to a present impression.
- •The belief adds nothing to the idea, but only changes how we conceive it, making it stronger and livelier.

The present conclusion about the influence of ·a natural· relation follows immediately from these steps, and every step appears to me sure and infallible. All that this operation of the mind contains is: •a present impression, •a lively idea, and •a relation or association in the imagination between the two.

. . . . It is the present impression that is to be considered as the true cause of the idea, and of the belief that comes

with it. So we should consult our experience in order to learn what special qualities the impression has that enable it to produce such an extraordinary effect.

•First kind of experience: the present impression doesn't have this effect through its own power and efficacy, considered alone as a single perception and limited to the present moment. I find that an impression from which I can draw no conclusion when it first appears can later become a basis for a belief, after I have had experience of its usual consequences. ·For such a transition to occur·, we must in every case have observed the same ·sort of· impression in past instances, and have found that there is some other ·sort of· impression with which it is constantly conjoined. This is confirmed by such a multitude of events that there can't be the slightest doubt about it.

From a •second kind of experience I conclude that the belief that comes with the present impression, and is produced by a number of past impressions and pairs of events, arises *immediately*, without any new operation of the reason or imagination. I can be sure of this, because I never am conscious of any such operation in myself and don't find anything in the situation to operate *on*. When something comes from a past repetition without any new reasoning or conclusion, our word for it is 'custom'; so we can take it as certainly established every belief that follows on a present impression is derived solely from custom. When we are *accustomed* to see two impressions conjoined, the appearance or idea of one immediately carries us to the idea of the other.

Being fully satisfied about this, I make a •third appeal to experience in order to learn whether the production of this phenomenon of *belief* needs anything more, in addition to the customary transition. So I change the first impression into an idea; and then I note that though the customary transition to the correlative idea still remains, there isn't any real belief or conviction. So a present impression is absolutely required for this whole operation; and when I go on to compare an impression with an idea, and find that they differ *only* in their degrees of force and liveliness, I reach the bottom-line conclusion that belief is a more vivid and intense conception of an idea, coming from its relation to a present impression.

Thus, all probable reasoning is nothing but a kind of sensation. We must follow our taste and sentiment not only in poetry and music but also in philosophy. When I am convinced of some principle, it is only an idea that strikes me more strongly. When I prefer one set of arguments to another set, all I do is to decide on the basis of how they *feel* which is the more powerful [Hume's exact words: 'I do nothing but decide from my feeling concerning the superiority of their influence']. Objects have no discoverable connection with one another, and the only factor that lets us draw any inference from the appearance of one object to the existence of another is *custom* operating on the imagination.

It is worth noting that the past experience on which all our judgments about cause and effect depend can operate on our mind so imperceptibly that we don't notice it, and it may even be that we don't fully know it. A person who stops short in his journey when he comes to a river in his way foresees the consequences of going forward; and his knowledge of these consequences comes from past experience which informs him of certain linkages of causes and effects. But does he *reflect on* any past experience, and *call to mind* instances that he has seen or heard of, in order to discover how water effects animal bodies? Surely not! *That* isn't how he proceeds in his reasoning. ·In his mind· the idea of •water is so closely connected with that of •sinking, and the idea of •sinking is so closely linked with that of •drowning, that his mind moves from one idea to the next to the next without

help from his memory. . . . But as this transition comes from experience and not from any primary connection between the ideas, we have to acknowledge that experience can produce a belief—a judgment regarding causes and effects—by a secret operation in which it is not once thought of. This removes any pretext that may remain for asserting that the mind is convinced *by reasoning* of the principle that instances of which we haven't had experience *must* resemble those of which we have. For we here find that the understanding or imagination can draw inferences from past experience without so much as reflecting on it—let alone forming a principle about it and reasoning on the basis of the principle!

In general we may observe that in all the most established and uniform conjunctions of causes and effects—gravity, impact, solidity, etc.—the mind never consciously reflects on any past experience; though in cause- effect linkages that are more rare and unusual the mind may engage in such reflections as an aid to the custom and transition of ideas. Indeed, in some cases •the reflection produces the belief without the custom; or— more accurately—•the reflection produces ·the belief by producing· the custom in an oblique and artificial manner. Let me explain. It is certain that not only in philosophy and science, but even in common life, we can come to know of a particular cause by *a single experiment*, provided it is judiciously made with a careful removal of all extraneous and irrelevant circumstances. . . . A habit can't be acquired from a single instance, so it may be thought that belief in this case can't be the effect of custom. But this difficulty will vanish if we consider that, though we are here supposed to have had only *one* experience of a particular effect, we have *millions* to convince us of this principle:

> •Like objects placed in like circumstances will always produce like effects.

And as this principle has established itself by a sufficient custom, it makes convincing and firm any opinion to which it can be applied. The connection of the ideas is not habitual after one experiment; but this connection is covered by another principle that *is* habitual; which brings us back to my hypothesis. In *all* cases we transfer our experience to instances of which we have no experience, doing this consciously or implicitly, directly or indirectly.

I mustn't leave this subject without remarking that it is very difficult to talk perfectly properly and accurately about the operations of the mind, because common language has seldom made any very fine distinctions amongst them, generally calling by the same word all that *closely resemble* each other. And as this is almost inevitably a source of obscurity and confusion in an author, so it may cause you to have doubts and objections that you otherwise would never have dreamed of. Thus, my general position that

> •an opinion or belief is nothing but a strong and lively idea derived from a present impression related to it

may be liable to the following objection, because of a little ambiguity in the words 'strong' and 'lively':

> It is not only an •impression that can give rise to reasoning—an •idea can have the same influence, especially given your principle that all our ideas are derived from corresponding impressions. If I now form an idea whose corresponding impression I have forgotten, I can still conclude from ·the existence of· this idea that *such an impression did once exist*; and this conclusion comes as a belief; so •what is the source of the qualities of force and liveliness that constitute this belief?

I am ready with an answer: •it comes from the present idea. This idea is not here considered as •the representation of an absent object but as •a real perception in the mind, of

which we are intimately conscious; so it must be able to bestow on whatever is related to it the same quality (call it 'firmness', or 'solidity', or 'force', or 'liveliness' [Hume throughout uses 'vivacity']) with which the mind reflects on it and is assured of its present existence. The idea here takes the place of an impression, and so far as our present purpose goes it is entirely the same.

For the same reason, we needn't be surprised to hear of the *memory* of an idea—that is, the *idea of* an idea—and of *its* having more force and liveliness than the loose conceptions of the imagination. In thinking of our past thoughts we don't just sketch out the objects of which we were thinking; we also conceive the action of our mind in doing this— that certain *je-ne-sais-quoi* of which it is impossible to give any definition or description but which everyone understands well enough. When the memory offers an idea of this, and represents it as past, it is easy to see how that idea could have more vigour and firmness than ·the idea that occurs· when we *think* of a past thought without having any *memory* of it. . . .

9: The effects of other relations and other habits

However convincing those arguments may appear, I mustn't rest content with them, but must turn the subject on every side in order to find new points of view from which I can illustrate and confirm these extraordinary and fundamental principles. Philosophers are *right* when they conscientiously hesitate to accept a new hypothesis; their attitude is necessary for progress towards the truth, and should be respected. So I must produce every argument that may tend to their satisfaction, and remove every objection that may stop them in their reasoning.

I have often remarked that in addition to •cause and effect the two relations of •resemblance and •contiguity are associating forces of thought, capable of conveying the imagination from one idea to another. I have also noted that when two objects are linked by either of these relations, and one of the objects is immediately present to the memory or senses, the mind is not only •carried to the linked object by means of the associating force, but •conceives that object with an additional force and vigour through the combined operation of the associating force and the present impression. In pointing all this out I was confirming *by analogy* my account of our judgments about cause and effect. But this very argument might be turned against me, becoming an objection to my hypothesis rather than a confirmation of it. The objection goes like this:

> If all the parts of your hypothesis are true, namely:
> •these three kinds of relation are derived from the same principles$_c$,
> •their effects in giving force and liveliness to our ideas are the same, and
> •belief is nothing but a more forceful and vivacious conception of an idea,
> it should follow that *belief* can come not only from the relation of •cause and effect, but also from those of •contiguity and •resemblance. But we find by experience that belief arises only from causation, and that we can draw no inference from one object to another unless they are connected by *this* relation. So we can conclude that there is some error in the reasoning that has led us into such difficulties.

That is the objection; now let us consider its solution. It is obvious that whatever is present to the memory, striking on the mind with a liveliness that resembles ·that of· an immediate impression, must have a considerable effect on all the operations of the mind, easily distinguishing itself from mere fictions of the imagination. Of these impressions or ideas of the memory we form a kind of *system*, incorporating into it whatever we remember having been present to our internal perception or ·our external· senses; and whenever some particular item in that system is joined to a present impressions, we choose to call it 'a reality'. But the mind doesn't stop at that. Finding that •this system of perceptions is connected by custom—or, if you like, by the relation of cause and effect—with •another system, it proceeds to consider the ideas of items in the latter system. It feels itself to be somehow forced to view these particular ideas, and finds that the custom or relation which does the forcing can't be changed in the slightest; so it forms them—·this second set of ideas·—into a new system, which it likewise dignifies with the title of 'realities'. •The former of these two systems is the object of the memory and senses, the •latter of the judgment.

The judgment is what populates and furnishes the world, acquainting us with things that are too remote in time or space for our senses or memory to reach them. [Hume goes on to describe his beliefs about the history of Rome. Then:] These and all my other beliefs are nothing but *ideas*, though by their force and settled order, arising from custom and the relation of cause and effect, they distinguish themselves from ideas that 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 is included in this system of realities, there is no doubt that these two relations *will* assist that of cause and effect, and fix the related idea with more force into the imagination. . . .

But though I can't entirely exclude the relations of resemblance and contiguity from operating on the imagination in this way, it is observable that when they occur on their own their influence is very feeble and uncertain. The cause-effect relation is needed to persuade us of any real existence, and its persuasion is also needed to give power to these other relations. ·Here is why·. Take a case where the appearance of an impression leads us not only •to feign another object but quite arbitrarily •to give the latter a particular relation to the impression: this can't have any great effect on the mind, and there is no reason why if the same impression returns we should be led to place the same object in the same relation to it. [The word 'feign' comes from a Latin word that is also the source for 'fiction'. Hume is talking about fictions, inventions, stories we tell ourselves.] It is in no way necessary for the mind to feign any resembling or contiguous objects; and if it *does* feign them it needn't always do it in the same way. Indeed, such a fiction is based on so little reason that nothing but pure whim can lead the mind to form it; and *whim* being fluctuating and uncertain, it can't possibly operate with any considerable degree of force and constancy. . . . The relation of cause and effect has all the opposite advantages. The objects it presents are fixed and unalterable. The impressions of 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 made to pass from the impression to the idea—and from that particular impression to that particular idea—without any choice or hesitation.

Not content with removing this objection, however, I shall try to extract from it an argument *for* my doctrine. Contiguity and resemblance have much less effect than does causation; but they still have some effect, and strengthen the confi-

dence of any opinion and the liveliness of any conception. If I can show this with various new examples in addition to the ones I have already noted, you will grant that that will be a considerable further argument that belief is nothing but a lively idea related to a present impression.

To begin with contiguity: it has been remarked that Moslem pilgrims who have seen Mecca, and Christians who have seen the Holy Land, are from then on more faithful and zealous believers than those who haven't had that advantage. A man whose memory presents him with a lively image of the Red Sea, the desert, Jerusalem, and Galilee can never doubt any miraculous events that are related by Moses or by the evangelists. His lively idea of those places passes by an easy transition to the events that are supposed to have been related to them by contiguity, and increases his belief by increasing the liveliness of his conception. A memory of these fields and rivers has the same influence on ordinary people as a new argument would— and from the same causes! Something similar holds for resemblance. I have remarked that •the conclusion we draw from a present object to its absent cause or effect is never based on any qualities that we observe in that object considered in itself; or, in other words, that it is only through experience that one can determine what a given event resulted from or what will result from it. But though this is so obvious that it didn't seem to need supporting argument, some philosophers have imagined that there *is* a visible cause for the communication of motion, and that a reasonable man could *immediately* infer the motion of one body from the impact of another, without appealing to any past observation. It is easy to prove that this is false, thus:

> If such an inference can be drawn merely from the ideas of body, motion, and impact, it must amount to a *demonstration*, and must imply the absolute impossibility of any contrary supposition. From this it would follow that 'A case of impact caused something other than the communication of motion' implies a formal contradiction: not merely that it can't possibly be true but that it can't even be *conceived*. But we can quickly satisfy ourselves that this is wrong by forming a clear and consistent idea of one body's colliding with another, and
>
> > immediately coming to rest, or
> > going back in the same line in which it came, or
> > going out of existence, or
> > moving in a circle or an ellipse,
>
> or—cutting it short—going through any one of countless other changes.

These suppositions are all consistent and natural; and the reason why some philosophers imagine the communication of motion to be *more* consistent and natural, not only than those suppositions but also than any other natural effect, is based on the *resemblance* between the cause and the effect—·motion into the collision, motion out from it·. In this case the •resemblance combines with •experience ·of motion in, motion out·—and binds the objects in the closest and most intimate manner to each other, so as to make those philosophers imagine them to be absolutely inseparable. Resemblance, then, has the same influence as experience, or anyway a parallel one; 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—which is what my hypothesis says.

Writers on optics all agree that the eye at all times sees the same number of physical points, and that a man on a mountain-top has no larger an image presented to his senses than when he is cooped up in the smallest room. It is only through experience that he infers from some special quali-

ties of the image the largeness of the object ·he is seeing·; and here as in other contexts he confuses this inference of his •judgment with a •sensation. [Hume develops this point in some detail, giving a special role to the relation of resemblance; omitted here.] No weakness of human nature is more universal and conspicuous than what we commonly call 'credulity', or too easily believing what others say; and this weakness is also very naturally accounted for by the influence of resemblance. When we accept any matter of fact on the strength of human testimony, our belief comes from the very same source as our inferences from causes to effects, and from effects to causes. Our experience of the dominant drives in human nature is the only possible basis for any confidence we may have in the veracity of men. But though experience is the true standard for this as of all other judgments, we seldom regulate ourselves entirely by it, and have a remarkable propensity to believe whatever we are told—even about apparitions, enchantments, and wonders, however contrary to daily experience and observation. The words or discourses of other people have an intimate •connection with certain ideas in their minds, and these ideas have a •connection with the facts or objects that they represent. This latter •connection is generally much overrated, and commands our assent beyond what experience will justify; and the explanation for this must lie in the resemblance between the ideas ·of the speakers· and the ·supposed· facts. Other effects indicate their causes only in an *oblique* manner; but the testimony of men does it *directly*, and is to be considered as a likeness as well as an effect. So it is not surprising that we are so rash in drawing inferences from it, and are less guided by experience in our judgments about it than we are in our judgments about any other subject.

Just as resemblance when combined with causation strengthens our reasonings, so a considerable lack of resemblance can almost entirely destroy them. A remarkable example of this is the universal carelessness and stupidity of men with regard to a future state, a topic in which they show as obstinate an *in*credulity as they do a blind credulity about other things. There is indeed no richer source of material for a studious man's wonder, and a pious man's regret, than the negligence of the bulk of mankind concerning their after-life; and it is with reason that many eminent theologians have been so bold as to say that though common people don't explicitly assent to any form of unbelief they are really unbelievers in their hearts and have nothing like what we could call a *belief* that their souls are eternal. Let us consider on the one hand •what divines have presented with such eloquence about the importance of eternity, ·which is to be spent either in heaven or in hell·; and in estimating this let us reflect that though in matters of rhetoric we can expect some exaggeration, in *this* case we must allow that the strongest figures of speech fall infinitely short of the subject. Then let us view on the other hand •how prodigiously *safe* men feel about this! Do these people really *believe* what they are taught, and what they claim to affirm? Obviously not. ·And I shall now explain why·.

Given that belief is an act of the mind arising from custom, it isn't surprising that a lack of resemblance should overthrow what custom has established, and lessen the force of the idea as much as custom increases it. A future state is so far removed from our comprehension, and we have so obscure an idea of *how* we shall exist after our bodies have disintegrated, that all the reasons we can devise—however strong in themselves and however much assisted by education—can never, in people with slow imaginations, surmount this difficulty and bestow a sufficient authority and force on the idea. I ascribe this incredulity to the faintness

of our idea of our future condition, derived from its •lack of resemblance to the present life, rather than to faintness derived from the after-life's •remoteness in time. For I observe that men are everywhere concerned about what may happen *in this world* after their death, and that nearly everyone has some care for his ·post mortem· reputation, his family, his friends, and his country.

[Then a paragraph continuing this theme, adducing other evidence that hardly anyone really *believes* that he is at risk of eternal damnation. Then:] I would further remark that in matters of religion men take a pleasure in being terrified, and that no preachers are as popular as those who arouse the most dismal and gloomy emotions. In the common affairs of life, where we feel and are penetrated with the reality of the subject, nothing can be nastier than fear and terror; it is only in •dramatic performances and •religious discourses that they ever give pleasure. In these latter cases the imagination lazily admits the idea; and the emotion, being softened by the lack of belief in what is said, has merely the agreeable effect of enlivening the mind and fixing the attention.

My hypothesis will be further confirmed if we examine the effects of other kinds of custom as well as of other relations. Custom, to which I attribute all belief and reasoning, can operate on the mind in invigorating an idea in two different ways. ·One is the way I have been describing·. •If in all past experience we have found two ·kinds of· objects to be always conjoined together, the appearance of one of these objects in an impression leads us, through custom, to move easily to the idea of the ·kind of· object that usually accompanies it; and the present impression and the easy transition make us conceive that idea in a stronger and livelier manner than we do any loose floating image of the imagination. But let us next •suppose that a mere idea alone, without any of this curious and almost artificial preparation ·of experienced linkage with something else·, should frequently appear to the mind, this idea must gradually become easier to have and more forceful when it does occur; and this facility and force—this easy introduction and firm hold on the mind—distinguish this recurring idea from any new and unusual idea. This is the only respect in which these two kinds of custom agree; and if it turns out that their effects on judgment are similar, we can certainly conclude that my account of judgment ·or belief· is satisfactory. Well, *is* their influence on judgment similar? Who can doubt it when we consider the nature and effects of education?

All the opinions and notions of things to which we have been accustomed from our infancy take such deep root that it is impossible for us, by all the powers of reason and experience, to eradicate them; and this *habit* has an influence that is as strong as the influence arising from the constant and inseparable union of causes and effects. Indeed, it is sometimes *stronger*, and *overcomes* the latter influence. Don't say that the vividness of the idea *produces* the belief; the vivid idea *is* the belief. The frequent repetition of an idea fixes it in the imagination, but such a repetition couldn't possibly produce belief all by itself if we were so built that belief could come only through reasoning and comparison of ideas. . . .

(Here are three parallel instances. •Someone who has lost a leg or an arm by amputation tries for a long time afterwards to use the lost limb. •After someone's death it is common for members of his household, especially the servants, to say that they can hardly believe he is dead, but still imagine him to be in his study or wherever else in the house they were accustomed to find him. •In conversation about some celebrated person, I have often heard something like this: 'I never saw him, but I almost fancy that I have, because I have so often heard talk of him.')

If we look at this argument from education in the right

way, it will appear very convincing; and all the more so from being based on one of the most common phenomena that is to be met with anywhere. ·We are all familiar with *education*; and I am contending that the core of education is the production of beliefs through sheer repetition of certain ideas—that is, through creating customs of the second of the two kinds I have mentioned·. I am convinced that more than half of the opinions that prevail among mankind are products of education, and that the principles that are implicitly embraced from this cause over-balance the ones that come either from abstract reasoning or from experience. [Hume's word 'over-balance' might mean 'outnumber' or 'overpower' or both.] As liars through the frequent repetition of their lies come at last to *remember* them, so our judgment, or rather our imagination, can through similar repetition have ideas so strongly and brightly imprinted on it that they operate on the mind in the same way as do the perceptions that reach us through the senses, memory, or reason.[6] But as education is an artificial and not a natural cause, and as its maxims are frequently contrary to reason and even to one another in different times and places, philosophers don't take account of it ·in their theorizing about belief·, though in reality it is built on almost the same foundation of custom and repetition as are our ·natural· reasonings from causes and effects.

10: Influence of belief

[This section discusses, with examples, ways in which imagination and belief interact with one another, always with an eye to confirming Hume's own theory about what belief is.]

11: The probability of chances

In order to give this system its full force and convincingness, we should turn briefly from *it* to *its consequences*, using the same principles to explain some other kinds of reasoning that are derived from the same origin.

Philosophers who have divided human reason into •knowledge and •probability, and have defined knowledge to be the evidentness that arises from the comparison of ideas, have to bring all our arguments from causes or effects under the general label 'probability'. I have followed suit earlier in this book (everyone is entitled to use words as he sees fit);

[6] I should remark that as our assent to all probable reasonings is based on the liveliness of ideas, it resembles many of the whimsies and prejudices that are rejected as 'mere offspring of the imagination'. From this way of talking we learn that 'imagination' is commonly used in two different senses; and in the following reasonings I have used it in both of them (I know that nothing is more contrary to true philosophy than this sort of inaccuracy). When I contrast •imagination with •memory, I mean (·broad sense·) the faculty by which we form our fainter ideas. When I contrast it with •reason, I mean (·narrower sense·) the same faculty but excluding our demonstrative and probable reasonings. When I am not contrasting it with either memory or reason, it doesn't matter whether you take it in the broader or narrower sense, or at least the context will sufficiently explain the meaning.

but really it is certain that in everyday talk we regard many arguments from causation as having conclusions that are certain enough to count as more than merely 'probable'. It would seem ridiculous to say that it is only probable that •the sun will rise tomorrow, or that •all men must die; yet clearly we have no further assurance of these propositions than what experience gives us. For this reason it might be better, in order to preserve the common meanings of words while also marking the different levels of evidentness, to distinguish human reason into *three* kinds: knowledge, proofs, and probabilities. By •'knowledge' I mean the assurance arising from the comparison of ideas. By •'proofs' I mean arguments that are derived from the relation of cause and effect, and are entirely free from doubt and uncertainty. By •'probability' I mean the evidentness that is still accompanied by uncertainty. It is this third sort of reasoning that I proceed to examine ·in the present section·.

Probability—or reasoning from conjecture—can be divided into two kinds, one based on •chance, the other on •causes. I shall consider these in order.

The idea of cause and effect is derived from experience, which presents us with certain ·kinds of· objects constantly conjoined with each other, and from this produces a habit of surveying them in that relation—a habit so strong that we must do violence to our thoughts to ·break it and· consider objects of those kinds in any other way. In contrast with this, *chance* is nothing real in itself; strictly speaking, it is merely the *negation* of a cause. So its influence on the mind is contrary to that of causation: and it is essential to chance that it leaves the imagination perfectly free to consider either the existence or the non-existence of the object that is regarded as contingent ·or dependent on chance·. A cause shows our thought the path to follow; in a way, it *forces* us to regard certain objects in certain relations. All that *chance* does is to destroy this compulsion of thought, leaving the mind in its original state of indifference, ·that is, evenly balanced between assent and dissent to the proposition· . . . .

Since it is of the essence of chance to produce complete indifference, the only way one chance can be greater than another is by being composed of a •greater number of •equal chances. If we said on any *other* basis that one chance could be greater than another, we would be saying that something about it made it superior to the other, pushing the outcome to its side more than to the other's. That is, we would be allowing *a cause* into the story, thus negating what we had started out with, namely the supposition that we were dealing with *chance*. A perfect and total indifference is essential to chance, and one total indifference can never in itself be either greater or lesser that another. This truth is not special to my system. It is accepted by everyone who does calculations about chances.

This *combination* of chances that is needed to make one risk greater than another brings up a remarkable fact about •chance and •causation. The two are directly contrary, yet we can't conceive the combination I have mentioned without supposing that •causes are mixed in among the •chances—supposing •necessity in some details and total •indifference in others. When nothing constrains the chances, every notion that the most extravagant fancy can form is on an equal footing with every other, and there can't be any circumstance that could give one an advantage over the others. If we don't allow that there are some causes to make the dice fall, to keep their shape when doing so, and to come to rest on one of their sides, we can't make any calculation about the laws of chance. But if we suppose that *those* causes operate, and suppose that all the rest is indifferent and determined by chance, we can easily arrive at a notion of a superior combination of chances. A die that has four sides marked with a

certain number of spots, and only two with another number, affords us an obvious and easy instance of this superiority. The mind is here limited by the causes to a precise number and quality of upshots—·specifically to *six* possible upshots, each consisting in the die's coming to rest on one side·—and at the same time it is undetermined in its choice of any of the six.

In our reasoning so far we have advanced three steps; that •chance is merely the negation of a cause, and produces total indifference in the mind; that •one negation of a cause and one total indifference can never be greater or lesser than another; and that •there must always be a mixture of causes among the chances if any reasoning about chances is to have a basis. Now we must move on, and consider what effect a greater combination of chances has on our mind—how does it influence our judgment and opinion? Here I can repeat all same arguments that I employed in examining the belief that arises from causes; and can prove in the same way that neither •demonstration nor •probability has any role in getting a greater number of chances to produce our assent . ·I shall take these one at a time·.

·Regarding •demonstration·: It is indeed obvious that mere comparison of ideas can never reveal to us anything relevant to our present question: it is impossible to *prove with certainty* that any outcome *must* fall on the side that has the greater number of chances. To suppose there is any certainty about this would be to overthrow what I have established about the perfect equality of opposing ·single· chances and the indifference of the mind with respect to them.

·Regarding •probability·: It might be said that though in an opposition of chances it is impossible to determine *with certainty* on which side the outcome will fall, we nevertheless can say for sure that it is *more likely and probable* that it will fall on the side that has the greater number of chances than that it will fall where there is a smaller number. If this is said, I reply:

> What do you mean by 'likelihood and probability'? The likelihood and probability of chances is a greater number of equal chances; so when you say that it is 'likely' that the outcome will fall on the side which has the greater number, rather than on one having a lesser number of chances, all you are saying is that where there is a greater number of chances there is actually a greater, and where there is an lesser there is a lesser. These are identical propositions [= 'tautologies'], and of no significance.

So the question remains: *how* does a greater number of equal chances operate on the mind to produce belief or assent? Apparently it's not by arguments derived from demonstration, or by ones from probability.

In order to clear up this difficulty, consider the following case:

> Someone takes a die that has a circle on four of its sides and a square on the other two; he puts this die into a box, intending to throw it.

Obviously, he must consider a circle to be more probable than a square; *that a circle will fall uppermost* is the prediction that he must prefer. In a way he *believes* that a circle will come uppermost, but with hesitation and doubt in proportion to the number of chances of a square; and if the number of 'square' chances were lessened, thus increasing the gap between it and the number of 'circle' chances, his belief would become less hesitant and more confident. This belief arises from his mind's operations on the simple and limited object before us, so we ought to be able to discover and explain it. We have nothing but one single die to think

about, in order to grasp one of the most curious operations of the understanding. [By 'curious' Hume probably means something like 'intricate and challenging'.] We should attend to three facts about the die that I have described. •First, certain causes—gravity, solidity, cubic shape, etc.—will cause it to fall, remain unaltered during the fall, and come down with one side uppermost. •Secondly, it has a particular number of sides, which are supposed indifferent—·that is, which are supposed to be such that there is no reason to expect any one rather than other to fall uppermost·. •Thirdly, on each side a certain figure is inscribed. These three facts constitute the whole nature of the die, so far as we are concerned here, and so they are the only things the mind can go by when forming a judgment about how the die will fall. So let us consider slowly and carefully what influence these facts must be having on our thought and imagination.

•First, I have already observed that custom makes the mind pass from any cause to its effect, and that when one appears it is almost impossible for the mind not to form an idea of the other. . . . When it thinks of the die as no longer supported by the box, the mind can't without •violence ·to itself· regard it as suspended in the air. Rather, it •naturally imagines it as lying on the table with one of its sides uppermost. This is an effect of the admixture of *causes* that is needed if we are to make any calculation about *chances*.

•Secondly, we are supposing that though the die *must* fall and turn up one of its sides, there is nothing to fix the particular side, this being determined entirely by chance. The very nature and essence of *chance* is a negation of *causes* and leaving the mind in complete indifference among those outcomes that are supposed to be contingent, ·i.e. at the mercy of chance·. So when the *causes* make our thought consider the die as falling and turning up one of its sides, the *chances* present all these sides as equal, and make us regard each of them as being just as probable and possible as each of the others. The imagination passes from the cause to the effect—from the throwing of the die to the turning up one of the six sides—and feels itself as somehow unable to make this process stop short or terminate in some other idea. But only one side can lie uppermost at a time, and the causal factors don't make us think of the sides as all lying uppermost together, which we regard as impossible; nor do they direct us with their entire force to any particular side, for if they did, the chosen side would be considered as certain and inevitable. Rather, the causal factors direct us to the whole six sides in such a way as to divide their 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 forces acting on our thought are common to all of them; but what they exert with respect to any one outcome is no more than what is suitable given what proportion of the whole it makes. This is how the original impulse, and consequently the liveliness of thought arising from the causes, is divided and split in pieces by the intermingled chances.

So now we have seen the influence of the two first aspects of the die—the causes, and the number and indifference of the sides—and have learned how they give a push to our thought, and divide that push into as many parts as there are sides. We must now look into the effects of •the third factor, namely the figures inscribed on the sides. Obviously, where several sides have the same figure inscribed on them, they must work together in their influence on the mind, bringing to bear on *one* image or idea of the figure all those divided pushes that were scattered over the several sides that have that figure on them. If we were asking 'Which *side* will fall uppermost?', all the sides would be perfectly equal, and no-one could have any advantage over any other.

But the question is 'Which *figure* will fall uppermost?'; and as the same figure is exhibited by more than one side, it is obvious that the pushes belonging to all *those* sides must come together on that one figure, and become stronger and more forcible by their union. In our example, four sides have a circle, two have a square. The pushes on the circle are therefore more numerous than the pushes on the square. But as the outcomes are contrary—it can't happen that circle and square *both* turn up in a single throw—the pushes likewise become contrary; the weaker force destroys the stronger as far as it has strength to do so; ·and what remains of the stronger one after the weaker has expended itself is the mind's probability- judgment about the outcome·. The liveliness of the idea is always proportional to the degrees of the push or tendency to make the transition; and according to my doctrine that liveliness of the idea is belief.

12: The probability of causes

The only use for what I have said about the probability of •chances is to help us explain the probability of •causes, since it is commonly allowed by philosophers and scientists that what plain people call 'chance' is really a secret and concealed cause. The latter sort of probability, therefore, is what we must chiefly examine.

The probabilities of causes are of several kinds, but all come from the same source, namely the association between a present impression and certain ideas. As the habit that produces the association comes from the *frequent* conjunction of ·kinds of· objects, it ·can't spring into existence all at once, but· must arrive at its full force *gradually*, gaining new force from each instance that we observe. The first instance has little or no force, the second adds a little to it, the third becomes still more noticeable; and it is by these slow steps that our judgment arrives at full confidence. But before it reaches such completeness it passes through several lower degrees, and in all of them it is to be regarded as only a presumption or probability. So the gradation from probabilities to proofs is in many cases imperceptible, and large differences between these kinds of confidence are easier to perceive than small ones.

Although this sort of probability comes before proof, and naturally takes place before any entire proof can exist, when people reach maturity they no longer have anything to do with it. It often happens of course that someone with the most advanced knowledge achieves only an imperfect experience of some particular conjunctions of events, which naturally produces ·in him· only an imperfect habit and transition; but then we must consider that the mind, having formed another observation concerning the connection of causes and effects, gives new force to its reasoning from that observation [Hume's exact words from ';' to here]; and by this means the mind can build an argument on one single experiment if it is properly prepared and examined. What we have found once to follow from an object ·of some kind· we conclude will always follow from it [= 'from objects of that kind']; and if we don't always build on this maxim as a certainty, it is not because •we haven't observed a large enough number of experiments but because •we have often met with instances to the contrary. And that leads us to ·the topic of this section·, namely the second kind of probability, where there is a contrariety in our experience and observation.

It would be very happy for men in the conduct of their

lives and actions if the same ·kinds of· objects were always conjoined, and we had nothing to fear but the mistakes of our own judgment, with no reason to allow for the uncertainty of Nature. But as it is often found that one observation conflicts with another, and that causes and effects don't follow in the same way that we have experienced in the past, I have to modify my theory so as to take into account this uncertainty, paying attention to the contrariety of outcomes. I start with the question of the nature and causes of this contrariety.

Common folk, who judge things according to their first appearance, attribute the uncertainty of outcomes to an uncertainty in the causes—they think that the causes often fail to have their usual influence even when they don't meet with any obstacle to their operation. But philosophers and scientists, observing that almost every part of Nature contains a vast variety of mechanisms and forces that are hidden from us because they are so small or so distant, think it at least possible that the contrariety of outcomes may come not from any contingency [here = 'unreliability'] in the cause but rather from the secret operation of contrary causes. This possibility becomes certainty when they bear in mind that when any contrariety of effects is studied carefully it always turns out that it *does* come from a contrariety of causes, and proceeds from their mutual hindrance and opposition. A peasant can give no better reason for a clock's stopping than to say 'It often doesn't go right'; but a clockmaker easily sees that the same force in the spring or pendulum always has the same influence on the wheels, but has failed of its usual effect because of a grain of dust that puts a stop to the whole movement. Having observed various cases of this general kind, philosophers and scientists form a maxim that the connection between *all* causes and effects is equally necessary, and that its seeming unreliability in some cases comes from the secret opposition of contrary causes.

But however philosophers and scientists may differ from common folk in how they •explain the contrariety of outcomes, their •inferences from it are always of the same kind and based on the same principles. A contrariety of outcomes in the past may give us a kind of hesitating belief for the future, in either of two 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 but not entirely constant, the mind is pushed towards passing from one object to the other, but not with such a complete habit as when the conjunction has been without exceptions and all the instances we have ever met with are uniform and of a piece. . . . There is no doubt that this is sometimes what happens, producing the ·tentative· inferences we draw from contrary phenomena; but I am convinced that it isn't what mainly influences the mind in this sort of reasoning. When our mind is moved purely by our habit of transition, we make the transition without any reflection, and don't have a moment's delay between seeing one object and believing in the other that is often found to accompany it. The custom doesn't depend on any deliberation, so it operates immediately, without allowing time to think. But it is very seldom like this in our probable reasonings. . . . In the latter usually take account of the contrariety of past outcomes, knowing that we are doing so: we compare the different sides of the contrariety, and carefully weigh the evidence that we have on each side. From this we can conclude that our reasonings of this kind arise from habit not *directly* but *in an oblique manner* which I must now try to explain.

Obviously, when a kind of object has contrary effects ·at different times·, we base our opinions about them purely on our past experience, and always consider as possible any effects that we have observed to follow from this kind of object. And just as past experience regulates our judgments about

the *possibility* of these effects, so it also regulates what we think about their *probability*; and we always take to be the most *likely* the effect that has been the most *common*. So we have two things to think about here: •*why* we treat the past as a standard for the future, and •*how* we extract a single judgment from a contrariety of past outcomes.

First ·the question of *why*·: The supposition that the future resembles the past isn't based on arguments of any kind, and comes solely from a habit that makes us expect for the future the same sequence of events as we have been accustomed to ·in the past·. This habit or push to transfer the past to the future is full and perfect; and therefore the first impulse of the imagination in this kind of reasoning is full and perfect too.

Secondly ·the question of *how*·: When we look back on past experiences and find them to be contrary, this push ·to transfer the past to the future·, though full and perfect in itself, doesn't take us to any one steady object, but offers us a number of disagreeing images in a certain order and proportion. So in this case the first impulse ·of the imagination· is split up and diffuses itself over all those images, each of them having an equal share of the force and liveliness that the impulse gives. Any of these past outcomes may happen again, and we think that when they do happen they will be mixed in the same proportion as in the past.

[A long paragraph spelling this out in more detail. A notable episode is this:] Each new experience ·of a cause-effect pair· is like a new brush-stroke, which gives additional liveliness to the colours without altering any of the shapes.

Summing up, then: experiences with contrary outcomes produce an imperfect belief, either •by weakening the habit, or by •dividing and then recombining the perfect habit that makes us conclude in general that instances of which we have no experience must resemble those of which we have.

To justify still further this account of the second sort of probability, where we reason with knowledge and reflection from a contrariety of past experiences, I shall propose some further considerations. (They have an air of subtlety, but don't hold that against them. Sound reasoning oughtn't to lose any of its force through being subtle; just as matter retains its solidity in air and fire and animal spirits, as well as in larger and more perceptible forms.) [Two points about that sentence. •It involves a half-suppressed pun: it was standardly said that air etc. differ from rocks etc. in being more 'subtle', meaning more finely divided. •When Hume implies that air is as 'solid' as rock, he means that it won't share its space with any other bodies, any more than rock will.]

[The two-page argument that follows is subtle and ingenious, but it is exhausting to read and follow, and seems not to add *much* to what Hume has already said. He follows it with something else, equally demanding, that he describes as 'almost the same argument in a different light'. This material is omitted from the present version.]

I am aware of how abstruse all this reasoning must appear to the general run of readers—people who aren't accustomed to going so deeply into the intellectual faculties of the mind, and so will be apt to reject as fanciful anything that doesn't fit with common received notions and with the easiest and most obvious principles of philosophy. You do have to take some trouble to follow these arguments of mine, though it takes very *little* trouble to see to see ·how bad the rival accounts are·—to see the imperfection of every plain-man hypothesis on this subject, and how little light philosophy has so far been able to cast in these elevated and challenging inquiries. If you can once be fully convinced that

- •Nothing in any object, considered in itself, can give us a reason for drawing a conclusion about anything other than that object, and
- •Even after observing the frequent or constant con-

> junction of objects, we have no *reason* to draw any inference about any object other than those of which we have had experience,

these two principles will throw you so loose from all common systems that you will have no trouble accepting other theses that may appear very extraordinary. These principles proved to be sufficiently convincing when applied to our most certain reasonings from causation; but I venture to say that they become even more believable when applied to the conjectural or probable reasonings that are our present topic.

[•Hume then goes again through his account of probabilistic reasoning, bringing out how it requires (and makes plausible) the two principles in question. •Then two paragraphs in which he presents 'two reflections which may deserve our attention'. One concerns the difference between *experiencing* contrary outcomes and merely *imagining* them. The other concerns (in effect) the mathematics of adding belief-strengths, which Hume says has 'a parallel instance in the affections'. The core of his view about the latter is that 'a man who desires a thousand pounds has in reality a thousand or more desires which unite together and seem to make only one passion'.]

Beside these two sorts of probability—derived from •imperfect experience and from •contrary outcomes—there is a third arising from •analogy, which differs from them in some significant respects. According to the account I have given, all kinds of reasoning from causes or effects are based on two things: •the constant conjunction of any two ·kinds of· objects in all past experience, and •the resemblance of a present object to one of the kinds. These have the effect that •the present object invigorates and enlivens the imagination, and •the resemblance together with •the constant union conveys this force and liveliness to the related idea, which we are therefore said to *believe*. If you weaken either the •union or the •resemblance, you weaken the force of transition and thereby weaken the belief that arises from it. The liveliness of the first impression can't be *fully* transferred to the related idea unless •the conjunction of objects of their kinds has been constant and •the present impression perfectly resembles the past ones whose union we have been accustomed to observe. In probabilities of chance and of causes (discussed above) it is •the constancy of the union that is diminished; and in the probability derived from analogy it is only •the resemblance that is diminished. Without *some* degree of resemblance there can't be any reasoning. But this resemblance can be greater or smaller, and the reasoning is proportionally more or less firm and certain. An experience loses some of its force when transferred to instances that don't exactly resemble it; but as long as there is some resemblance remaining there is still a basis for probability.

13: Unphilosophical probability

The three kinds of probability that I have described are all accepted by philosophers as reasonable bases for belief and opinion. But there are other kinds that are derived from the same principles but haven't had the good fortune to be accepted in the same way. ·In this section I shall discuss four of them·.

The **first** probability of this kind can be described like this. The vividness of the inferred idea may be lessened by a lessening of •the union or of •the resemblance, and also—I now add—by a lessening of •the impression. . . . The argu-

ment that we base on a remembered matter of fact is more or less convincing according to whether the fact is recent or remote in time. This source for difference in degrees of evidentness is not accepted by philosophy as solid and legitimate, because ·if it *is* accepted, then· an argument must have more force today than it will have in a month's time. But despite the opposition of philosophy, the remoteness-in-time aspect certainly has a considerable influence on the understanding, and secretly changes the authority of an argument, depending on *when* it is put to us. . . .

A **second** source of difference in our degrees of belief and assurance, always disclaimed by philosophers but always effective, is this. An experience that is recent and fresh in the memory affects us more, having a greater influence on judgment as well as on the passions than one that is in some measure obliterated. A lively impression produces more assurance than a faint one, because it has more initial force to pass on to the related idea, which thereby gets more force and liveliness. Similarly with a recent observation: the custom and transition is more complete in that case, and preserves better the initial force of what is transferred. Thus a drunkard who has seen his companion die from a drinking-spree is struck with that instance for some time, and dreads having such an accident himself; but as the memory of it gradually decays, his former sense of security returns and the danger comes to seem less certain and real.

I add as a **third** instance ·of unphilosophical probability· the following. Although our reasonings from •proofs are considerably different from our reasonings from •probabilities, the former kind of reasoning often slides imperceptibly into the latter simply because the proof in question involves *so many* connected arguments. When an inference is drawn immediately from an object without any intermediate cause or effect, the conviction is much stronger . . . . than when the imagination is carried through a long chain of connected arguments, however infallible the connection of each link may be thought to be. The liveliness of all the ideas comes from the original impression, through the customary transition of the imagination; and it is obvious that this liveliness must be gradually lessened in proportion to the distance that the transition has to cover. Sometimes this distance does more to reduce conviction than even contrary experiences would have done; and a man may receive a livelier conviction from a probable reasoning that is brief and immediate than from a long chain of consequences, even if the latter is sound and conclusive in each part. Indeed, reasons of the latter kind seldom produce any conviction: one must have a very strong and firm imagination to preserve the evidentness through so many stages right to the end!

An odd point arises here, ·which I shall state in the form of an objection to what I have been saying·:

> There is no point of ancient history of which we can have any assurance except through many millions of causes and effects, and through a chain of inferences of an almost immeasurable length. Before the knowledge of the fact could come to the first historian, it must be conveyed through many mouths; and after it is committed to writing, each new copy is a new object whose connection with the previous one is known only by experience and observation. From what you have been saying about strength of belief it seems to follow that the evidentness of all ancient history must now be lost, or at least will be lost in time as the chain of causes gets ever longer. But it seems contrary to common sense to think that if the world of scholarship and the art of printing continue in the same way that they do now, our descendants will some day come to doubt that there ever was such a man as Julius

> Caesar. So this looks like an objection to the account you have been giving. If belief consisted (·as you say it does·) only in a certain liveliness conveyed from an original impression, it would fade in accordance with the length of the transition, and would eventually have to be utterly extinguished. And if belief is sometimes *not* capable of such an extinction, it must be something different from that liveliness.

(Before I answer this objection I should remark that this line of thought has generated a very celebrated argument against the Christian religion, with just one difference: ·in the anti-Christianity argument· it is supposed that each link of the chain of human testimony is only probabilistically sound, and to be ·in itself· liable to some doubt and uncertainty. And it must be admitted that in *this* way of looking at the subject—which is not the correct one—every history and tradition must indeed eventually lose all its force and convincingness. Every new probability lessens the original conviction; and however great that conviction may be, it can't continue under such repeated lessenings. This is true in general, though we shall find in 1_{iv} that there is one very memorable exception, a vastly important one for our present topic of the understanding.)

Meanwhile, to answer the preceding objection on the supposition that historical evidence amounts initially to a complete *proof*, bear in mind that though the links connecting any historical fact with a present impression are very numerous, they are all *of the same kind*, depending ·only· on the reliability of printers and copyists. One edition is succeeded by another, and that by a third, and so on, till the chain reaches the history book we are now reading. There is no variation in the steps. After we know one, we know them all; and after we have taken one ·inferential step· we can't hesitate to take all the others. This is enough to preserve the convincingness of history. . . .

A **fourth** unphilosophical sort of probability, ·which will be the topic of the remainder of this section·, is derived from general rules that we rashly form to ourselves—rules that are the source of what we properly call *prejudice* [the Latin root of which means 'pre- judgment']. An Irishman can't have wit, and a Frenchman can't have solidity; so even in particular cases where the Irishman talks entertainingly and the Frenchman talks judiciously, we have held such a prejudice against them that ·we think· they must be a dunce and a fop ·respectively·, in spite of sense and reason.

Human nature is very given to errors of this kind, and perhaps this nation as much as any other! Why do men form general rules and allow them to influence their judgment, even contrary to present observation and experience? I think that it comes from the very same sources as to all judgments about causes and effects. [In the rest of this paragraph, Hume reminds us of his account of causal and probabilistic reasoning, especially stressing how the latter may be weakened by imperfect resemblances amongst the instances.]

Although custom is •the basis of all our judgments, sometimes it has an effect on the imagination •in opposition to the judgment, and produces a contrariety in our views about the same object. Let me explain. In most kinds of causes there is a complication of factors, some essential and others superfluous, some absolutely required for the production of the effect and others present only by accident. Now, when these superfluous factors are numerous and remarkable and frequently conjoined with the essential factors, they influence the imagination so much that even in the absence of something essential they carry us on to the idea of the usual effect, giving it a force and liveliness that make it superior to the mere fictions of the imagination. We can correct this

propensity by reflecting on the nature of the factors on which it is based; but it is still certain that custom starts it off and gives a bias to the imagination.

To illustrate this by a familiar example: a man who is hung out from a high tower in a cage of iron can't help trembling when he sees the drop below him, even though his *present* experience of the solidity of the iron that supports him tells him that he is perfectly safe from falling, and the idea of falling and harm and death come only from custom and ·*past*· experience. That custom goes beyond the instances from which it is derived and to which it perfectly corresponds—·instances in which heavy things are released *without* support and fall to the ground·—and influences his ideas of objects that resemble the others in some respects but don't precisely fit the same rule. The factors of •depth and descent impress him so strongly that their influence can't be destroyed by the contrary factors of •support and solidity, which ought to make him feel perfectly safe. His imagination runs away with its object, ·the thought of falling·, and arouses a passion (·fear·) proportional to it. That passion reacts back on the imagination, and enlivens the idea; this newly enlivened idea has a new influence on the passion, increasing its force and violence; so his imagination and his feelings mutually support each other, causing the whole ·situation· to have a very great influence upon him.

But why need we look for other instances, when *the present subject of unphilosophical probabilities* offers us such an obvious one, in the conflict between judgment and imagination that arises from custom? ·I shall explain this by presenting an apparent difficulty for my account·:

> According to my theory, reasonings are merely effects of custom, and custom's only influence is to enliven the imagination and give us a strong conception of some object. So it seems to follow that our judgment and our imagination can never be in conflict—that custom can't operate on the imagination in such a way as to put it in opposition to the judgment. ·But we have seen that they *do* sometimes conflict with one another; so this is a problem for my theory·.

The only solution for this difficulty is to bring in the influence of *general rules*. In section 15 I shall call attention to some general rules by which we ought to regulate our judgment about causes and effects; and these rules are based on the nature of our understanding, and on our experience of how it operates in our judgments about objects. Through those rules we learn to distinguish accidental circumstances from effective causes; and when we find that an effect can be produced in the absence of a certain factor we conclude that that factor is not part of the effective cause, however often it is conjoined with it. But this frequent conjunction necessarily makes the factor in question have some effect on the imagination, in spite of the opposite conclusion from general rules; and so the opposition of these two principles produces a contrariety in our thoughts, and makes us ascribe •one inference to our judgment, and •the other to our imagination. The general rule is attributed to our judgment because it is more extensive and constant; the exception to the general rule is credited to the imagination because it is more capricious and uncertain.

Thus our general rules are in a way set in opposition to each other. When an object appears that •resembles some cause in very considerable respects, the imagination naturally carries us to a lively conception of the usual effect, even if the object •differs from that cause in the most significant and effective respects. Here—·in this *wrong* transition to an idea of the usual effect·—is the first influence of general rules. But when we review this act of the mind and compare it with the more general and authentic operations of the un-

derstanding, we find it to be irregular and destructive of all the most established principles of reasoning, which causes us to reject it. This is a second influence of general rules, and implies the condemnation of the first one. Sometimes one prevails, sometimes the other, according to the disposition and character of the person. Ordinary folk are commonly guided by the first, and wise men by the second. Meanwhile sceptics can enjoy this prospect of a new and notable contradiction in our reason, and of seeing all philosophy ready to be subverted by a force in human nature and then saved by giving a new direction to the very same force! The following of general rules is a very unphilosophical sort of probability, but it is only by following them that we can correct this and all other unphilosophical probabilities.

Since we have instances where general rules act on the imagination contrary to the judgment, we needn't be surprised to see their effects increase when they combine with the judgment, presenting to us ideas that have more force than any others. Everyone 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. Even if someone does *communicate* his sentiments by such secret insinuations, making them known just as certainly as openly revealing them would, their influence is not equally strong and powerful. Someone who lashes me with concealed strokes of satire doesn't move me to indignation as intensely as if he had flatly told me I was a fool and coxcomb, though I understand his meaning just as well as I would if he had done that. This difference is to be attributed to the influence of general rules.

Whether a person •openly abuses me or •slyly indicates his contempt, in neither case do I *immediately* perceive his sentiment or opinion; I become aware of it only by *signs*, that is, by its effects. So the only difference between these two cases is that •in openly revealing his sentiments he uses signs that are general and universal, while •in secretly indicating them he uses signs that are more singular and uncommon. And when the imagination runs from the present impression ·of the man's words or behaviour· to the absent idea ·of his hostility or contempt·, it makes the transition more easily—and so conceives the object with greater force—when the connection is •common and universal than when it is more •rare and particular. . . .

[Hume adds a further paragraph and a half, adding detail to this, and offering a reflection on reasons why *sometimes* 'scurrility is less displeasing than delicate satire'.]

To this account of the different influence of open and concealed flattery or satire, I shall add the consideration of another phenomenon that is analogous to it. There are many violations of codes of honour that the world —though not excusing them—is more apt to *overlook* when the appearances are saved and the transgression is secret and concealed. (This holds for both men and women.) People who know perfectly well that the fault has been committed pardon it more easily when the proofs seem somewhat indirect and ambiguous than when they are direct and undeniable. In both cases the same idea is presented, and strictly speaking is equally assented to by the judgment; but its influence is different because of the different ways in which it is presented. . . . The difference is just this: in the first case the sign from which we infer the blamable action is single, and suffices all on its own to be the basis for our reasoning and judgment; whereas in the second case the signs are numerous, and decide little or nothing when taken alone and not accompanied by many minute and almost imperceptible factors. Any reasoning is convincing in proportion as it is single and united to the eye, and gives less work to the imagination in collecting its parts and going from them to the correlative idea that is the

conclusion. . . .

[In a final pair of paragraphs Hume re-states his main conclusions in sections 11–13, contending that they are confirmed by their ability to interlock and solve problems, and that their success helps to confirm his account of belief.]

14: The idea of necessary connection

Having thus explained *how* we reason beyond our immediate impressions, and conclude that such and such causes must have such and such effects, we must now retrace our steps and pick up again the question that first occurred to us, and that we dropped along the way (near the end of section 2). The question is: What is our idea of *necessity*, when we say that two objects are *necessarily* connected? As I have often said already, if we claim to have such an idea we must find some impression that gives rise to it, because we have no idea that isn't derived from an impression. So I ask myself: In what objects is necessity commonly supposed to lie? And finding that it is always ascribed to *causes* and *effects*, I turn my attention to two objects that are supposed to be related as cause and effect, and examine them in all the situations in which they can occur. I see at once that they are contiguous in time and place, and that the one we call 'cause' precedes the one we call 'effect'. In *no* instance can I go any further: I can't find any third relation between these objects. So I take a broader view, and consider a number of instances in which I find objects of one kind always existing in relations of contiguity and succession with objects of another kind. At first sight this seems to be pointless: the reflection on several instances only repeats the same objects, so it can't give rise to any new idea. But on further enquiry I find that the repetition is *not* the same in every respect. It produces a new impression ·that I don't get from any single instance·, and through that impression it gives me the idea ·of necessity· which I am at present examining. For after a frequent repetition I find that on the appearance of one of the objects, custom *makes* the mind think of its usual attendant, and think of it more vividly on account of its relation to the first object. So it is this impression, this being-made-to-think-of-the-effect, that gives me the idea of necessity.

I'm sure that you will have no trouble accepting this result, as being an obvious consequence of principles that I have already established and have often employed in my reasonings. This obviousness, both of the first principles and of the inferences from them, may seduce you into incautiously accepting the conclusion, making you imagine that it contains nothing extraordinary or worth thinking about. But although such casualness may make my reasoning easier to accept, it will also make it easier to forget; so I think I should warn you that I have just now examined one of the most elevated questions in philosophy, the one that seems to involve the interests of all the sciences—namely the question about *the power and efficacy of causes*. That warning will naturally rouse your attention and make you ask for a fuller account of my doctrine, as well as of the arguments on which it is based. This request is so reasonable that I can't refuse to comply with it, especially because I have hopes that the more my principles are examined the more forceful and convincing they will be.

There is no question which, on account of its importance

as well as its difficulty, has caused more disputes among both ancient and modern philosophers than this one about the •efficacy of causes, •the quality that *makes* an effect follow a cause. But before they embarked on these disputes, I think, they would have done well to examined what *idea* we have of the •efficacy they are arguing about. This is what I find principally lacking in their reasonings, and what I shall here try to provide.

I begin by observing that the words 'efficacy', 'agency', 'power', 'force', 'energy', 'necessity', 'connection', and 'productive quality', are all nearly synonymous, which makes it absurd to employ any of them in defining any of the others. This observation rejects at once all the common definitions that philosophers have given of 'power' and 'efficacy'. Our search for the idea must be directed not to these definitions but to the impressions from which it was originally derived. If it is a compound idea, it must arise from compound impressions. If simple, from simple ones.

I believe that the most widely accepted and most popular [here = 'appropriate for ordinary folk who lack philosophical skills and knowledge'] explanation of our idea of power is to say this:

> We find from experience that various new productions occur in the world of matter, such as the motions and variations of bodies; and we conclude that there must somewhere be a power capable of producing them; and this reasoning brings us at last to the idea of power and efficacy. (Thus Mr Locke, in his chapter on Power) [*Essay Concerning Human Understanding* II.xxi.1])

But to be convinced that this explanation is more popular than philosophical we need only to remember two very obvious principles. First, •that reason alone can never give rise to any original idea, and secondly •that reason, as distinct from experience, can never make us conclude that a cause or productive quality is absolutely required for every beginning of existence. I have explained these two points already, so I shan't go on about them here.

I shall only infer from them that since •reason can never give rise to the idea of *efficacy*, that idea must be derived from •experience—from particular instances of this efficacy which get into the mind through the common channels of sensation or reflection. . . . If we claim to have a sound idea of this efficacy, we must produce some *instance* in which the efficacy is plainly revealed to the mind and its operations are obvious to our consciousness or sensation. If we evade this demand, we are admitting that the ·so-called· idea ·of efficacy· is impossible and imaginary; since the only other escape is to plead that the idea is an innate one, and ·that escape-route is blocked because· the theory of innate ideas has been already refuted and is now almost universally rejected in the learned world. What we have to do, then, is to find some natural cause-effect pair in which the mind can grasp—clearly, unambiguously, and securely—how the cause operates and what gives it its efficacy.

We don't get much encouragement in this from the enormous variation that we find in the opinions of philosophers who have claimed to explain the secret force and energy of causes. Various philosophers have variously contended that bodies operate by

> their substantial form,
> their accidents or qualities,
> their matter and form,
> their form and accidents,
> certain powers and faculties distinct from all the above.

Further, all these opinions are mixed and varied in a thousand different ways, creating a strong presumption that none of them is solid or credible, and that there are simply no grounds for thinking that any of the known qualities of matter has any kind of efficacy. This presumption gains strength

when we consider that substantial forms and accidents and faculties are *not* really among the known properties of bodies, but are perfectly unintelligible and inexplicable. Obviously philosophers would never have had recourse to such obscure and uncertain notions if they had met with any satisfaction in ideas that 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. The bottom line is this: we can conclude that it is impossible in any one instance ·of a cause-effect pair· to show what it is that contains the force and agency of the cause; and that in this respect the most refined understandings are on a par with the plain man in the street. If you think you can refute this assertion, you needn't take the trouble to invent any long arguments; all you need to do is to show us an instance of a cause where we discover the power or operating force. We often have to use this kind of challenge, as being almost the only means of proving a negative in philosophy.

The failures of their attempts to pin down this *power* has finally obliged philosophers to conclude that the ultimate force and efficacy of Nature is perfectly unknown to us, and that it is no use looking for it among the known qualities of matter. They are almost unanimous about this; where their opinions differ it is in what they infer from it. Some of them, especially the Cartesians, have satisfied themselves that we are acquainted with *the whole essence* of matter, which they say consists in *extension*. Now, extension doesn't imply actual motion, but only mobility; so they naturally conclude that when matters moves, the energy that produces the motion can't lie in the extension, ·which means (for them) that it can't lie in the matter·. So, they conclude, matter is not endowed with any efficacy, and can't possibly (unaided) communicate motion or produce any of the effects that we ascribe to it.

This conclusion leads them to another which they regard as entirely inescapable. ·They argue like this·:

> Matter is in itself entirely inactive and deprived of any power to produce or continue or communicate motion; but these effects are evident to our senses, and the power that produces them must be *somewhere*. So it must lie in God, the divine being who contains in his nature all excellency and perfection. So God is the first mover of the universe: he not only first created matter and gave it its initial push, but also through a continuing exertion of his omnipotence he keeps it in existence and gives it all its motions and configurations and qualities.

This opinion is certainly very interesting, and well worth our attention; but if you think for a moment about *why* it has come up for us in our present inquiry, you will see that we needn't examine it in detail here. We have settled it as a principle that, because all ideas are derived from some previous perceptions, we can't have any idea of •power and efficacy unless instances can be produced in which this •power is perceived to exert itself. These instances can never be discovered in *body*, so the Cartesians have relied on their principle of innate ideas and had recourse to a God whom they think to be the only *active* being in the universe, and the immediate cause of every alteration in matter. But given the falsity of the principle of innate ideas, the supposition of a God can't be of any use to us in accounting for the idea of agency which we can't find among the objects that are presented to our senses or those that we are internally conscious of in our own minds. For if every idea is derived from an impression, the idea of a God must come from the same origin; and if no impression, either of sensation or reflection, implies any force or efficacy, it is equally impossible to discover or even imagine any such active force in God. So

when these ·Cartesian· philosophers argue that

> No efficacious force can be discovered in matter, so no such force should be attributed to matter,

they ought by parity of reasoning to argue

> No efficacious force can be discovered in God, so no such force should be attributed to God.

If they regard that conclusion as absurd and impious, as indeed it is, I shall tell them how they can avoid it—namely, admitting at the outset that they have no adequate *idea* of power or efficacy in any object, since they can't discover a single instance of it in bodies or in minds, in divine natures or in creaturely ones.

The same conclusion is unavoidable on the hypothesis of those who maintain the efficacy of subordinate causes, and credit matter with having a power or energy that is real but *derivative*. For they grant that this energy doesn't lie in any of the known qualities of matter, so ·for them as for the Cartesians· the difficulty still remains about the origin of the *idea* of it. If we really have an idea of power we can attribute power to an •unknown quality; but

> the idea couldn't be derived from a quality that we don't know, and there is nothing in •known qualities that could produce the idea,

so it follows that it is mere self-deception for us to imagine we have any idea of this kind in the way we ordinarily think we do. All ideas are derived from and represent impressions. We never have any impression that contains any power or efficacy. So we never have any idea of power.

Some have asserted that we feel an energy or power in our own mind, and that having acquired the idea of power in this way we transfer that quality to matter, where we can't immediately discover it. The motions of our body and the thoughts and sentiments of our mind (they say) obey the will, and we needn't look beyond that for a sound notion of force or power. But to convince us of how fallacious this reasoning is, we need only notice that the will—which they are taking to be a cause—doesn't have a discoverable connection with its effects any more than any material cause has one with *its* effect. We are so far from perceiving the connection between •an act of volition and •a bodily movement that it is generally agreed that the powers and essence of thought and matter come nowhere near to providing an explanation for the relation between willing to make a certain movement and making it. And the will's power over our mind is no more intelligible. In that case ·too· the effect is distinguishable and separable from the cause, and couldn't be foreseen without the experience of their constant conjunction. We can effectively command our thoughts up to a certain point, but not beyond that; and it is only by consulting experience that can know where the boundaries to our authority lie. (·For example, I can *think about horses* just by choosing to think about horses; but I can't *rapidly run through thoughts of the first nineteen prime numbers* or *believe that the earth is flat* just by choosing to do so; and it is only from experience that I know what I can do just by choosing to and what I can't—none of it 'stands to reason', none of it can be seen to be expectable given the nature of the will's command over thoughts·.) In short, so far as our present topic goes, the actions of the mind are like the actions of matter: all we perceive is constant conjunction, and we can't reason beyond it. . . . We have no chance of attaining an idea of force by consulting our own minds.[7]

[7] Our ideas of God are similarly imperfect, but this can't have any effect on either religion or morals. The order of the universe proves that there is an omnipotent mind, that is, a mind whose will is *constantly accompanied by* the obedience of every creature and being. That's all that is needed as a basis for all the articles of religion; we don't need to form a distinct idea of God's force and energy.

It has been established as a certain principle that general or abstract ideas are nothing but individual ones looked at in a certain way, and that when we reflect on any object we have to bring into our thought its particular degrees of quantity and quality—just as the object itself has to have particular degrees of quantity and quality. So if we have any idea of *power in general* we must also be able to conceive some specific kind of power; and as power can't exist alone but is always regarded as an attribute of some existing thing, we must be able to place this power in some particular thing and to conceive that thing as having a real force and energy by which such and such a particular effect *necessarily* results from its operation. We must •conceive the connection between the cause and the effect distinctly and in detail, and •see from a simple view of one of them that it *must* be followed or preceded by the other. This is the true manner of conceiving a particular power in a particular body; .... and it is perfectly obvious that the human mind ·can't do any such thing, that is, it· can't form an idea of two objects that will enable it to conceive any connection between them, or comprehend distinctly the power or efficacy by which they are united. Such a connection would amount to a demonstration, and would imply the absolute impossibility for the one object not to follow, or to be conceived not to follow on the other; and that kind of connection has already been rejected in all cases. If you disagree, and think you have acquired a notion of power in some particular object, please point out to me the object. Until someone does that—and nobody will!—I have to conclude 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.

From all this we may infer that when we

> •talk of any being, whether divine or creaturely, as having a 'power' or 'force' that is exactly right for some effect, or •speak of a 'necessary connection' between objects, and suppose that this connection depends on an 'efficacy' or 'energy' that some of these objects possess,

we really have no clear meaning for any of these expressions, and are merely using common words without any clear and determinate ideas. Perhaps the expressions never have meanings; but it is more probable that they do have proper meanings which they lose in these contexts through being wrongly used. So let us return to our subject, to see if we can discover the nature and origin of the ideas that we attach to the expressions ·when we are using them properly·.

As we confront a particular cause-effect pair, we can't just by considering either or both of those objects •perceive the tie that unites them, or •say for sure that there is a connection between them. So it is not from any one instance that we arrive at the idea of cause and effect, of a necessary connection, of power, of force, of energy, of efficacy. •If all we ever saw were particular conjunctions of objects, each conjoined pair being entirely different from each of the others, we could never form any such ideas.

But •when we observe numerous instances in which the same ·kinds of· objects are conjoined, we immediately conceive a connection between them, and begin to draw an inference from one to another. So this •multiplicity of resembling instances constitutes the *essence* of power or connection, and is the source from which the idea of it arises. To understand the idea of power, then, we must consider this •multiplicity—and that is all I require for a solution of the difficulty we have been wrestling with. I reason thus: The repetition of perfectly similar instances can't on its own give rise to an original idea different from what is to be found in any particular instance; I have pointed this out already, and

it obviously follows from my basic principle that all ideas are copied from impressions. But the idea of *power* is a new original idea that isn't to be found in any one instance, and yet it arises from the repetition of numerous instances; so it follows that the repetition doesn't have that effect *on its own*, but must either (1) reveal or (2) produce something new that *is* the source of that idea. . . . (1) But the repetition of similar objects in similar relations of succession and contiguity obviously doesn't •reveal anything new in any one of them, since we can't draw any inference from it or make it a subject of either demonstrative or probable reasonings (as I proved in section 6). Indeed, even if we *could* draw an inference, it wouldn't make any difference in the present case. That is because no kind of reasoning can give rise to a new idea such as the idea of *power* is; when we reason we must *already* have clear ideas to serve as the objects of our reasoning. The conception always precedes the understanding; and where one is obscure the other is uncertain, where one fails the other must fail also.

(2) It is certain that this repetition of similar objects in similar situations •produces nothing new in these objects or in any external body. For you will readily agree that the different instances we have of the conjunction of resembling causes and effects are in themselves entirely independent ·of one another·, and that the passing on of motion that I see result from the present collision of two billiard balls is totally distinct from what I saw result from such a collision a year ago. These collisions have no influence on each other: they are entirely separated by time and place, and one of them could have existed and communicated motion even if the other had never occurred. So:

> Nothing new is either •revealed or •produced in any objects by their constant conjunction, and by the uninterrupted resemblance of their relations of succession and contiguity. Yet it is from this resemblance that the ideas of *necessity*, of *power*, and of *efficacy* are derived. So these ideas don't represent anything that does or can belong to the objects that are constantly conjoined.

Look at this argument from any angle you like—you will find it to be perfectly unanswerable. Similar instances are the first source of our idea of power or necessity; but their similarity doesn't give them any influence on each other or on any external object. We must therefore look in some other direction to find the origin of that idea.

Though the numerous resembling instances that give rise to the idea of power have no influence on each other, and can never produce in the object any new quality that could be the model for that idea, our *observation of* this resemblance produces a new impression *in our mind*, and that is the idea's real model. For after we have observed 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 the latter in a stronger light on account of that determination. [Feeling a 'determination' to form a certain idea is just feeling oneself being *made* to form the idea. Most of Hume's uses of 'determine' etc. have been rendered here by 'make' etc., but in the present section 'determination' is allowed to stand.] This determination is the only effect of the resemblance, and so it must *be* the power or efficacy the idea of which is derived from the resemblance. The numerous instances of resembling conjunctions lead us into the notion of power and necessity. These instances are in themselves totally distinct from each other and have no union except in our mind, which observes them and collects their ideas. So necessity is the effect of *this observation*, and is nothing but an internal impression of the mind—a determination to carry our thoughts from one object to another. If we don't

view it in this way 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 connection between causes and effects is the basis of our inference from one to the other. The basis of our inference is •the transition ·in our minds· arising from the accustomed union. These, therefore, are the same: ·the necessary connection between causes and effects *is* the move our mind makes from an impression of the cause to a lively idea of the effect, or perhaps it is not the move itself but rather our being *made or determined* to make the move·.

The idea of necessity arises from some impression. No impression conveyed by our ·outer· senses can give rise to it. So it must be derived from some internal impression, some impression of reflection. The only internal impression that has anything to do with the present business is ·the impression of· the propensity that custom produces in us to pass from an object to the idea of its usual attendant. This, therefore, is the essence of necessity. The bottom line is this: necessity is something that exists in the mind, not in objects, and we can't ever form the remotest idea of it considered as a quality in bodies. Either we have no idea of necessity, or necessity is nothing but the determination of the thought to pass from causes to effects (and vice versa) according to their experienced union.

Thus, just as •the necessity that makes twice two equal four . . . . lies only in •the act of the understanding by which we consider and compare these ideas, so also •the necessity or power that unites causes with effects lies in •the determination of the mind to pass from the one to the other. The efficacy or energy of causes doesn't belong to the causes themselves or to God or to the two together; it belongs entirely to the mind that considers the union of two or more objects in all past instances. It is here that the real *power* of causes is placed, along with their *connection* and *necessity*.

I am aware that this is the most violent of all the paradoxes that I have advanced or will advance in the course of this *Treatise*, and that only through solid proof and reasoning can I hope to get it accepted and to overcome the ingrained prejudices of mankind. Before people are reconciled to this doctrine, they will have *often* to repeat to themselves ·the central line of argument·:

- •The simple view of any two objects or actions, however they are related, can never give us any idea of power or of a connection between them.
- •This idea arises from the repetition of their union.
- •The repetition doesn't reveal anything or cause anything in the *objects*; its only influence is on the *mind*, through the customary transition that it produces.

Therefore:

- •this customary transition is the same as the power and necessity, which are therefore qualities of perceptions rather than of objects, and are internally felt by the soul rather than perceived externally in bodies.

Any extraordinary claim is usually met with astonishment, which immediately changes into the highest degree of admiration or contempt, depending on whether we approve or disapprove of what is said. I am much afraid that although the above reasoning seems to me the shortest and most decisive imaginable, the bias of the mind will persist in the general run of readers, giving them a prejudice against the present doctrine.

This bias against it is easily accounted for. It is widely recognized that the mind has a great propensity to *spread itself* on external objects: when some objects cause internal impressions that always occur at the same time that the objects appear to the senses, the mind conjoins these impressions with the objects. For example, as certain sounds

and smells are always found to accompany certain visible objects, we naturally imagine that the sounds and smells are in the objects, even being in the same place, though in fact the qualities are the wrong sorts of thing to be conjoined with objects, and really don't exist in any place. I shall return to this in 5_{iv}. All I need say here is that this propensity ·that the mind has for spreading itself on external objects· is what makes us suppose necessity and power to lie in the objects we consider, not in our mind that considers them. . . .

But although this is the only reasonable account we can give of necessity, the contrary notion is so riveted in the mind by the forces I have mentioned that I am sure my views will be treated by many as extravagant and ridiculous.

> What! the efficacy of causes lies in the determination of the mind? As if causes didn't operate entirely independently of the mind, and wouldn't continue their operation even if no minds existed to think about them or reason about them! •Thought may well depend on •causes for its operation, but •causes don't depend on •thought. ·To suppose otherwise· is to reverse the order of Nature and give a secondary role to what is really primary. To every operation there is an appropriate power, which must belong to 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 relates to the cause and the effect only by perceiving them is a gross absurdity and contrary to the most certain principles of human reason.

All I can say in reply to these arguments is that they are like a blind man's claiming to find a great many absurdities in the supposition that the colour of scarlet is not the same as the sound of a trumpet, or that light is not the same as solidity! If we really have no idea of power or efficacy in any object, or of any real connection between causes and effects, it won't do much good to 'prove' that efficacy is necessary in all operations. People who say such things don't understand their own meanings, and ignorantly run together ideas that are entirely distinct from each other. I willingly allow that both material and immaterial objects may have various qualities of which we know nothing; and if we choose to call these 'power' or 'efficacy', that won't matter much to the world. But when we use the terms 'power' and 'efficacy' not as •meaning those unknown qualities, but rather as •signifying something of which we *do* have a clear idea, and which is incompatible with the objects to which we attribute it, obscurity and error begin to occur and we are led astray by a false philosophy. That is what happens when we transfer •the determination of the thought to •external objects and credit *them* with a real intelligible connection between them, this being ·an objectivised analogue of· a quality that can belong only to the observing mind.

As for the point that the operations of Nature are independent of our thought and reasoning, I agree; which is why I have remarked

- •that objects have the relations of contiguity and succession to each other,
- •that similar objects can be observed to have similar relations in many instances, and
- •that all this is independent of the operations of the understanding.

But if we go beyond that and ascribe a *power* or *necessary connection* to these objects, we are ascribing something that we can never observe in them, and have to derive the idea of it from what we feel internally when we think about them. I carry this doctrine so far that I am ready to apply it to ·the causal claim involved in· my present line of thought. ·I do that in the following paragraph·.

When an object is presented to us, it immediately gives the mind a lively idea of the object that is usually found to accompany it, and this determination of the mind forms the necessary connection of these objects. But when we step back and attend not to •the objects but to •our perceptions of them, we still have a causal claim to consider, namely that the impression (of one object) is the cause and the lively idea (of another object) is the effect; and *their* necessary connection is the new determination that we feel to pass from the idea of the impression to the idea of the lively idea. The force that unites our internal perceptions is as unintelligible—·as incapable of being seen as necessitating, just by hard thinking·—as is the force that unites external objects, and is known to us only by experience. Now, I have already sufficiently examined and explained the nature and effects of experience: it never gives us any insight into the internal structure or operating force of objects, but only accustoms the mind to pass from ·an impression of· one to ·a lively idea of· another.

It is now time to gather up all the parts of this reasoning, and assemble them into an exact definition of the relation of cause and effect, which is our present topic. This order of exposition—*first* examining our inference from the cause-effect relation and *then* explaining the relation itself—would have been inexcusable if it had been possible to proceed in any other way. But as the nature of •the relation depends so much on that of •the inference, I have had to advance in this seemingly preposterous manner, using certain terms before being able exactly to define them or fix their meaning. I shall now correct this fault by giving a precise definition of cause and effect.

There are two definitions we can give for this relation, which differ only in that they present different views of the same object; one makes us consider cause-effect as a •philosophical relation (a mere comparison of two ideas), the other makes us consider it as a •natural relation (an association between two ideas). [See note on page 8.] We can define a 'cause' to be

> An object precedent and contiguous to another, and where all the objects resembling the former are similarly precedent and contiguous to objects that resemble the latter.

If you find this to be defective because in addition to the cause and the effect it brings in something extraneous (·namely, other objects that resemble them·), we can substitute this other definition in its place:

> A cause is an object precedent and contiguous to another, and united with it in such a way that the idea of one determines the mind to form the idea of the other, and the impression of one to form a livelier idea of the other.

If you reject this too for the same reason—·because in addition to the cause and the effect it brings something extraneous (namely our impressions and ideas of them)·—I can only ask you to replace it by a better definition. I have to admit that I can't do that. [Hume then goes on to repeat his theory and his reasons for it, concluding:] However extraordinary my views ·about cause-effect· may appear, I think it is useless to trouble myself with any further enquiry or reasoning on the subject, and shall now rely on them as on established maxims.

Before leaving this subject I shall draw some corollaries from my theory—ones that will enable us to remove four prejudices and popular errors that have held sway in philosophy. (1) We can learn from my doctrine that all causes are of the same kind, and that there is no basis for distinguishing •*making* causes from •*enabling* causes, or for sorting out causes according to whether they are

efficient,
formal,
material,
exemplary, or
final.

[The efficient cause of a coin is the stamping of a die on hot metal, its formal cause is its roundness etc., its material cause is the metal it is made of, and its final cause is the commercial end for which the coin was made. The notion of 'exemplary cause', employed by some mediaeval philosophers wishing to combine Plato with Christianity, can't be briefly explained here.] Our idea of efficiency ·or *making*· is derived from the constant conjunction of two ·kinds of· objects; when this is observed the cause is efficient; and where it is not, there is no cause of any kind. For the same reason we must deny that there is any essential difference between *cause* and *occasion*. If constant conjunction is implied in what we call 'occasion', it is a real cause. If not, it isn't a ·natural· relation at all, and can't give rise to any argument or reasoning. [Some philosophers, notably Malebranche, held that created things cannot really act on one another, and that what happens in billiards (for example) is that God causes the cue-ball to move *on the occasion of* its being struck by the cue.]

(2) The same course of reasoning will make us conclude that just as there is only one kind of *cause*, so also there is only one kind of *necessity*, and that the common distinction between 'moral' and 'physical' necessity has no basis. This account I have given of necessity makes this clear. The constant conjunction of objects, along with the determination of the mind, constitutes *physical necessity*; and when these are absent what you have is *chance*. As objects must either be conjoined or not, and as the mind must either be determined or not determined to pass from one object to another, there can't be any middle case between chance and absolute necessity. You don't change the nature of the necessity by weakening this conjunction and determination. Even in the operation of bodies there are different degrees of constancy ·of going-together·, and different degrees of force ·exerted on the mind in its movement from impression to idea·, without producing different *kinds of causality*.

The distinction that is often made between ·having· power and exercising it is equally baseless.

(3) Perhaps I can now fully overcome all the natural reluctance to accept my earlier arguments in which I tried to prove that *the necessity of a cause to every beginning of existence* has no demonstrative or intuitive support. That conclusion won't appear strange in the light of my definitions. If we define a 'cause' to be

> An object precedent and contiguous to another, and where all the objects resembling the former are similarly precedent and contiguous to objects that resemble the latter,

we can easily grasp that there is no absolute or metaphysical necessity that every beginning of existence should be preceded by such an object. And if we define a 'cause' to be

> An object precedent and contiguous to another, and united with it in the imagination in such a way that the idea of one determines the mind to form the idea of the other, and the impression of one to form a livelier idea of the other,

we shall have even less difficulty in assenting to my opinion. Such an influence on the mind—·so far from being something we can be sure *must go with every beginning of existence*—is in itself perfectly extraordinary and incomprehensible, and it is only from experience and observation that we are certain that it ever occurs.

(4) We can never have reason to believe in the existence of something of which we can't form an idea. All our reasonings about existence are derived from causation, so they are

derived from the experienced conjunction of objects and not from any exercise of pure thinking. So the same experience ·that grounds our causal reasoning· must give us a notion of these objects ·whose existence we reason to·; so there can't be any mystery in our conclusions—·that is, we can't soundly argue for the existence of an I-know-not-what of which we don't have an idea·. . . .

15: Rules by which to judge of causes and effects

According to my doctrine, there are no objects which we can, by merely surveying them and without consulting experience, discover to be the causes of anything else; and no objects that we can certainly discover in the same manner *not* to be the causes ·of specified other things·. **Anything can produce anything.** Creation, annihilation, motion, reason, volition—all these can arise from one another, or from any other object we can imagine. You won't find this strange if you hold in your mind together two principles that I have explained: •that the constant conjunction of objects determines their causation, and •that strictly speaking no objects are contrary to each other but existence and non-existence (see i.5). Where objects are not contrary, nothing hinders them from having the constant conjunction on which the relation of cause and effect totally depends.

Since it is thus *possible* for any object to be a cause or effect of any other, it may be proper to fix some general rules by which we can know when the cause-effect really *does* obtain. ·I shall offer eight such rules·.

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 between the cause and effect. This is what chiefly constitutes the cause-effect relation.

4. The same cause always produces the same effect, and the same effect always comes from the same cause. We derive this principle from experience. And it's the source of most of our philosophical reasonings. For when by any clear experience we have discovered the causes or effects of any phenomenon, we immediately extend our observation to every phenomenon of the same kind, without waiting for the constant repetition from which the idea of the cause-effect relation was originally derived.

5. (This rule depends on rule 4.) Where several different objects produce the same effect, it must be by means of some quality that we find to be common to them all. For as like effects imply like causes, we must always ascribe the causation to the respect in which the causes are alike.

6. (Another rule stemming from 4.) The difference in the effects of two similar objects must come from a respect in which the objects are not alike. For as like causes always produce like effects, when in any instance we find that this seems not to hold we must conclude that this irregularity proceeds from some ·not-yet-discovered· difference between the causes.

7. When an object increases or diminishes with the increase or diminution of its cause, it is to be regarded as a compounded effect, derived from the union of different effects arising from different parts of the cause. The absence (or presence) of one part of the cause is here supposed to be always followed by the absence (or presence) of a correspond-

ing part of the effect. This constant conjunction sufficiently proves that one part is the cause of the other. But we must not rashly draw such a conclusion from a few instances. A certain degree of heat gives pleasure; if you reduce the heat, the pleasure lessens; but it doesn't follow that if you raise the heat beyond a certain degree the pleasure will increase correspondingly; for we find that ·on the contrary· it degenerates into pain.

8. An object which exists for any time in its full perfection without any effect is not the sole cause of that effect, but needs to be assisted by some other force that can 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 shows that these causes are not complete ones.

Those eight rules contain all the logic that I think proper to use in my reasoning; and perhaps even they weren't much needed: the logic they contain might have been supplied by the natural workings of our understanding. Our Aristotelian intellectuals and logicians don't exhibit so much superiority over ordinary folk in their reason and ability that I want to imitate them by delivering a long system of rules and precepts to direct our judgment in philosophy! All the rules of this sort are very easy to discover, but extremely difficult to apply; and even empirical science, which seems the most natural and simple of all, requires the utmost stretch of human judgment. Every phenomenon in Nature is compounded and modified in so many details that in order to arrive at the decisive point we must carefully separate whatever is superfluous and investigate through new experiments whether every detail of the first experiment was essential to it. These new experiments are open to critical examination of the same kind; so that we need the utmost constancy to persevere in our enquiry, and the utmost skill to choose the right way among so many that present themselves. If this is the case even in •physical science, how much more in •the sciences of human nature, where there is a much greater complication of details, and where the beliefs and feelings that are essential to any action of the mind are so unconscious and obscure that they often escape our strictest attention, and are not only unaccountable in their causes but not even known to exist! I greatly fear that the small success I meet with in my enquiries will make this remark sound like an apology rather than—·what it really is·—a boast! If anything can give me confidence that I am proceeding on the right lines, it will be the widening of my range of empirical data as much as possible; so it may be proper at this point to examine the reasoning faculty of non- human animals as well as that of human creatures.

16: The reason of animals

It is ridiculous to deny an obvious truth, and almost as ridiculous to take much trouble to defend one; and no truth appears to me more obvious than that *beasts are endowed with thought and reason as well as men.* The evidence for this is so obvious that it never escapes the most stupid and ignorant.

We are conscious that we ourselves, in adapting means to ends, are guided by reason and design, and that we don't ignorantly or casually perform the actions that tend to self-preservation, and to getting pleasure and avoiding pain. So

when we see other creatures in millions of instances perform •similar actions directed to •similar ends, all our principles of reason and probability carry us with an irresistible force to believe in the existence of a •similar cause. I don't think I need to illustrate this argument with particular examples; the smallest attention ·to the non-human part of the animal kingdom· will supply us with more than enough. The resemblance between the actions of animals and those of men is so complete in this respect that the first action of the first animal we happen to choose will provide us with incontestable evidence for the present doctrine.

This doctrine is as useful as it is obvious, and furnishes us with a kind of touchstone by which to test every theory in this area of philosophy. The resemblance of the •external actions of animals to our own actions leads us to judge that their •internal actions also resemble ours; and that same line of reasoning, carried one step further, will make us conclude that since *their* internal actions resemble *ours*, the causes must also be alike. So when any hypothesis is advanced to explain a mental operation that is common to men and beasts, we must apply the same hypothesis to both; and just as every true hypothesis will survive this test, I venture to say that no false one will do so. In the systems that philosophers have employed to account for the actions of the mind, the common defect has been that they presuppose so much subtlety and refinement of thought that the thought they describe is out of reach not only of mere animals but even of children and common people in our own species, although they are capable of the same emotions and affections as people of the most accomplished genius and understanding. Such •subtle complexity is a clear proof of the falsehood ·of a theory of mind·, just as •simplicity is proof of its truth.

Let us, therefore, put our present system about 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.

I need to distinguish •the actions of animals that are of a down-to-earth kind and seem to be on a level with their common capacities from •those more extraordinary instances of wisdom that they sometimes display in the interests of their own preservation and the propagation of their species. A dog that avoids fire and precipices, that shuns strangers and caresses his master, gives us an instance of the •first kind. A bird that chooses with such care and precision the place and materials of her nest, and sits on her eggs for an appropriate time in a suitable season, ... provides us with a lively instance of the •second.

As to actions of the former kind, I assert that they come from a reasoning that is not different—in itself or in the forces behind it—from what appears in human nature. It is necessary in the first place that there be some impression immediately present to their memory or senses, to be the basis for 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 that his prey is not far away.

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 on one sign or motion for some time, and afterwards on another; and he will successively draw different conclusions in line with his most recent experience.

Now, let any philosopher try to explain the act of the mind we call 'belief', giving an account of its causes *without* bringing in the influence of custom on the imagination, and let his hypothesis be equally applicable to beasts as to the human species; when he has done this, I promise to accept

the result! But at the same time I demand that if my system is the only one that can do this, it should in fairness be accepted as entirely satisfactory and convincing. That it *is* the only one is evident almost without any reasoning.

- •Beasts certainly never perceive any real connection among objects. So
- •it is by experience that they infer one from another.
- •They can't by any argument reach the general conclusion that objects of which they have had no experience resemble those of which they have. So
- •it is through custom alone that experience operates on them.

All this was obvious enough with respect to man. When applied to beasts there can't be the least suspicion of mistake; which must be admitted to be a strong confirmation, or rather an invincible proof, of my system.

The force of habit in reconciling us to a phenomenon shows nowhere more strikingly than in this: men are not astonished at the operations of their own reason, yet they wonder at the instinct of animals, and find it hard to explain because it can't be traced back to the very same sources as their own reason·. To consider the matter rightly, reason ·itself· is nothing but a wonderful and unintelligible instinct in our souls, which carries us along a certain sequence of ideas and endows them with particular qualities according to their particular situations and relations. This instinct, admittedly, arises from past observation and experience; but can anyone give the ultimate reason why •past experience and observation produce such an effect, any more than why •Nature alone should produce it? Nature can certainly produce ·*without* help from habit· anything that can arise *from* habit; indeed, habit is merely one of the forces of Nature, getting all its power from Nature.

Part iv: The sceptical and other systems of philosophy

1: 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. So we must in every reasoning form a new judgment, as a check or control on our first judgment or belief; and ·as a basis for the new judgment· we must enlarge our view to take in a kind of history of all the cases where our understanding has deceived us, compared those with the ones where its testimony was sound and true. Our reason must be considered as a kind of *cause* of which truth is the natural *effect*; but a cause that can often be prevented from having its natural effect by the intrusion of other causes and by the inconstancy of our mental powers. In this way, all •knowledge degenerates into •probability; and this probability is greater or less depending on our experience of the truthfulness or deceitfulness of our understanding, and on how simple or complex the question is.

No algebraist or mathematician is so expert in his science that he places *complete* confidence in any truth immediately on discovering it, or regards it ·initially· as more than merely probable. Every time he runs over his proofs, his confidence increases; but still more by the approval of his friends; and it is brought to full perfection by the universal assent and applause of the learned world. And this gradual increase in confidence is obviously nothing but the addition of new probabilities, and is derived from the constant union of causes and effects according to past experience and observation.

In financial accounts of any length or importance, merchants seldom rely on the infallible certainty of numbers for their security. Rather, they structure their accounts in a manner that gives their results a greater probability than what is derived from the skill and experience of the accountant. For it is clear that skill and experience do yield some probability ·of accuracy·, though *what* the probability is varies according to how experienced the accountant is and how long his account is. Now, nobody will maintain that the result of a long calculation can be more than probable. Yet it is safe to say that there is hardly any proposition about numbers of which we can be more sure; for it is easy to break the longest series of additions down into steps in each of which one number less than 10 is added to another—the simplest operation that can be done with numbers. So we shall find it impracticable to show the precise limits of knowledge and of probability, or discover the particular number of steps at which knowledge stops and probability begins. But knowledge and probability can't shade into each other: they are of contrary and disagreeing natures, and they can't be split up—each of them must be either entirely present, or entirely absent. Furthermore, if •any single addition were certain ·and a case of knowledge·, •every one would be so, and consequently the total sum would be certain—unless the whole can be different from all its parts. I had almost said 'This is certain', but I reflect that what I am saying applies to itself as well as to every other reasoning, and thus must therefore slide from knowledge down into probability.

So all knowledge resolves itself into probability, and eventually comes to be of the same nature as the kind of assurance that we have in common life. Let us, then, examine

our common-life sort of reasoning, to see what foundation it stands on.

In every judgment that we can form about probability, as well as about knowledge, we ought always to correct the •first judgment derived from the nature of the object by a •second judgment derived from the nature of the understanding. A man of solid sense and long experience certainly should and usually does have more confidence in his opinions than a man who is foolish and ignorant. . . . But even in someone with the best sense and longest experience this confidence is never complete, because such a person must be conscious of many errors in the past, and must still fear making more. So now there arises a new sort of probability to correct and regulate the first, assigning to it its proper level of confidence. Just as demonstration is subject to the control of probability, so also ·this· probability admits of further adjustment through an act of the mind in which we reflect on the nature of our understanding and on the reasoning that took us to the first probability.

Now we have found in every probability •the original uncertainty inherent in the subject and also •a second uncertainty derived from the weakness of our judgment ·in arriving at the first probability·. When we have put two together ·to get a single over-all probability·, we are obliged by our reason to add •a third doubt derived from the possibility of error ·at the second stage· where we estimated the reliability of our faculties. This third doubt is one that immediately occurs to us, and if we want to track our reason closely we can't get out of reaching a conclusion about it. But even if this conclusion is favourable to our second judgment, it is itself based only on probability and must weaken still further our first level of confidence. And it must *itself* be weakened by a •fourth doubt of the same kind, and so on ad infinitum; till at last nothing remains of the first probability, however great we may have supposed it to be, and however small the lessening of it by every new uncertainty. Nothing that is finite can survive an infinity of repeated decreases; and even the vastest quantity that we can imagine must in this manner be reduced to nothing. However strong our first belief is, it is bound to perish when it passes through so many new examinations, each of which somewhat lessens its force and vigour. When I reflect on the natural fallibility of my judgment, I have less confidence in my opinions than when I consider only the topic that I am reasoning about; and when I go still further and scrutinize every successive estimation that I make of my faculties, all the rules of logic require a continual lessening and eventually a total extinction of belief and evidentness.

'Do you sincerely assent to this argument that you seem to take such trouble to persuade us of? Are you really one of those sceptics who hold that everything is uncertain, and that our judgment doesn't have measures of truth and falsehood on any topic?' I reply that this question is entirely superfluous, and that neither I nor anyone else was ever sincerely and constantly of that ·sceptical· opinion. Nature, by an absolute and uncontrollable necessity, *makes* us judge as well as breathe and feel; and we *can't prevent ourselves* from •viewing certain objects in a stronger and fuller light on account of their customary connection with a present impression, any more than we can prevent ourselves from •thinking as long as we are awake, or from •seeing nearby bodies when we turn our eyes towards them in broad sunlight. Whoever has taken trouble to refute the objections of this total scepticism has really been disputing without an antagonist, trying to establish •by arguments a faculty that •Nature has already implanted in the mind and made unavoidable.

Then why did I display so carefully the arguments of that

fantastic sect (·the total sceptics·)? It was to make you aware of the truth of my hypotheses that •all our reasonings about causes and effects are derived from nothing but custom, and that •belief is strictly an act of the *feeling* part of our natures rather than of the *thinking* part. ·I now proceed to connect the second of these hypotheses with what I have shown about reasoning and probability·.

Concerning the elements in our make-up that make us reach a conclusion on any subject, and correct that conclusion in the light of thoughts about our intellectual limits and about the situation of our mind when we reached the conclusion, I have proved that they—these very same elements—when carried further and applied to every new judgment on ourselves, must by continually lessening our original confidence eventually reduce it to nothing, utterly subverting all belief and opinion. So if belief were a simple act of thought, not involving any special *manner* of conception such as conceiving in a forceful and lively way, it would be bound to destroy itself and in every case terminate in a total suspense of judgment. But experience will sufficiently convince you (if you think it worthwhile to try this) that although you can't find anything wrong with my arguments you still continue to believe, think, and reason as usual; so you can safely conclude that your reasoning and belief is some *sensation* or peculiar *manner* of conception that can't be destroyed by mere ideas and reflections.

But here a further question may be raised:

> Even on your hypothesis ·about what belief is·, how does it happen that your arguments early in this section don't produce a total suspension of judgment? *How* does the mind ever retain any degree of assurance on any subject? These new probabilities whose repetition perpetually lessens the original confidence are based on the very same principles as the first judgment in the series, and it makes no difference whether the principles have to do with thought (·which you deny·) or with sensation (·which you assert·). *Either way*, it seems unavoidable that they must subvert belief, through the opposition either of contrary thoughts or of contrary sensations, reducing the mind to a total uncertainty. Some question is proposed to me, and after going over the impressions of my memory and senses, and carrying my thoughts from them to objects of the kinds commonly conjoined with them, I feel a stronger and more forcible conception on one side ·of the question· than on the other. This strong conception (·according to you·) constitutes my first conclusion ·or belief·. Next, I examine my judgment itself and, observing from experience that it is sometimes sound and sometimes erroneous, I see it as governed by contrary forces or causes, of which some lead to truth and others to error; and in balancing these contrary causes I arrive at a new probability which lessens the assurance of my first conclusion. This new probability is open to being lessened in the same way as the previous one was, and so on, ad infinitum. So how does it happen that even after all that we retain a degree of belief that is sufficient for our purpose in philosophy or in common life?

I answer that after the first and second conclusions the action of the mind becomes forced and unnatural, and the ideas become faint and obscure. The •principles$_c$ of judgment and the balancing of opposite causes is the same as at the very beginning, but their •influence on the imagination and the difference they make to the vigour of the thought is by no means the same. When the mind doesn't grasp its objects with easy smoothness, the same sources of activity don't have the same effect as they do in a more natural

conception of the ideas; and the imagination doesn't feel a sensation anything like the one that comes from its everyday judgments and opinions. The attention is on the stretch; the posture of the mind is uncomfortable, and the ·animal· spirits, being diverted from their natural course, are not governed in their movements by the same laws as when they flow in their usual channel—or at any rate are not governed by them to the same degree.

It isn't difficult to provide other examples of the same phenomenon; the present subject of metaphysics supplies them in abundance. An argument that would have been found convincing in a reasoning about history or politics has little or no influence in abstruser subjects such as metaphysics, even when it is perfectly understood; and that is because understanding it requires a study and an effort of thought, which 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 who represented his heroes as talking cleverly and inventively in their misfortunes would never touch the passions. Just as the •emotions of the soul prevent any •subtle reasoning and reflection, so •reflective thinking tends to quell •emotions. The mind, as well as the body, seems to be endowed with a certain definite amount of force and activity which it employs in one action only at the expense of all the rest. This is more evidently true where the actions are of quite different kinds; for then the force of the mind is not only redirected but its disposition is changed, making us incapable of a sudden switch from one action to the other, let alone of performing both at once. No wonder, then, that the belief arising from a subtle reasoning lessens in proportion to the efforts that the imagination makes to enter into the reasoning and to conceive it in all its parts. Belief, being a lively conception, can never be complete when it is not founded on something natural and easy.

I take this to be the true state of the question, and cannot approve of the way in which some people try dispose of the sceptics by rejecting all their arguments at once, without enquiry or examination. They argue like this:

> If the sceptical reasonings are strong, that is a proof that reason can have some force and authority; if they are weak, they can never be sufficient to invalidate all the conclusions of our understanding.

This argument is not sound, and here is why. If the sceptical reasonings could exist and not be destroyed by their own subtlety, they would be successively strong and weak, according to the successive dispositions of the mind. Reason first appears in possession of the throne, prescribing laws with absolute authority. So her enemy (·the sceptical argument·) has to take shelter under her protection and by using rational arguments to prove reason's incompetence and liability to error, her enemy produces a sort of warrant of authenticity signed and sealed by reason. This warrant initially has some authority in proportion to the present and immediate authority of reason from which it is derived. But as it is supposed to be contradictory to reason, it gradually lessens •the force of that governing power and •its own force at the same time; till at last they both vanish away into nothing through regular and proper lessenings. ·Here is how·. The sceptical and anti-sceptical reasons are of the same kind, though working in contrary directions, so that when the anti- sceptical case is strong it has to reckon with an enemy of equal force in the sceptical case; and as they started out with equal force, they continue like that for as long as either of them exists; and neither loses any force in the contest without taking as much from its opponent. So it is fortunate that Nature eventually breaks the force of all

sceptical arguments, keeping them from having much influence on the understanding. If we put all our trust in their destroying themselves, ·as alleged in the above argument·, we would be relying on something that can never take place until they (·the sceptical arguments·) have first subverted all belief and totally destroyed human reason.

2: Scepticism with regard to the senses

Thus the sceptic still continues to •reason and believe, even though he asserts that he can't defend his reason by reason; and by the same rule he must •assent to the principle concerning the existence of body, though he can't claim to maintain its truth by any arguments of philosophy. Nature hasn't left this to his choice, and has doubtless thought it too important 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 it is pointless to ask 'Is there body or not?', because that is something we must—·being compelled by Nature·—take for granted in all our reasonings.

So the subject of our present enquiry is *the causes that induce us to believe in the existence of body*. I start with a distinction that at first sight may seem superfluous, but which will contribute greatly to the perfect understanding of what follows. Two questions that are commonly run together ought to be examined separately. They are:

- •Why do we attribute a **continued** existence to objects even when they aren't present to the senses? and
- •Why do we suppose objects to have an existence **distinct** from the mind and perception?

In the second question, I ·am using 'distinct from' to· refer to object's spatial position as well as its ·causal· relations—•its external position as well as •the independence of its existence and operation. These two questions, about the continued and distinct existence of body, are intimately connected. For if the objects of our senses •continue to exist even when they are not perceived, their existence is of course independent of the perception and ·in that sense· •distinct from it; and conversely, if their existence is independent of the perception and ·in that sense· •distinct from it, they must •continue to exist even when they are not perceived. But though a decision on either of the questions also decides the other as well, it will be easier for us to discover the sources in human nature from which the decision arises if we treat •continuity separately from •distinctness. So I shall inquire whether the opinion that bodies have a •continued existence is produced by the senses, by reason, or by the imagination, and shall inquire into the analogous question regarding the opinion that bodies exist •distinct from the mind. These are the only questions that are intelligible on the present subject. As for the notion of external existence, when understood to mean that bodies exist and are of a categorially different sort from our perceptions, I have already shown its absurdity in 6_{ii}.

·THE SENSES·

Obviously the senses can't give rise to the view that objects •continue to exist after they have stopped appearing to the senses. For them to do *that* would be for them to continue to operate even after they have entirely stopped operating, which is a contradiction in terms. So if the senses have any influence in the present case, it must be in producing the opinion that bodies have a •distinct (not a continued) existence. If they were to do that, it would have to be either

by presenting their impressions as •images [= 'likenesses'] and representations ·of bodies existing distinct from the mind· or by presenting their impressions as •themselves *being* these distinct and external existences. ·Let us look at these separately·.

It is obvious that our senses don't offer their impressions as the images of something distinct (i.e. independent and external), because all they convey to us is a single perception, with not the slightest hint of anything beyond it. A single perception can't produce the idea of two existing things except through some inference of either reason or imagination (·and I shall come to them later·). When the mind looks further than what immediately appears to it, its conclusions can never be attributed to the senses; and it certainly *does* look further when from a single perception it infers two existing things and supposes relations of resemblance and causation between them.

So if our senses suggest any idea of distinct existences, they must do it by presenting their impressions as *being* those very existences, this being a kind of fallacy and illusion. In this connection I point out that all sensations are felt by the mind as what they really are; when we *wonder whether* they present themselves as distinct objects or only as impressions, we aren't asking about their nature but about their •relations and •situation—·specifically, about whether they are •related to us by causation or resemblance, and whether they are •located somewhere other than where we are·. Now, if the senses presented our impressions as being objects that are *external to and independent of ourselves*, they must be able to relate the objects to ourselves, which means that we ourselves must appear to our senses. So that is the question we now have to face: *how far are we ourselves the objects of our senses?* No question in philosophy is more abstruse than the one about ·personal· identity—about the nature of the uniting principle$_c$ that ·makes a •number of items· constitute •one person. So far from being able to answer it merely through our senses, we must—·and in section 6 I shall·—have recourse to the most profound metaphysics to give a satisfactory answer to it; and in common life it is obvious that these ideas of *self* and *person* are never very fixed or determinate. So it is absurd to suggest that *the senses* can ever distinguish ourselves from external objects.

And a further point: All impressions (external and internal), passions, affections, sensations, pains, and pleasures are originally on the same footing; and whatever differences we may observe among them, they *all* appear in their true colours *as impressions or perceptions* ·and not as objects distinct from ourselves·. Indeed, it is hardly possible that it should be otherwise: it isn't conceivable that our senses should be able to deceive us about the •situation and relations of our impressions, any more than about their •nature. For since all the actions and sensations of the mind are known to us by consciousness, they must in every detail appear to be what they are, and be what they appear. It is impossible that something that enters the mind as *really* a perception should *appear* to be something different. If that could happen, it would mean that we might be mistaken even about what we are most intimately conscious of.

Rather than spending more time examining whether our senses *possibly could* deceive us by representing our perceptions as distinct from ourselves (that is, as •external to and •independent of us), let us consider whether they *really do* so. . . . Here is an argument that might be used:

> My own body evidently belongs to me, and as various impressions appear exterior to *my body* I suppose them to be exterior to *me*. (Let's set aside the metaphysical question about the identity of a thinking substance, ·which may be tied up with the question of

what *I* am·.) The paper on which I am now writing is beyond my hand. The table is beyond the paper. The walls of the room beyond the table. And in looking towards the window I see a great stretch of fields and buildings beyond my room. From all this it can be inferred that all I need are my senses, with no help from any other faculty, to be convinced of the external existence of body.

This inference is blocked by the three following considerations. **(1)** Properly speaking, when we look at our limbs and other body-parts what we perceive isn't •our body but rather •certain impressions that come to us through the senses; so when we treat these impressions as being (or as being impressions *of*) real bodies, that is an act of the mind that's as hard to explain as the one we are now examining. **(2)** Sounds, tastes, and smells, though commonly regarded by the mind as •continued •independent qualities, don't appear to have any existence in the extended realm, so that *they* can't appear to the senses as situated outside the body. The reason why we *ascribe* a place to them will be considered in section 5. **(3)** Even our sight doesn't inform us of distance or outerness immediately and without a certain reasoning and experience, as is agreed by the most rational philosophers ·under the lead of Berkeley·.

As to the •independence of our perceptions from ourselves, this can never be given to us by the senses; any opinion we form about it must be derived from experience and observation; and we'll see later that our conclusions from experience are far from being favourable to the doctrine of the independence of our perceptions. Anyway, I would point out that when we talk of real 'distinct' existents, we are usually thinking more of their •independence than of their •external position; we think an object has sufficient reality if its existence is uninterrupted, and independent of the incessant revolutions that we are conscious of in ourselves.

Summing up what I have said about the senses: They give us no notion of •continued existence because they can't operate beyond the limits within which they really operate. No more do they produce the opinion of a •distinct existence, because they can't offer that to the mind as represented or as original. To offer it as represented, they must present both an object and an image. To make it appear as original, they would have to convey a falsehood, ... but in fact they don't and can't deceive us. So we can conclude with certainty that the senses don't give rise to the opinion of a •continued existence or of a •distinct one.

I shall confirm this ·with an argument that will run to the end of the next paragraph·. Three different kinds of impressions are conveyed by the senses:

- •those of bodies' shape, size, motion, and solidity,
- •those of colours, tastes, smells, sounds, heat, and cold; and
- •pains and pleasures that arise from the application of objects to our bodies, for example by the cutting of our flesh with steel.

Both philosophers and ordinary folk suppose the first of these to have a distinct continued existence. Only common people regard the second in that way. Both philosophers and common folk, again, regard the third as merely perceptions and thus as being interrupted and dependent in their existence.

Now, whatever our philosophical opinion may be, it is obvious that *so far as the senses can tell* colours, sounds, heat, and cold exist in the same way as do motion and solidity; and that the mere perception ·of them· isn't what makes us distinguish them in this respect, ·by attributing independent existence to the latter group and not the former·.

·On the contrary, many people think their senses tell them that colours etc. *do* have an independent existence·. The prejudice in favour of assigning a distinct continued existence to colours etc. is so strong that when the contrary opinion is advanced by modern philosophers, people think they can almost refute it by appealing only to their feeling and experience; their very senses, they think, contradict this philosophy! It is also obvious that colours etc. are originally on the same footing as the pain that arises from steel and pleasure that comes from a fire, and that the difference between them is based not on perception or reason but on the imagination. Both lots—·colour etc. and pain etc.·—are agreed to be nothing but perceptions arising from the particular configurations and motions of the parts of body, so how could they possibly differ? Taking all this into account, we can conclude that, as far as the senses are judges, all perceptions are the same in their manner of existence.

·Reason·

Notice that when people attribute a distinct continued existence to sounds and colours, they do this without ever consulting reason or testing our opinions by any philosophical principles. Indeed, whatever convincing arguments philosophers may think they can produce to establish the belief in objects that are independent of the mind, these arguments are known to only a very few; it is not by *them* that children, peasants, and most of mankind are induced to attribute ·independent· objects to some impressions and deny them to others. Thus, we find that all the conclusions that common people arrive at about this are *directly contrary* to those that are confirmed by philosophy! For philosophy informs us that everything that appears to the mind is nothing but a perception, and is interrupted and dependent on the mind; whereas common people confuse •perceptions with •objects, and attribute a •distinct continued existence (·objects·) to the very things they feel or see (·perceptions·). This opinion is entirely *unreasonable*, therefore, and so it must come from some faculty other than the understanding, ·i.e. other than *reason*·. To which I would add this: As long as we take our perceptions and objects to be the same, we can't infer the existence of the objects from the existence of the perceptions, or form any argument from the relation of cause and effect, which is the only one that can assure us of any matter of fact. And even after we distinguish perceptions from objects, it will soon appear that we still can't reason from the existence of one to the existence of the other. All this shows that our reason doesn't and couldn't possibly, on any supposition, give us an assurance of the continued and distinct existence of body. That opinion must be entirely owing to the imagination, which must now be the subject of our enquiry. ·The discussion of the imagination's role in producing the belief in continued bodies that are distinct from us will occupy more than half of the length of this section·.

·Imagination: first attempts·

Since all impressions are internal and perishing things, and appear as such, •the notion of their distinct and continued existence ·can't arise from them alone; so it· must arise from some of their qualities aided by qualities of the imagination; and since •this notion doesn't extend to *all* of them, it must arise from qualities that *only some* impressions possess. So we can easily discover what these qualities are by comparing the impressions to which we attribute a distinct and continued existence with those that we regard as internal and perishing.

It has commonly been supposed that we attribute a reality and continued existence to some impressions because they are *involuntary* (·as I look up from this table with my eyes open I *can't help* **seeing** the window, whereas with my eyes closed I can *choose* whether to **imagine** the window·);

and another suggestion is that we attribute a reality and continued existence to some perceptions because they have *greater force and violence* than the others (·my perception when I see the window is more forceful than the one I have when I imagine the window·). These are both wrong. It is obvious that some impressions that we never suppose to have any existence beyond our perception are just as involuntary as, and are *more* violent than, the impressions of shape and extension, colour and sound that we suppose to be permanent beings; for example our pains and pleasures, our passions and affections. . . .

Having rejected these common opinions, we must search for some other theory revealing the special qualities in some impressions that makes us attribute to them a distinct and continued existence.

After a little examination we shall find that all the objects to which we attribute a continued existence have a peculiar **constancy** that distinguishes them from the impressions ·that we don't regard as existing continuously, through gaps in our perception, because we think that their· existence depends on our perception. The mountains and houses and trees that I see at this moment have always appeared 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 to me without the least alteration. My bed and table, my books and papers, present themselves in the same uniform manner, and don't change because of interruptions in my seeing or perceiving them. This is the case with *all* the impressions whose objects are supposed to have an external existence, and it doesn't hold for *any* other impressions, whether gentle or violent, voluntary or involuntary.

But this constancy is not perfect, and admits of considerable exceptions: bodies often change their position and qualities, and after a little absence or interruption they may be hardly knowable. But we can see that even in these changes they preserve a •coherence, and have a regular •dependence on each other, which is the basis for a kind of reasoning from causation that produces the opinion of their continued existence. When I return to my room after an hour's absence, I don't find my fire in the same state as when I left it; but then in other cases I have been accustomed to seeing a similar alteration produced in a similar period of time, whether I am present or absent. (·Similar initial states of the fire have regularly been followed by similar subsequent states; this makes me think that the former cause the latter; and that requires that the fire stayed in existence throughout. This is the 'kind of reasoning from causation' to which I referred·.) So this **coherence** in their changes is one of the characteristics of external objects, as well as their **constancy**.

Having found that the belief in the continued existence of body depends on the coherence and constancy of certain impressions, I now ask *how* these qualities give rise to this extraordinary opinion. To begin with coherence: although the internal impressions that we regard as fleeting and perishing also have a certain coherence or regularity in their appearances, it is of a somewhat different kind from what we find in bodies. We find by experience that our •passions have a mutual connection with and dependence on each other; but we never find ourselves having to suppose that they have existed and operated when they were not perceived, in order to preserve the same dependence and connection of which we have had experience. It is not like that with •external objects. *They* require a continued existence if they are not to lose much of the regularity of their operation. I am sitting here in my room with my face to the fire, and all the objects that strike my senses are within a few yards of me. (It is true that my memory informs me of the existence of many

·other· objects; but what it tells me is only about their *past* existence, and neither it nor my senses tell me that those things have continued in existence until now.) So here I am, turning over these thoughts, when suddenly I hear a noise as of a door turning on its hinges, and a moment later I see a porter coming towards me. This gives rise to many new reflections and reasonings ·in which three things predominate·. •I have never observed that this ·kind of· noise could come from anything but the motion of a door; so I conclude that the present phenomenon is a contradiction to all past experience unless the door that I remember on the other side of the room still exists. •I have always found that human bodies have a quality that I call 'gravity' which prevents them from floating in the air, which is what this porter must have done to arrive at my chamber unless the stairs that I remember have survived my absence ·from them·. •I receive a letter which, when I open it, I see by the handwriting and signature to have come from a friend, and in it he says he is six hundred miles away. Obviously I can't account for this phenomenon, consistently with my experience in other instances, without spreading out in my mind the whole sea and continent between us, and supposing the effects and continued existence of coaches and ferries, according to my memory and observation. Looked at in a certain way, these phenomena of the porter and letter are contradictions to common experience, and may be regarded as objections to the maxims we form about the connections of causes and effects. I am accustomed to hearing a certain sound and at the same time seeing a certain object in motion. On this occasion I have received one of these impressions without the other. These observations are contrary unless I suppose that the door still exists and that it was opened without my perceiving it; and this supposition, which at first was entirely arbitrary and hypothetical, becomes more strong and convincing through being the only one that lets me reconcile the contradiction. At almost every moment of my life there is a similar instance presented to me, leading me to suppose the continued existence of objects in order to connect their past appearances with their present ones, giving them such a union with each other as I have found by experience to be suitable to their particular natures and circumstances. Thus I am naturally led to regard the world as something real and durable, and as preserving its existence even when I don't perceive it.

•This inference from the coherence of appearances may seem to be of the same nature with •our reasonings about causes and effects, because both are derived from custom and regulated by past experience. But we shall find that they are ultimately quite different from one another, and that our present inference arises from the understanding and from custom ·not in the direct way that causal reasoning does, but· in an indirect and oblique manner. You will agree that since nothing is ever really present to the mind except its own perceptions,

> it is impossible that •any habit should ever be acquired other than through the regular succession of these perceptions, and impossible that •any habit should ever exceed that degree of regularity.

So a certain degree of regularity in our perceptions can't be a basis for us to infer a *greater* degree of regularity in some objects that are not perceived. To suppose that it could is to suppose a contradiction—namely, a habit acquired by something that was never present to the mind. But when we infer the continued existence of the objects of sense from their coherence and the frequency of their union, we obviously do this so as to give them a *greater* regularity than has been observed in our mere perceptions. ·To make this clearer, I shall redescribe the situation in slightly different terms·. We

notice a connection between two kinds of objects in their past appearance to the senses, but we don't see this connection to be perfectly constant, because we can break it by turning our head or shutting our eyes. So what we suppose in this case is that these objects still continue their usual connection, despite their apparent interruption, and that the irregular appearances ·of them· are joined by something that we don't perceive. But as all reasoning about matters of fact arises purely from custom, and custom can only be the effect of repeated perceptions, extending custom and reasoning *beyond* the perceptions can never be the direct and natural effect of the constant repetition and connection. It must, therefore, arise from the cooperation of some other forces.

I have already observed in examining the foundation of mathematics (in 4_{ii}) that when the imagination embarks on any line of thinking it is apt to continue even when its object fails it; like a galley put in motion by the oars, it carries on its course without any new impulse. I gave this as the reason why, after considering several rough standards of equality and correcting them by each other, we proceed to imagine a standard of equality that is so correct and exact that it can't admit of the least error or variation. The same tendency makes us easily entertain this opinion of the continued 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 continued existence; and once the mind is engaged in observing a uniformity among objects, it naturally continues this until it renders the uniformity as complete as possible. The simple supposition of their continued existence suffices for this purpose, and gives us a notion of a much greater regularity ·or •coherence· among objects than they have when we look no further than our senses.

But whatever force we may ascribe to this tendency, I am afraid it is too weak to support unaided such a vast edifice as *the continued existence of all external bodies*. To give a satisfactory account of that opinion, I think, we must bring in not only the •coherence of objects but also their •constancy. There is an inference from the constancy of our perceptions which, like the preceding one from their coherence, gives rise to the opinion of the continued existence of body. (·Notice that I am still focussing on objects' *continued* existence·; the belief in that is prior to, and a cause of, the belief in their *distinct* existence.) Explaining this will lead me into a considerable range of very profound reasoning, and I want to avoid confusion; so I think it worthwhile to give a short sketch or abridged version of my system before proceeding to lay out its parts in detail.

·IMAGINATION: SKETCH OF THE SYSTEM·

When we have been accustomed to observe a constancy in certain impressions, and have found that the perception of the sun or ocean (for instance) returns to us after an absence or annihilation with similar parts and in a similar order to its first appearance, we aren't apt to regard these interrupted perceptions as different, which they really are; on the contrary, we consider them as *individually the same*—·thinking that my present impression that I now have is the very one, the same individual impression, that I had an hour ago·—on account of their *resemblance*. But ·we are pulled also in the opposite direction·: the interruption of the existence of the impressions is contrary to their perfect ·individual· identity, and makes us think that the first impression was annihilated and a second one created later; so we find ourselves somewhat at a loss, and are involved in a kind of contradiction. In order to free ourselves from this difficulty, we disguise the interruption as much as we

can, or rather we abolish it by supposing that these interrupted perceptions are connected by a real existence that we don't perceive. This supposition—this *idea of continued existence*—acquires force and liveliness from the memory of the broken impressions and from that propensity they give us to suppose them to be ·individually· the same; and according to my theory of belief, the very essence of belief consists in the force and liveliness of the conception.

In order to justify this system, four things are needed. •To explain the *principium individuationis*, or principle of identity; •to explain why the resemblance of our broken and interrupted perceptions induces us to attribute an identity to them; •to explain why this illusion—·this false attribution of identity·—gives us a propensity to unite these broken appearances by ·supposing· a continued existence; and •to explain the force and liveliness of conception that arises from the propensity.

·IMAGINATION: FIRST PART OF THE SYSTEM·

First, as to the principle of individuation, notice that the view of a single object is not sufficient to convey the idea of identity. Consider the proposition *An object is the same as itself*. If the idea expressed by 'object' is exactly the one meant by 'itself', the proposition really means nothing; and in that case it doesn't contain a predicate and a subject, though the sentence purports to do so. One single object conveys the idea of *unity*, not of *identity*.

On the other hand, a number of objects can never convey the idea of identity, however alike they may be. The mind always pronounces *this* one not to be *that* or *the other*, and considers them as forming two, three or some higher number of objects, whose existences are entirely distinct and independent.

Since *number* and *unity* are thus both incompatible with it, the relation of identity must lie in something that is neither of them. At first sight this seems quite impossible: there can't be something intermediate between unity and number, any more than there can between existence and non- existence. Given one object, we either have another, in which case we have the idea of number; or we don't have any other, in which case the object remains at unity.

To remove this difficulty, let us get help from the idea of time or duration. I have already observed in 5_{ii} that time in a strict sense implies change, and that when we apply the idea of time to any unchanging object, supposing it to participate in the changes of the coexisting objects and in particular of the changes in our perceptions, this is only *a fiction of the imagination*. This fiction, which almost universally takes place, is the means by which we get a notion of identity from a single object that we survey for a period of time without observing in it any interruption or variation. ·Here is how it does that·. We can consider any two points in this period in either of two ways: we can

> •survey them at the very same instant, in which case they give us the idea of **number**: both as being two points in time, and as containing perceptions of two objects, for the objects must be multiplied in order to be conceived as existing in these two different points of time;

or we can

> •trace the succession of time by a matching succession of ideas, conceiving first one moment along with the object at that time, then imagine a change in the time without any variation or interruption in the object; and so we get the idea of **unity**.

Here then is an idea that is intermediate between unity and number, or—more properly speaking—is either of them, according to how we look at it; and this is the idea that we call the idea of identity. We can't in propriety of speech say that

an object is the same as itself unless we mean that *the object existent at one time is the same as itself existent at another*. In this way we make a difference between the idea meant by 'object' and that meant by 'itself', without going as far as number yet without confining ourselves to a strict and absolute unity.

Thus the principle of individuation is nothing but the invariableness and uninterruptedness of an object through a supposed variation of time, by which the mind can trace it in the different periods of its existence, without any break in the view, and without being obliged to form the idea of multiplicity or number.

·IMAGINATION: SECOND PART OF THE SYSTEM·

I now proceed to show why the constancy of our perceptions makes us ascribe to them a perfect numerical identity, even though there are very long intervals between their appearances, and even though they have only one of the essential qualities of identity, namely invariableness. To avoid all ambiguity and confusion about this, I explain that I am here going to account for the opinions of *common people* with regard to the existence of bodies; so I must entirely conform to their manner of thinking and talking. Now, ·some· philosophers distinguish sense-*perceptions* from *objects* of the senses, and suppose that the objects coexist with the perceptions and resemble them; but, as I have already remarked, this distinction is not recognized by the general run of people, who *perceive* only one thing and wouldn't assent to the opinion that there *really are* two, of which one represents the other. For them, the very sensations that enter by the eye or ear are the true objects, and they can't make much sense of the suggestion that •this pen that is immediately perceived represents •another pen that is like it. To accommodate myself to their notions, therefore, I shall at first suppose that there is only a single existing thing that I shall call 'object' or 'perception' as seems best for my purpose ·in the given context·, understanding each word to stand for what any common man means by 'hat' or 'shoe' or 'stone' or any other impression that his senses bring to him. I shall be sure to warn you when I return to a more philosophical way of speaking and thinking. [See page 109.] Now we face the question about the source of the error and deception that we are prey to when we attribute identity to our resembling perceptions, despite their interruption. Here I must recall something that I proved and explained in 5_{ii}, namely that what is most apt to make us mistake one idea for another is a relation between them that links them in the imagination so that it passes easily from one to the other. The relation that does this the most effectively is *resemblance*, because it causes an association not only of ideas but also of dispositions: when some act or operation of the mind leads us to have a certain idea, it will be led also to have a similar idea *through a similar act or operation*. I have commented on the importance of this. We can take it as a general rule that any •two ideas that put the mind into the same disposition, *or into similar ones*, are very apt to be confounded—·and thus to be thought to be •one idea·. The mind readily passes from one to the other and doesn't notice the change unless it attends very closely—and that is something of which most people's minds are wholly incapable.

In order to apply this general maxim, we must first examine

> •the disposition of the mind when it views an object that preserves a perfect identity,

and then find

> •some other object that we wrongly identify with the former one because it causes in us a similar disposition.

When we fix our thought on some object and suppose it

to continue the same for some time, it's clear that we are supposing that only the *time* is changing, and we don't put ourselves to the trouble of producing any new image or idea of the *object*. The mind's faculties in this case are not put to any work beyond what is necessary to continue the idea we formerly had, which goes on existing without variation or interruption. The passage from one moment to the next is hardly felt, and the conception of it doesn't involve any difference of perception or idea. . . . That is the disposition of the mind when it contemplates a perfectly identical object. Now we have to discover what *other* objects can put the mind in that same disposition when it considers them, causing the same uninterrupted passage of the imagination from one idea to another. This is of the highest importance. For if we find any such objects, we can certainly conclude (from the foregoing principle) that it is very natural for them to be wrongly identified with identical objects, and are taken to be such in most of our reasonings. But though this question is very important, it is not very difficult or doubtful. For I immediately reply that *a sequence of related objects* puts the mind into this disposition: such a •sequence is contemplated with the same smooth and uninterrupted progress of the imagination as accompanies a view of a •single invariable object. The very nature and essence of ·natural· relations is to connect our ideas with each other, and when one idea appears to facilitate the move to the related one. The move between related ideas is therefore so smooth and easy that it produces little alteration in the mind, and seems like a continuation of a single action; and as the continuation of a single action is an effect of the continued view of a single object, this is why we attribute singleness to every succession of related objects, treating them as though they were a single object. The thought slides along the succession as easily as if it were considering only one object; and so it confounds the succession with the identity.

We shall later see many instances of this tendency of *relations* to make us ·wrongly· identify different objects with one another, but here I shall stay with the present subject. We find by experience that there is so much constancy in most of the impressions of the senses that their interruption produces no alteration in them, allowing them to returning ·to our senses· with the same appearance and situation as they had before. I survey the furniture in my room; I shut my eyes and then re-open them; and I find my new perceptions to resemble perfectly the previous ones. I observe this resemblance ·across interruptions· in a thousand instances, and it naturally connects my ideas of these interrupted perceptions by the strongest relation, conveying the mind easily from one to another. An easy passage of the imagination along the ideas of these •different and interrupted perceptions is almost the same disposition of mind as that in which we contemplate •one constant and uninterrupted perception. It is therefore very natural for us to mistake the one for the other.[8]

·Imagination: third part of the system·

The people who have this opinion about the identity of

[8] This reasoning is admittedly rather abstruse and hard to understand; but the remarkable fact is that this very difficulty can be turned into an argument for the reasoning! We can see that there are two resemblances that contribute to our mistaking •the sequence of our interrupted perceptions for •an identical object. The first is the resemblance of the perceptions that are involved in each; the second is the resemblance of the acts of the mind that are involved in each. Now we are apt to confound *these resemblances* with each other, ·and that is what makes this whole piece of theory hard to get straight in one's mind·. It is also what it is natural for us to do, according to this very theory. If you can only keep the two resemblances distinct, you'll have no difficulty in following my argument.

our resembling perceptions are in general all the uthinking and unphilosophical part of mankind, (that is, all of us at one time or another); so they are the ones who (·as I said earlier·) suppose their perceptions to be their only objects, and never think of a double existence: ·perception and external object·, internal and external, representing and represented. The very image that is present to the senses is for them (for *us*!) the real body, and it is to these interrupted images we ascribe a perfect identity. But the interruption of the appearance seems contrary to their identity, and that naturally leads us to regard the resembling perceptions as different from each other ·after all·. Here we 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 a number of distinct though similar things that appear after certain intervals.

The perplexity arising from this contradiction inclines us to unite these broken appearances by *the fiction of a continued existence*, which is the third part of the system I offered to explain.

Our experience shows us—as certainly as it shows anything—that whatever contradicts either our opinions or our passions generates a noticeable uneasiness, whether the contradiction comes from without or from within—from the opposition of external objects or from the conflict of forces inside us. On the other hand, anything that chimes with our natural propensities, and either externally advances their satisfaction or internally goes along with their turns of thought and feeling, is sure to give us conscious pleasure. Now, we have here an opposition between •the notion of the identity of resembling perceptions and •the interruption in their appearance, so the mind is bound to be uneasy and to seek relief from that uneasiness. Since the uneasiness arises from the opposition of two contrary forces, the mind must look for relief by sacrificing one to the other. But as the smooth passage of our thought along our resembling perceptions makes us ascribe an identity to them, we are very reluctant to give up that opinion. So we must turn to the other side ·of the dilemma·, and suppose that our perceptions are not interrupted after all, that their existence is not only invariable but continuous, and that this enables them to be entirely the same, strictly identical. But *appearances of* these perceptions are interrupted so often and for such long periods that we can't overlook the interruptions; and they seem to imply that the perceptions *didn't exist* during those periods. The alternative is to suppose that they existed but weren't present to the mind; but this looks like a flat contradiction that we couldn't ever swallow, because a perception's *existing* seems at first sight to be the very same thing as its *appearing to a mind*. To clear this matter up, and to learn how an interruption in the appearance of a perception doesn't necessarily imply an interruption in its existence, I need to touch on some principles that I'll have occasion to explain more fully in section 6.

I begin by observing that our present difficulty is not about the factual question of whether the mind *does* form such a conclusion about the continued existence of its perceptions, but only about *how* it does so, about what forces are at work in this. It is certain that almost all mankind—and even philosophers most of the time—take their perceptions to be their only objects, and suppose that the very thing that is intimately present to the mind is the real body or material thing. It is also certain that this very perception or object is supposed to have a continued uninterrupted existence, and to be neither annihilated by our absence nor brought into

existence by our presence. We say:

> When we are absent from it, it still exists, but we don't feel, we don't see it. When we are present, we feel or see it.

So two questions arise. •How can we get ourselves to be satisfied in supposing a perception to be absent from the mind without being annihilated? •How do we conceive an object to become present to the mind, without some new creation of a perception or image; and what do we mean by 'seeing' and 'feeling' and 'perceiving' an object? As to the first question, I would remark that what we call 'a mind' is nothing but a heap or collection of different perceptions, held together by certain relations and wrongly supposed to be endowed with a perfect simplicity and identity. Now, every perception is distinguishable from every other, and can be considered as existing separately from any other; from which it clearly follows that there is no absurdity in separating any particular perception from the mind—that is, in breaking off all its relations with that heap of connected perceptions that constitute a thinking being.

The same reasoning gives us an answer to the second question. If the label 'perception' doesn't make this separation from a mind absurd and contradictory, the label 'object', standing for the very same thing, can't make a presence to the mind 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 continued and uninterrupted being can 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 doesn't necessarily imply an interruption in the existence; the supposition of the continued existence of perceptible objects or perceptions involves no contradiction; we can easily go along with out inclination to make that supposition. When the exact resemblance of our perceptions makes us ascribe to them an identity, we can remove the seeming interruption by *feigning* a continued being that can fill those intervals and preserve a perfect and entire identity to our perceptions. [*Feigning* is creating a *fiction*; the two words come from a single Latin word.]

·IMAGINATION: FOURTH PART OF THE SYSTEM·

But we don't just feign this continued existence—we believe in it. Where does this belief come from? This question leads us to the fourth part of my system. I have already shown that belief in general consists in nothing but the liveliness of an idea, and that an idea can acquire this liveliness by its •relation to some present impression. Impressions are naturally the most vivid perceptions of the mind, and some of this vividness is conveyed by the •relation to every connected idea. The relation •disposes the mind to go from the impression to the idea, and causes the move to be a •smooth one. The mind goes so easily from the one perception to the other that it hardly notices the change, and retains in the second perception (·the idea·) a considerable share of the liveliness of the first (·the impression·). It is aroused by the lively impression, and this liveliness is conveyed without much loss to the related idea, because of the •smooth transition and the •disposition of the imagination.

Even if this disposition arises from something other than the influence of relations, its source—whatever it is—must obviously have the same effect ·as I have been attributing to relations·, and must convey the liveliness from the impression to the idea. And that is what we have in our 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 disposes us to consider these ·different· interrupted perceptions as ·being· •the same; and also disposes us to connect them by a continued existence in order to justify •this identity and avoid its seeming contradiction with the interrupted appearance of these perceptions. So we are disposed to feign the continued existence of all perceptible objects; and as this disposition arises from some lively impressions of the memory it gives liveliness to that fiction—which is to say that it makes us *believe* in the continued existence of the body. If we sometimes ascribe a continued existence to objects that are perfectly new to us, and of whose constancy and coherence we have no experience, it is because they present themselves to our senses in a manner that resembles that of constant and coherent objects; and *this* resemblance is a source of reasoning and analogy, leading us to attribute the same qualities to objects that are similar.

I believe a thinking reader will find it easier to •assent to this system than to •grasp it fully and clearly, and after a little thought will agree that every part carries its own proof along with it. ·I shall now run through the argument again in a slightly different way·. It is obvious that as common people

•suppose their perceptions to be their only objects,

and at the same time

•believe in the continued existence of matter,

we have to explain how •that belief can arise for people who make •that supposition. Now, on that supposition it is not true that any of our objects (or perceptions) is 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 seduced into this opinion only by the resemblance of certain perceptions (evidence for this: our resembling perceptions are the only ones that we are disposed to suppose the same). This disposition to confer an identity on our resembling perceptions produces the fiction of a continued existence. That fiction ·is properly so-called· because it, as well as the identity, really is false, as all philosophers agree, and its only effect is to remedy the interruption of our perceptions which is the only obstacle to their identity. Finally, this disposition causes belief by means of the present impressions of the memory (evidence: without memories of former sensations we would obviously never have any belief in the continued 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 that is perfectly convincing. . . .

But although the natural disposition of the imagination leads us in this way to ascribe a continued existence to those perceptible objects or perceptions that we find to resemble each other in their interrupted appearance, a very little reflection and philosophy is sufficient to make us see the fallacy of that opinion. I have already remarked that there is an intimate connection between the two theses, of a •continued existence and of a •distinct or independent existence, and that we no sooner establish one than the other follows as a necessary consequence. It is the belief in a continued existence that comes first, and without much study or reflection pulls the other along with it. . . . But when we compare experiments and think about them a little, we quickly see that the doctrine of the independent existence of our sensory perceptions is contrary to the plainest experience. This leads us to retrace our steps and perceive our error in attributing a continued existence to our perceptions. It is the origin of many very curious opinions that I shall here try to account for.

First I should mention a few of those experiential episodes that convince us that our perceptions don't have any independent existence. When we press one eye with a finger, we immediately perceive all the objects to become double, and half of them to be removed from their usual position. But as we don't attribute a continued existence to both these perceptions, and as they are both of the same nature, we clearly perceive that all our perceptions depend on our organs and the disposition of our nerves and animal spirits. This is confirmed by the seeming growth and shrinkage of objects according to how far away they are, by the apparent alterations in their shapes, by the changes in their colour and other qualities, when we are ill, and by countless other experiences of the same kind—from all which we learn that our sensible perceptions don't have any distinct or independent existence.

·The new philosophical system·

The natural consequence of this reasoning should be that our perceptions don't have a continued existence either; and indeed philosophers have reached this view so thoroughly that they change their system, and distinguish (as I shall do from here on) between •perceptions and •objects. They hold that perceptions are interrupted and perishing, and different at every different return ·to our senses·; and that objects are uninterrupted and preserve a continued existence and identity. But however philosophical this new system may be thought to be, I contend that it is only a superficial remedy, and that it contains all the difficulties of the common system along with some others that are all its own. There are no drives in either the understanding or the imagination that lead us directly to embrace this opinion of the double existence of •perceptions and •objects, and we can't arrive at it except by passing through the common hypothesis of the identity and continuity of our interrupted •perceptions. If we weren't first convinced that our perceptions are our only objects, and continue to exist even when they no longer appear to the senses, we would never be led to think that our perceptions and our objects are different, and that it is only our objects that have a continued existence. ·I contend·:

> The philosophical hypothesis •has no primary recommendation either to reason or the imagination, and •acquires all its influence on the imagination from the common hypothesis.

This ·displayed· proposition contains two parts, which I shall try to prove as distinctly and clearly as such abstruse subjects will permit.

As to the first part of the proposition that this philosophical hypothesis has no primary recommendation either to reason or the imagination, we can soon satisfy ourselves with regard to *reason*, by the following reflections. The only existences of which we are certain are perceptions that, being immediately present to us in consciousness, command our strongest assent and are the ultimate basis of all our conclusions. The only conclusion we can draw from the existence of one thing to the existence of another is through the relation of *cause and effect*, showing that there is a connection between them and that the existence of one depends on that of the other. The idea of the cause-effect relation is derived from past experience in which we find that two ·kinds of· beings are constantly conjoined and are always present together to the mind. But no beings are ever present to the mind except perceptions; so we can observe a conjunction or cause-effect relation •between different perceptions, but can never observe it •between perceptions and objects. So it is impossible that from any fact about perceptions we can ever validly form any conclusion about the existence of objects ·when these are understood, as they are in the philosophical

hypothesis, as different from perceptions·.

It is no less certain that this philosophical system has no primary recommendation to the *imagination*, which would never have arrived at such a view on its own and through forces that are intrinsic to it. It will be somewhat difficult to prove this to your full satisfaction, I admit, because it implies a negative, and negatives very often don't admit of any positive proof. If someone would take the trouble to look into this question and invent a system ·claiming· to account for how this opinion *does* arise directly from the imagination, we could by examining that system reach a certain judgment on the present topic. Thus:

> Let it be taken for granted that •our perceptions are broken and interrupted, and that •however alike they are they are still different from each other; and let anyone on this basis show why •the imagination *directly and immediately* (·not through the indirect mechanism I have proposed·) proceeds to the belief in another existing thing that resembles these perceptions in their nature but ·differs from them in being· continuous and uninterrupted and identical.

When someone has done this to my satisfaction, I promise to renounce my present opinion. Meanwhile I can't help thinking that this, because of the very abstractedness and difficulty of the first supposition [Hume's phrase], is not fit material for the imagination to work on. Whoever wants to explain the origin of the *common* opinion about the continued and distinct existence of body must focus on the mind as it *commonly* is, and proceed on the supposition that our perceptions are our only objects and continue to exist even when not perceived. This opinion is false, but it is the most natural of any, and is the only one that has any primary recommendation to the imagination. As to the second part of the proposition ·that is displayed a page back·, that the philosophical system acquires all its influence on the imagination from the common one: this is a natural and unavoidable consequence of the foregoing conclusion that the philosophical system has no primary recommendation to reason or the imagination. We find by experience that the philosophical system *does* take hold of many minds, especially of all those who reflect even a little on this subject; so it must derive all its authority from the common system, as it has no authority of its own. These two systems, though directly contrary, are connected together and here is how.

The imagination naturally thinks along the following lines:

- •Our perceptions are our only objects.
- •Resembling perceptions are the same, however broken or uninterrupted in their appearance.
- •This apparent interruption is contrary to the identity.
- •So it is only an *apparent* interruption, and the perception or object *really* continues to exist even when absent from us.
- •So our sensory perceptions have a continued and uninterrupted existence.

But as a little reflection destroys this conclusion that our perceptions have a continued existence by showing that they have a dependent one—·and I have shown that they couldn't be continuous unless they were independent·—it would naturally be expected that we should altogether reject the opinion that Nature contains any such thing as a continued existence that is preserved even when it no longer appears to the senses. But that is not what has happened! Philosophers don't in general infer from

> Our sensory perceptions are dependent and not continuous

that

> Nothing has a continued existence ·through gaps in

our perceptions·.

Indeed, they are so far from making that inference that although all philosophical sects agree with the former view, the latter—which is in a way its necessary consequence—has been the property only of a few extravagant sceptics; and even they have maintained it in words only, and were never able to bring themselves sincerely to believe it.

There is a great difference between opinions that we form after calm deep thought and ones that we embrace by a kind of instinct or natural impulse because of their suitableness and conformity to the mind. When opinions of these two kinds come into conflict, it is easy to foresee which will win! As long as our attention is focussed on the subject, the philosophical and studied principle may prevail; but the moment we relax our thoughts, Nature will display herself and pull us back to our former ·instinctive or natural· opinion. Indeed, Nature sometimes has so much influence that she can stop us in our tracks, even in the middle of our deepest reflections, and keep us from running on into all the consequences of some philosophical opinion. Thus, though we clearly perceive the dependence and interruption of our perceptions, we come to an abrupt halt and don't infer that there is nothing independent and continuous. The opinion that there *are* such things has taken such deep root in the imagination that it is impossible ever to eradicate it; no tenuous metaphysical conviction of the dependence of our perceptions is sufficient for that purpose.

But though our natural and obvious drives here prevail over our studied reflections, there must surely be some struggle and opposition over this, at least so long as these reflections retain any force or liveliness. In order to set ourselves at ease in this respect, we contrive a new hypothesis that seems to take in both these influences—of reason and of imagination. This is the philosophical hypothesis of the double existence of perceptions and objects: it pleases our reason by allowing that our dependent perceptions are interrupted and different, and it is also agreeable to the imagination because it attributes a continued existence to something else that we call 'objects'. This philosophical system, therefore, is the misshaped offspring of two principles that are •contrary to each other, are •both at once embraced by the mind, and are •unable mutually to destroy each other. The imagination tells us that our resembling perceptions

> •have a continued and uninterrupted existence, and are not annihilated by being absent from us.

Reflection tells us that even our resembling perceptions

> •are interrupted in their existence, and are different from each other.

We escape the contradiction between these opinions by a new fiction that squares with the hypotheses of both reflection and imagination by ascribing these contrary qualities to different existences—•the interruption to perceptions, and •the continuity to objects. Nature is obstinate, and refuses to give up, however strongly it is attacked by reason; and at the same time reason is so clear about this matter that there is no possibility of disguising it ·by muffling and then evading its message·. Not being able to reconcile these two enemies, we try to set ourselves at ease as much as possible by successively granting to each whatever it demands, and by feigning a *double existence* in which each can find something that meets all the conditions it lays down. ·Look at how we get ourselves into this·:

> If we were fully convinced that our resembling perceptions are continued and identical and independent, we would never go for this opinion of a double existence; because in that case we would find satisfaction in our first supposition, and would not look beyond.

On the other hand,

> If we were fully convinced that our perceptions are dependent and interrupted and different, we would be equally disinclined to embrace the opinion of a double existence; because in that case we would clearly perceive the error of our first supposition of a continued existence, and give it no further thought.

So the opinion of a double existence arises from the half-way situation of the mind—from adhering to these two contrary principles in such a way as to seek some pretext to justify accepting both; which (happily!) is found at last in the system of a double existence.

Another advantage of this philosophical system is its similarity to the common one: it enables us to humour our reason for a moment when it becomes troublesome and anxious, but as soon as reason's attention flags, the system makes it easy to us to return to our common and natural notions. Sure enough, we find that philosophers make use of this advantage: as soon as they leave their studies they join with the rest of mankind in those exploded opinions that our perceptions are our only objects, and continue identically and uninterruptedly the same through all their interrupted appearances.

Other aspects of the philosophical system show very conspicuously its dependence on the imagination. I shall note two of them. First, ·in the philosophical system· we suppose external objects to *resemble* internal perceptions. I have already shown that the relation of cause and effect can never let us soundly infer the existence of external continuous objects from the existence or qualities of our perceptions; and I now add that even if we could justify such an inference, we should never have any reason to infer that our objects *resemble* our perceptions. So that opinion is comes purely from the quality of the imagination that I have explained above, namely that *it borrows all its ideas from some earlier perception*. We never can conceive anything but perceptions, so ·in our imagination· we must make everything resemble them.

Secondly, ·in the philosophical system· we don't merely suppose our objects to resemble our perceptions in a general way; we also take it for granted that each particular object resembles the perception that it causes. The relation of cause and effect makes us bring in that other relation, resemblance; and since the ideas of these items—·the object and the perception of it·—are already united together in the imagination by the former relation (·cause-effect·), we naturally add the latter (·resemblance·) to complete the union. We have a strong disposition to complete every union by joining new relations to those that we have before observed between any ideas, as I shall have occasion to remark in section 5.

·Final remarks·

Having thus given an account of all the systems, both popular and philosophical, with regard to external existents, I can't help expressing a certain attitude that arises in me when I review those systems. I began this subject by laying it down that we ought to have an unquestioning faith in our senses, and that this would be the conclusion I would draw from the whole of my reasoning. Frankly, however, I feel myself at present in a quite contrary frame of mind, and am more inclined to put •no faith at all in my senses (or rather my imagination) than to place in it such an •unquestioning confidence. I can't conceive how such trivial qualities of the imagination, guided by such false suppositions, can ever lead to any solid and rational system. I mean the qualities of the coherence and constancy of our perceptions, which produce the opinion of their continued existence, although these qualities of perceptions have no perceivable *connection* with such an existence. The *constancy* of our perceptions has the most considerable effect, and yet it is the one that brings

the greatest difficulties. It is a gross illusion to suppose that our resembling perceptions are numerically the same ·after an interruption·; and it is this illusion that leads us to the view that these perceptions are *not* interrupted and still exist when not present to our senses. So much for our popular system! As to our philosophical system: it suffers from the same difficulties, and in addition to them it is loaded with the absurdity of at once •denying and •asserting the common supposition! Philosophers say that our resembling perceptions are *not* identically the same and uninterrupted; yet they have so great a disposition to believe that they *are* that they arbitrarily invent a new set of perceptions to which they attribute these qualities. (I say 'a new set of *perceptions*' ·for a good reason·. We can in a general ·vague· way suppose there are objects that are not perceptions, but it is impossible for us to think clearly and sharply about objects as being in their nature anything but exactly the same as perceptions.) What then can we look for from this confusion of groundless and extraordinary opinions but error and falsehood? And how can we justify to ourselves any belief in them? This sceptical doubt, with respect to both reason and the senses, is an illness that can never be thoroughly cured; it is bound to return upon us every moment, even if we chase it away and sometimes seem to be entirely free from it. On no system is it possible to defend either our understanding (·i.e. reason·) or our senses, and when we try to justify them in that manner ·that I have been discussing· we merely expose their defects further. As the sceptical doubt arises naturally from deep and hard thought about those subjects, it always increases as we think longer and harder, whether our thoughts are in opposition to sceptical doubt or conformity with it. Only •carelessness and •inattention can give us any remedy. For this reason I rely entirely on •them; and I take it for granted that whatever you may think at this present moment, in an hour from now you will be convinced that there is both an external and internal world; and on that supposition—·that there is an external as well as an internal world·—I intend now to examine some general systems, ancient and modern, that have been proposed regarding both 'worlds', before I proceed ·in section 5· to a more particular enquiry about our impressions. This may eventually be found to be relevant to the subject of the present section.

3: The ancient philosophy

Several moralists have recommended, as an excellent method of becoming acquainted with our own hearts and knowing our progress in virtue, to recollect our dreams in the morning and examine them as severely as we would our most serious and deliberate actions. Our character is the same sleeping as waking, they say, and it shows up most clearly when deliberation, fear, and scheming have no place, and when men can't try to deceive themselves or others. The generosity or baseness of our character, our mildness or cruelty, our courage or cowardice, are quite uninhibited in their influence on the •fictions of the imagination, revealing themselves in the most glaring colours. In a similar way I believe that we might make some useful discoveries through a criticism of the •fictions of ancient philosophy concerning substances, substantial forms, accidents, and occult qualities; those fictions, however unreasonable and capricious they may be, have a very intimate connection with the forces at work in human nature.

The most judicious philosophers agree that our ideas of bodies are nothing but

> collections formed by the mind of the ideas of the various distinct perceptible qualities of which objects are composed and which we find to have a constant union with each other.

Although these qualities are in themselves entirely distinct ·from one another·, it is certain that we commonly regard the compound that they form as *one thing* and as continuing to be that thing while it undergoes very considerable alterations. The admitted •compositeness is obviously contrary to this supposed •simplicity, just as the •alteration is contrary to the •identity. So it may be worthwhile to consider the causes that make us almost universally fall into such evident contradictions, and also the means by which we try to conceal them. [In this context, 'simple' means 'without parts'. In equating 'x is one thing' with 'x is simple', Hume is assuming that an item with parts—a 'composite' item—is really a collection of its parts, not really *one thing*.] The ideas of the various different qualities that an object has one after another are linked by a very close relation; so when the mind looks along the series it is carried from one part of it to another by an easy transition, and doesn't perceive the change any more than it would perceive a change when contemplating a single unchanging object. This easy transition is an effect . . . . of the relation ·between each quality and its successor·; and as the imagination readily identifies one idea with another when their influence on the mind is similar, it comes about that the mind considers any such •sequence of related qualities as •one continuous object, existing without any alteration. The smooth and uninterrupted movement of thought, being alike in both cases, easily deceives the mind and makes us ascribe an *identity* to the changing sequence of connected qualities.

But when we look at the sequence in a different way, not •tracking it gradually through the successive moments, but instead •surveying at once any two distinct periods of its duration, and •laying its qualities at those two moments side by side in our minds, *then* the variations that we didn't notice when they arose gradually appear significant, and seem entirely to destroy the identity. Thus there comes to be a kind of contrariety in our method of thinking, because of the different •points of view from which we survey the object and the different •lengths of time between the moments that we consider together. ·Here is the essential contrast·:

> •When we gradually follow an object through its successive changes, the smooth progress of our thought makes us ascribe an *identity* to the sequence, because this smooth progress is similar to our act of the mind when we consider an unchanging object. •When we compare its situation after a considerable change ·with its situation before·, the progress of the thought is broken, so that we are presented with the idea of diversity, i.e. *non-identity*.

To reconcile these contradictory positions 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 have a similar notion with regard to the simplicity of substances, and from similar causes. Suppose that •a perfectly simple and indivisible object is presented, along with •another object—·a composite one·—whose coexistent parts are linked by a strong relation. Obviously the actions of the mind in considering these two objects are not very different. The imagination conceives the simple object

> at once, easily, by a single effort of thought, without change or variation.

The connection of parts in the composite object has almost

the same effect ·on the contemplating mind·: it unites the object within itself in such a way that the imagination doesn't feel the transition when it passes from one part to another. Thus the colour, taste, shape, solidity, and other qualities that are combined in a peach or a melon are thought of as forming *one thing*; and this happens because of their close relation, which makes them affect our thought in the same way as if the object were perfectly uncompounded—·i.e. had no parts at all·. But the mind doesn't stop at that. When it views the object in a different way it finds that all these qualities are different, distinguishable, and separable from each other; that view of things destroys the mind's primary and more natural notions, and obliges the imagination to feign an unknown something—an original •substance and •matter—as a source of the union or cohesion among these qualities, and as what may entitle the composite object to be called *one thing*, despite its diversity and compositeness.

The Aristotelian philosophy says that the 'original' matter is absolutely the same in all bodies, and it considers fire, water, earth, and air as being of the very same *substance* because of their gradual changes into each other. At the same time it assigns to each of these sorts of objects a distinct *substantial form* that it supposes to be the source of all the different qualities the objects possess, and to be a new basis for simplicity and identity for each particular sort. All depends on how we look at the objects. •When we look along the imperceptible changes of bodies, we suppose all of them to be of the same substance or essence. •When we consider their perceptible differences, we attribute to each of them a substantial and essential difference. •And to allow ourselves to keep 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* [= 'qualities'] is an unavoidable consequence of this way of thinking about substances and substantial forms. [Hume uses 'quality' freely throughout the *Treatise*. He uses 'accident' for qualities thought of as existing things that have to be kept in existence by other things, namely the substances that *have* them.] We can't help thinking of colours, sounds, tastes, shapes, and other properties of bodies as existents that can't exist on their own and have to be supported by something in which they *inhere*. For whenever we have discovered any of these perceptible qualities we have, for the reasons mentioned above, imagined a substance to exist also; the same habit that makes us infer •a connection between cause and effect here makes us infer •a dependence of every quality on an unknown substance.

The custom of *imagining* a dependence has the same effect as the custom of *observing* it would have. But this turn of thought is no more reasonable than any of the previous ones. Every quality is distinct from every other, and can be conceived to exist on its own—apart from every other quality and also from that unintelligible chimera of *a substance*.

But these philosophers carry their fictions still further in their opinions about *occult* qualities: they suppose a supporting substance, which they don't understand, and a supported accident, of which they have no better an idea. The whole system, therefore, is entirely incomprehensible, and yet is derived from principles as natural as any of the ones I have explained.

In considering this subject, we can see that as the people concerned acquire new degrees of reason and knowledge, their opinions rise up through three levels. These opinions are •that of the common people, •that of a false philosophy, and •that of the true philosophy—and we shall find when we look into it that the true philosophy is closer to the views of the common people than it is to those of a mistaken knowledge ·such as many philosophers have·. It is natu-

ral for men in their common and careless way of thinking to imagine that they perceive a connection between objects that they have constantly found united together; and because custom has made it hard for them to separate the ideas, they are apt to imagine such a separation to be in itself impossible and absurd. ·Thus, for example: Someone observes—for things (x) like middle-sized physical objects—that •x-is-left-unsupported is almost always followed immediately by •x-falls-to-the-ground; this creates in him a custom of expectation, in which an impression of •x-unsupported *leads quickly and smoothly* and easily to an idea of •x-falling; and this inclines him to think that the idea of •non-support *is absolutely tied to* the idea of •falling in the way that the idea of being square is tied to the idea of being rectangular; which means that he is inclined to think he can see that it is absolutely (logically) impossible for an unsupported object of the relevant kind not to fall·. But philosophers, who set aside the effects of custom and look for relations between the ideas of objects, immediately see the falsehood of these common opinions and discover that there is no known connection among objects—·that is, none of the kind involving a connection between the ideas of the objects·. Every object appears to them entirely distinct and separate from every other; and they see that when we infer one from *another*, our basis is not a view of the nature and qualities of the objects but only an experience of having often observed ·objects of those kinds· to have been constantly conjoined. But these philosophers, instead of soundly inferring from this that we don't have *any* idea of mind-independent objective power or agency, frequently search for the qualities in which this agency consists, and are displeased with every account of it that their reason suggests to them. Their intellects are sharp enough to keep from the common error that there is a natural and perceivable connection ·of ideas· between matter's various perceptible qualities and how it behaves, but not sharp enough to keep them from looking for such a connection in matter itself—in the causes themselves. If they had found their way to the right conclusion, they would have turned back to the situation of the common people, and would have adopted a lazy 'don't care' attitude to all these long investigations ·into the causal tie·. As things are, they seem to be in a very lamentable condition, much worse that the poets present in their descriptions of the punishments of Sisyphus and Tantalus. For what could be more tormenting than to seek eagerly something that always flies away from us, and to seek it in a place where it can't possibly be?

But as Nature seems to have observed a kind of justice and compensation in everything, she hasn't neglected philosophers more than the rest of the creation, but has provided them with a consolation amid all their disappointments and afflictions. This consolation principally consists in their invention of the words 'faculty' and 'occult quality'. After the frequent use of a term that is significant and intelligible, we often omit the idea that we mean to express by it, and preserve only the custom by which we recall the idea when we want to; so it naturally happens that after the frequent use of a term that is wholly *in*significant and *un*intelligible, we fancy *it* to be on the same footing with the meaningful ones and to have a meaning that we don't actually have in mind but that we could bring to mind if we thought about it. . . . By this means these philosophers set themselves at ease, and eventually arrive through •an illusion at the same 'don't care' attitude that common people achieve through •their stupidity, and true philosophers achieve through •their moderate scepticism. They need only to say that a phenomenon that puzzles them arises from a 'faculty' or an 'occult quality' and there's an end of all dispute and enquiry about it!

But among all the examples of the ancient Aristotelians'

showing they were guided by every trivial twist of the imagination, none is more remarkable than their 'sympathies', 'antipathies', and 'horrors of a vacuum'! There is a very remarkable inclination in human nature to attribute to external objects the same emotions that it observes in itself, and to find everywhere those ideas [here = 'qualities'] that are most present to it. This inclination is suppressed by a little reflection, and it occurs only in children, poets, and the ancient philosophers. It appears in children when they want to kick the stones that hurt them; in poets by their readiness to personify everything; and in the ancient philosophers by these fictions of 'sympathy' and 'antipathy'. We must pardon •children because of their age, and •poets because they are openly obedient to the promptings of their imagination; but what excuse shall we find to justify our •philosophers—·the ancients and their modern disciples·—in such a striking weakness?

4: The modern philosophy

You may want to object:

> You say yourself that the imagination is the ultimate judge of all systems of philosophy. So you are unjust in blaming the ancient philosophers for making use of their imagination, and letting themselves be entirely guided by it in their reasonings.

In order to justify myself, I must distinguish two kinds of forces that are at work in the imagination: •those that are permanent, irresistible, and universal, such as the customary transition from causes to effects and from effects to causes, and •those that are changing, weak, and irregular; such as those on which I have just been commenting. •The former are the foundation of all our thoughts and actions, so that if they were lost human nature would immediately perish and go to ruin. •The latter are not ones that *must* be at work in mankind, and they are not necessary for the conduct of life or even useful in it. On the contrary, we see them at work only in weak minds, and because they are opposite to the former forces of custom and reasoning they can easily be overthrown when confronted by the opposition. For this reason, the former are accepted by philosophy and the latter rejected. Someone who hears an articulate voice in the dark and concludes that there is someone there reasons soundly and naturally, even though his inference is derived from nothing but custom, which brings him a lively idea of a human creature because of his usual conjunction of that with the present impression ·of the voice·. But someone who is tormented—he knows not why—with the fear of spectres in the dark may perhaps be said to reason, and indeed to reason 'naturally'; but then it must be in the same sense that a malady is said to be 'natural' because it arises from natural causes, even though it is contrary to health, which is the most agreeable and most natural condition for a man to be in.

The opinions of the ancient philosophers, their fictions of substance and accident, and their reasonings about substantial forms and occult qualities, are like spectres in the dark! They are driven by forces which, however common, are neither universal nor unavoidable in human nature. The *modern* philosophy claims to be entirely free from this defect, and to arise only from the solid, permanent, and consistent principles of the imagination. We must now look into the

grounds for this claim.

The fundamental principle of that philosophy is the opinion about colours, sounds, tastes, smells, heat, and cold, which it asserts to be nothing but impressions in the mind, derived from the operation of external objects and without any resemblance to the qualities of the objects. Having examined the reasons commonly produced for this opinion, I find only one of them to be satisfactory, namely the one based on the variations of those impressions even while the external object seems to remain unaltered. These variations depend on various factors. •Upon the different states of our health: a sick man feels a disagreeable taste in food that used to please him the most. •Upon the different conditions and constitutions of men: stuff that seems bitter to one man is sweet to another. •Upon differences in location and distance: colours reflected from the clouds change according to the distance of the clouds, and according to the angle they make with the eye and the luminous body. Fire also communicates the sensation of pleasure at one distance and of pain at another. Instances of this kind are very numerous and frequent.

The conclusion drawn from them is also utterly satisfactory. When different impressions of the same sense come from an object, it certainly can't be that *each* of these impressions resembles a quality that exists in the object. (Why? Because one object can't, at one time have different qualities of the same sense, and one quality can't resemble impressions that are entirely different from one another.) It evidently follows that *many* of our impressions have no external model or archetype [= 'thing from which something is copied']. Now, from similar effects we presume similar causes. Many of our impressions of colour, sound, etc., are admittedly nothing but internal existences ·with no archetypes in Nature·, arising from causes that don't resemble them in the slightest. *These* impressions are in appearance in no way different from *the other* impressions of colour, sound, etc. So we conclude that they *all* have causes of that sort.

Once this principle has been accepted, all the other doctrines of the modern philosophy seem to follow by an easy inference:

> Once we have removed sounds, colours, heat, cold, and other perceptible qualities from the category of continuous independent existents, we are left with only 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 special cases: shape, motion, gravity, and cohesion. The generation, growth, decline, and death of animals and vegetables are nothing but changes of shape and motion, as are all the operations of bodies on each other, and the operations of fire, light, water, air, earth and all the elements and powers of Nature. *One shape and motion produces another shape and motion*; and we can't form even the remotest idea of any force or drive (active or passive) among systems of matter other than that one.

I think that many objections could be made to this system, but at present I shall confine myself to one that I think is very decisive. I contend that instead of explaining the operations of external objects by means of this system, we utterly annihilate all these objects and reduce ourselves to the opinions of the most extravagant scepticism about them. If colours, sounds, tastes, and smells are merely perceptions, nothing that we can conceive has a real, continuous, and independent existence—not even motion, extension, and solidity, which are the primary qualities emphasized most ·in the modern philosophy·.

To start with motion: obviously this quality is altogether

inconceivable except when thought of as the motion *of an object*: the idea of motion necessarily supposes that of a moving body. Now, what is our idea of the moving *body*, without which motion is incomprehensible? It must come down to the idea of •extension or of •solidity; so the reality of motion depends on the reality of those other two qualities.

Everyone agrees with this opinion about motion, ·namely that it is conceivable only as the motion *of something*·; and I have proved that it holds also with regard to extension, ·which is conceivable only as the extension *of something*·—I have shown that it is impossible to conceive extension except as composed of parts that have either colour or solidity. The idea of extension is a compound idea; but it isn't compounded out of *infinitely* many parts or lesser ideas, so it must eventually be made up of parts that are perfectly simple and indivisible ·and thus don't have parts in their turn·. These simple and indivisible parts are not themselves ideas of extension ·because extension must have parts·, so they must be non-entities, nothings, unless they are conceived as coloured or solid. Colour is excluded from any real existence ·by the modern philosophy which I am now examining·. The reality of our •idea of extension therefore depends on the reality of •our idea of solidity; the former can't be sound if the latter is chimerical. Let us look, then, into the idea of solidity.

The idea of •solidity is the idea of •two objects which, however hard they are pushed, can't penetrate each other, but still maintain a separate and distinct existence. So solidity is perfectly incomprehensible taken on its own, without the conception of *some bodies that are solid* and maintain this separate and distinct existence. Now, what idea do we have of these bodies? The ideas of colours, sounds, and other 'secondary qualities' are excluded. The idea of •motion depends on the idea of •extension, and the idea of •extension depends on the idea of •solidity. So the idea of solidity can't possibly depend on either of those two ideas (·motion and extension·), for that would be to run in a circle, make one idea depend on another which at the same time depends on *it*. Our modern philosophy, therefore, provides us with no sound or satisfactory idea of solidity or, therefore, of matter.

This argument will appear entirely conclusive to anyone who understands it; but it may seem abstruse and complicated to the general run of readers, so I shall try to make it obvious by some changes of wording. To form an idea of solidity we must conceive two bodies pressing on each other without any penetration; and we can't do that if we confine ourselves to one object. (And still less if we don't conceive any: two non-entities can't exclude each other from their places, because they don't have places and don't have qualities.) What idea do we form of these bodies or objects to which we attribute solidity? To say that we conceive them merely as *solid* is to run on ad infinitum. To affirm that we depict them to ourselves as *extended* either •bases everything on a false idea or •brings us around in a circle. Extension must necessarily be considered either as •coloured, which is a false idea ·according to the modern philosophy, which says that nothing out there in the world is coloured·, or as •solid, which brings us back to where we started. The same argument applies regarding mobility and shape; and so ultimately we have to conclude that after the exclusion of colour, sounds, heat, and cold from the category of external existents there remains nothing that can give us a sound and consistent idea of body. . . . Let us remember here our accustomed method of examining ideas by considering the impressions from which they came. The impressions that enter through the sight and hearing, smell and taste, are affirmed by modern philosophy to have no resembling ·external· objects; so the idea of solidity, which is supposed

to be real—·i.e. to resemble external objects·—can't be derived from any of those senses. So all that remains is the sense of *touch* as a conveyor of the impression that is the ultimate source of the idea of solidity; and indeed we *do* naturally imagine that we *feel* the solidity of bodies, and need only to touch an object to perceive its solidity. But this is a layman's way of thinking rather than a philosopher's, as will appear from the following ·two· reflections.

First, it is easy to observe that although bodies are felt by means of their solidity, the *feeling* doesn't resemble the *solidity*. A man with no feeling in one hand has as perfect an idea of impenetrability when he •sees that hand supported by the table as when he •feels the table with the other hand. An object pressing on any part of our bodies meets with resistance; and that resistance, through the motion it gives to the nerves and animal spirits, conveys a certain sensation to the mind; but it doesn't follow that there are any resemblances among the sensation, the motion, and the resistance.

Secondly, the impressions of touch are simple impressions (except with regard to their extent, which is irrelevant to the present purpose); and from this simplicity I infer that they don't represent solidity or any real object. Consider these two cases ·in which solidity is manifested·:

- •A man presses a stone or other solid body with his hand;
- •Two stones press each other.

You will agree that these two cases are not in every respect alike, because the former involves not just solidity but also a *feeling or sensation* that doesn't appear in the latter. So to bring out the likeness between these two cases alike we must remove ·at least· some part of the impression that the man feels by his hand; but a simple impression doesn't *have* parts, so we have to remove the whole impression; which proves that this whole impression has no archetype or model in external objects. To which we may add that solidity necessarily involves •two bodies along with •contiguity [= 'nextness'] and •impact; but that ·trio· is a compound object, and can't possibly be represented by a simple impression. Not to mention the fact that though •solidity is always the same, •tactual impressions keep changing, which is a clear proof that •the latter are not representations of •the former.

Thus there is a direct and total opposition between our reason and our senses; or, more properly speaking, between the conclusions we form from cause and effect and those that convince us of the continued and independent existence of body. When we reason from cause and effect, we conclude that neither colour, sound, taste, nor smell have a continued and independent existence. When we exclude these perceptible qualities there is nothing left in the universe that *does* have such an existence.

5: 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 imagine is so clear and determinate), we would expect still greater difficulties and contradictions in every hypothesis about 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 would be wrong. The intellectual world, though involved in infinite obscurities, is not tangled in contradictions such as we discovered in the natural world. What is known about it is self-consistent, and

what is unknown we must be content to leave so.

Certain philosophers promise to lessen our ignorance if we will listen to them, but I'm afraid that in doing so we would risk running into contradictions from which the subject itself is free. These philosophers are the reasoners who probe the question of whether the 'substances' in which they suppose our perceptions to 'inhere' are material or immaterial. In order to put a stop to this endless point-scoring on both sides, I know no better method than to ask these philosophers 'What do you mean by "substance" and by "inhere"?' It will be reasonable to enter seriously into the dispute after they have answered this question, but not until then.

We have found the question impossible to answer with regard to *matter and body*; and when it comes to *mind* there are all the same difficulties and some additional ones that are special to that subject. As every idea is derived from a preceding impression, if we had any *idea* of the substance of our minds we must also have an *impression* of it; and it is hard if not impossible to conceive what such an impression could be. For how can an impression •represent a substance otherwise than by •resembling it? And how can an impression resemble a substance, given that (according to the philosophy I am examining) it isn't a substance and has none of the special qualities or characteristics of a substance? But leaving the question of *what may or may not be*, and turning to the question of *what actually is*, I ask the philosophers who claim that we have an idea of the substance of our minds to point out the impression that produces it, and say clearly how the impression operates and from what object it is derived. Is it an impression of sensation or of reflection? Is it pleasant, or painful, or neither? Do we have it all the time, or does it only return at intervals? If at intervals, *when* does it principally return, and what causes produce it? If, instead of answering these questions, anyone should evade the difficulty by saying that the definition of 'a substance' is *something that can exist by itself*, and that this definition ought to satisfy us, I would reply that this definition fits everything that can possibly be conceived, and can't possibly serve to distinguish substance from accident, or the soul from its perceptions. Here is why. This is a principle:

> Everything can be distinguished from everything else; and if two things can be distinguished, they can be separated by the imagination—·which is to say that they can be conceived as separate from one another·.

Another principle that has been already acknowledged is this:

> Anything that is clearly conceived can exist, and anything that can be clearly conceived as being thus-and-so can exist in that way—·for example, things that can *be conceived as existing* separately from one another can *exist* separately from one another·.

My conclusion from these two principles is that since all our perceptions are different from each other, and from everything else in the universe, they are also distinct and separable, and may be considered ·or conceived· as separately existent, and ·therefore· can exist separately and have no need of anything else to support their existence. So they are *substances* according to this definition.

So we can't arrive at any satisfactory notion of substance, whether by looking for an originating impression or by means of a definition; and that seems to me a sufficient reason for abandoning utterly the dispute about whether the soul is material or not, and makes me absolutely condemn the very question. We have no perfect idea of anything except *perceptions*. A substance is entirely different from a perception. So we have no idea of a substance. It is thought ·by some

philosophers· that our perceptions can exist only if they 'inhere in' something that supports them; but nothing seems to be needed to support the existence of a perception. So we have no idea of 'inhesion'. That being the case, how can we possibly answer the question 'Do perceptions inhere in a material substance or in immaterial one?' when we don't so much as understand the meaning of the question?

·THE LOCATION OF OUR PERCEPTIONS·

One argument that is commonly employed for the immateriality of the soul seems to me remarkable:

> Whatever is extended consists of parts; and whatever consists of parts can be divided, if not in reality then at least in the imagination. But something that is divisible can't possibly be conjoined to a thought or perception, which is altogether indivisible. If such a conjunction did occur, would the indivisible thought exist on the left or on the right side of this extended divisible body? On the surface or in the middle? On the back or on the front side of it? ·If you aren't convinced by those rhetorical questions, consider instead this sober argument·. If the thought or perception is conjoined with something extended, it must exist *somewhere* within that thing's boundaries—either •in one particular part or •in every part. In •the former case, that particular part is indivisible, and the perception is conjoined only with *it* and not with the extended thing; and in •the latter case, the thought must also be extended and separable and divisible, just as the body is, which is utterly absurd and contradictory. Can anyone conceive a passion that is a yard long, a foot wide, and an inch thick? So thought and extension are wholly incompatible qualities, and can never come together in one subject.

This argument doesn't bear on the question about the substance of the soul, but only the question about its being in the same place as matter; so it may be worthwhile to consider in general what objects are capable of being *in places* and what ones are not. This is an interesting and challenging question, which may lead us to some discoveries of considerable importance.

Our first •notion of space and extension is derived solely from the senses of sight and touch; only things that are coloured or tangible can have parts that are arranged in such a way as to convey •that idea. ·You might say that a *taste* has parts, because it can be lessened or increased; but· increasing or lessening a taste is not like lessening or increasing a visible object. ·Again, you might say that we experience distance—and thus extension—through the sense of hearing; but· when several sounds strike our hearing at once, it is only through custom and reflection that we form an idea of spatial relations among the bodies from which the sounds are derived. Anything that exists *somewhere* must either •be extended or •be a mathematical point having no parts or inner complexity. Something extended must have a particular shape—square, round, triangular—none of which can be true of a desire, or indeed of any impression or idea except ones belonging to sight and touch. And although a desire is indivisible, it oughtn't to be considered as a mathematical point. If it were one, it could be arranged along with three or four other desires in such a way as to make a complex with a determinate length, width, and thickness; which is obviously absurd.

In the light of these remarks, you won't be surprised when I affirm something that is condemned by many metaphysicians, and regarded as contrary to the most certain principles of human reason. It is that *an object can exist, and yet be nowhere*. And I assert that this is not only *possible* but that most existing things *do* and ·indeed· *must* exist

in that way. An object can be said to 'be nowhere' when •its parts are not related to one another in such a way as to form any shape or size, and •it as a whole isn't related to other bodies in such a way as to fit our notions of closeness or distance. Now this is obviously the case with all our perceptions and objects except those of the sight and touch. •A smell or a sound can't be either circular or square; •a moral reflection can't be situated to the right or to the left of a passion. These objects and perceptions, so far from requiring any particular place, are absolutely incompatible with it; we can't even *imagine* their being located. . . . Perceptions that have no parts and exist nowhere cannot be spatially conjoined with matter or body—i.e. with something extended and divisible —because any relation has to be based on some common quality. But there is no need for me now to press this argument. It may be better worth our while to remark that this question of the placing of objects comes up not only in metaphysical disputes about the nature of the soul but even in everyday life. Consider a fig at one end of the table and an olive at the other: when we form the complex ideas of these substances, one of the most obvious is that of their different tastes, and clearly we incorporate and conjoin these qualities with ones that are coloured and tangible. The bitter taste of one and sweet taste of the other are supposed to lie *in* the visible bodies and ·thus· to be separated from each other by the whole length of the table. This illusion is so remarkable and ·yet· so natural that it may be proper to consider its causes.

Although things that exist without any place or extension can't be •joined in space by something extended, they can enter into many •other relations. Thus the taste and smell of a piece of fruit are inseparable from its other qualities of colour and tangibility; and whichever of them is the cause and whichever the effect, they certainly always exist together. And it's not just that they coexist in some general way—·their coexistence exhibits two relations that we have seen to have a powerful effect on our minds·. The taste •appears in the mind at the same time as the smell; and it is when the extended body comes within reach of our senses that we perceive its particular taste and smell—·so we naturally infer that the body •causes the taste and smell·. So we have the relations of •causation and •contiguity in the time of their appearance between the extended object and the quality that exists nowhere; and this must have such an effect on the mind that when one of the related items appears the mind will immediately turn to the conception of the other. And this is not all. As well as turning our thought from one to the other on account of their relation, we try to give them a further relation—namely, being in the same place—so as to make the transition more easy and natural. For it is a quality in human nature that I shall often have occasion to mention, and shall explain more fully in its proper place, that when objects are united by some relation we are strongly disposed to add some further relation to them in order to complete their union. . . . But whatever confused notions we may form of a union in place between (say) a fig and its particular taste, when we think about it we have to see that there is something altogether unintelligible and contradictory about such a union. Let us ask ourselves one obvious question:

> The taste that we conceive to be contained within the boundary of the fig—is it in every part of the fig, or in only one part?

Faced with this, we must quickly find ourselves at a loss, and see the impossibility of ever giving a satisfactory answer. We can't reply that it is only in one part, for experience convinces us that every part has the same taste. And it's no better to reply that it exists in every part, for then we must suppose the taste to have shape and size, which is absurd and incom-

prehensible. So here we are pulled in opposite directions by two forces—•the inclination of our imagination, which makes us incorporate the taste into the fig, and •our reason, which shows us the impossibility of such a union. Being divided between these opposing pulls, we don't renounce either of them, but instead involve the subject in so much confusion and obscurity that we no longer see the opposition. We suppose that the taste exists within the boundary of the fig, but in such a way that it •fills the whole thing without being extended, and •exists complete in every part of it without being divided! In short, in our most ordinary everyday way of thinking we use a principle of the Aristotelian philosophers which seems shocking when it is expressed crudely: *totum in toto, et totum in qualibet parte*—which is about the same as saying that a thing is in a certain place and yet is not there. [The Latin means, literally, 'The whole in the whole, and the whole in each part'.] All this absurdity comes from our trying to assign a *place* to something that is utterly incapable of it; and that attempt comes from our inclination to complete a union that is based on causation and contiguity of time, by crediting the objects with being in the same place. But if reason is ever strong enough to overcome prejudice, it must surely prevail here. For here are our only choices ·regarding such items as passions and tastes and smells·:

> •They exist without being in any place. •They have shapes and sizes. •They are incorporated with extended objects, and then the whole is in the whole and the whole is in every part.

The absurdity of the second and third suppositions proves sufficiently the truth of the first. And there is no fourth opinion. What about the supposition that these items exist in the way mathematical points do? That ·isn't a genuine fourth option, because· it boils down to the second opinion: it supposes that various passions may be placed in a circle, and that a certain number of smells can combine with a certain number of sounds to compose a body of twelve cubic inches; the mere mention of which shows it to be ridiculous.

But though in this view of things we can't refuse to condemn the materialists, who conjoin all thought with •an extended body, a little thought will show us an equally strong reason for blaming their opponents, who conjoin all thought with •a simple and indivisible substance. The plainest and most down-to-earth philosophy informs us that an external object can't make itself known to the mind immediately; it has to appear through the interposition of an image or perception. The table that appears to me right now is only a perception, and all its qualities are qualities of a perception. Now, the most obvious of all its qualities is extendedness. The perception consists of parts. These parts are arranged in such a way as to give us the notion of distance and closeness, of length, width, and thickness. The termini of these three dimensions create what we call *shape*. This shape is movable, separate, and divisible. *Mobility* and *divisibility* are the distinguishing properties of extended objects. And to cut short all disputes, the very idea of extendedness is copied from nothing but an impression, with which it must therefore perfectly agree. To say that the idea of extension 'agrees with' something is to say that the 'something' is extended.

The ·materialist· free-thinker can now have his turn to triumph. Having found that some impressions and ideas are really extended, he can ask his opponents 'How can you bring a simple and indivisible subject together with an extended perception?' All the arguments of the theologians can here be turned back against them. ·They have demanded of the materialist 'Is the unextended perception on the left-hand or the right-hand part of the extended body?', but now the materialist can demand·: 'Is the unextended subject (or immaterial substance, if you like) on the left-hand or the

right hand part of the ·extended· perception? Is it in this particular part, or in that other? Is it in every part without being extended? Or is it complete in any one part without deserting the rest?' It is impossible to give to these questions any answer that won't both •be absurd in itself and •·be available (if it weren't absurd) for the materialists to use for *their* purposes, that is, to· account for the union of our unextended perceptions with an extended substance.

·THE SUBSTANTIAL UNDERLAY OF OUR PERCEPTIONS—(SPINOZA)·

This is my opportunity to take up again the question about the substance of the soul. Though I have condemned that question as utterly unintelligible, I can't refrain from offering some further reflections on it. I assert this:

> The doctrine of a thinking substance that is immaterial, simple and indivisible is a true *atheism*. From it we can infer all the ·atheistic· views for which Spinoza is so universally infamous

. From this line of thought I hope at least to reap one advantage, that my adversaries won't have any excuse for rendering *my* doctrine odious by accusations that can be so easily turned back against *them*. The fundamental principle of Spinoza's atheism is the doctrine of the simplicity of the universe—·that is, the universe's not having *parts*·—and the unity of the substance in which he supposes both thought and matter to inhere. There is only one substance in the world, says Spinoza, and that substance is perfectly simple and indivisible, and doesn't have any particular position because it exists everywhere. Whatever we discover externally by sensation, whatever we feel internally by reflection —all these are nothing but qualities of that one simple and necessarily existent being, and don't have any separate or distinct existence. ·This table and that chair are not two distinct things, they are just two qualities of the one and only thing—the one substance·. All the passions of the soul, all the configurations of matter however different and various, inhere in the same substance ; they can be distinguished from one another, without their distinctness bringing it about that they inhere in distinct substances. The same substratum [= 'underlay'], if I may so speak, supports the most different qualities without any difference in itself, and varies them without itself varying. Neither time, nor place, nor all the diversity of Nature are able to produce any composition or change in the perfect simplicity and identity of the one substance.

This brief exposition of the principles of that famous atheist will, I think, be sufficient for the present purpose. Without our having to enter further into these gloomy and obscure regions, I shall be able to show that •this hideous hypothesis of Spinoza's is almost the same as •the doctrine of the immateriality of the soul, which has become so popular. To make this evident, let us remember (from 6_{ii}) that because every idea is derived from a preceding perception, it follows that ·we can't have an idea of something that it is radically different in kind from a perception; from which it follows in turn that· our idea of an externally existing object can't possibly represent anything radically different in kind from every perception. Whatever difference we may suppose between perceptions and external objects, it is still incomprehensible to us; and we are obliged either to make external objects the same as perceptions or to conceive an external object merely as a relation without a relative—·that is, to conceive it emptily as whatever-it-is-that- some-perceptions-are-perceptions-*of*·.

The conclusion I shall draw from this may at first sight appear to be a cheat, but a very little thought will show it to solid and satisfactory. I start with this:

> We can *suppose* there to be a radical difference in kind between an object and an impression, but we cannot *conceive* such a difference; so when we reach any con-

> clusion about impressions that are inter-connected or incompatible we shan't know for certain that it will apply also to objects; but any such conclusion that we form about objects will certainly apply also to impressions.

The reason is not difficult. An object is supposed to be different from an impression; so if in our reasoning we start with the impression, we can't be sure that the details ·of the impression· that we are going by are shared by the object; it may ·for all we know· be that the object differs from the impression in that respect. But ·the converse doesn't hold·: our reasoning, if it starts with the object, certainly must hold also for the impression. Why? Because the quality of the object on which the reasoning is based must at least be conceived by the mind (·otherwise it couldn't be reasoned about·), and it couldn't be conceived unless it were a quality also possessed by an impression, because all our ideas are derived from impressions. So we can lay it down as a certain maxim that we can never . . . . discover a connection or incompatibility between objects that doesn't hold also for impressions; though the converse proposition—that all the discoverable relations between impressions hold also for objects—may not be equally true, .

Let us now apply this to the present case. I am presented with two different systems of existing things for which—I am supposing ·for purposes of argument·—I have to assign some substance or ground of inhesion. •I observe first the universe of objects or of bodies—the sun, moon, and stars, the earth, seas, plants, animals, men, ships, houses, and other productions of art or of nature. Here Spinoza appears, and tells me that

> these are only qualities, and the subject in which they inhere—·the substance that *has* them·—is simple, uncompounded, and indivisible.

After this I consider •the other system of beings, namely the universe of thought, or of my impressions and ideas. There I observe another sun, moon, and stars, an earth and seas, covered and inhabited by plants and animals; towns, houses, mountains, rivers—and in short everything I can discover or conceive in the first system. When I ask about these, theologians present themselves and tell me that

> these also are qualities, and indeed qualities of one simple, uncompounded, and indivisible substance.

Then I am deafened by the noise of a hundred voices that treat Spinoza's hypothesis with detestation and scorn, and the theologians' view with applause and veneration! I look into these hypotheses to see what may be the reason for such a strong preference for one of them, and I find that •they share the fault of being unintelligible, and that •as far as we *can* understand them they are so much alike that we can't find any absurdity in one that isn't shared by the other. Because all our ideas are derived from our impressions, we have no idea of a quality in an object that doesn't match and can't represent a quality in an impression. So if we can ·against Spinoza· find a conflict between *an extended object as a quality* and *something simple and uncompounded which is the substance in which it inheres*, then there must (·against the theologians·) be the same conflict between *the perception or impression of an extended object* and *something simple and uncompounded which is the substance ·in which it inheres·*. Every idea of a quality in an object passes through an impression, so every *perceivable* relation, whether of connection or incompatibility, must be common to both objects and impressions.

Looked at in a general way, this argument seems obvious beyond all doubt and contradiction. Still, to make it clearer and more intuitive, let us go through it in detail, and see whether all the absurdities that have been found in Spinoza's

system may not also be found in that of the theologians.

First, this has been said against Spinoza:

> Because according to Spinoza a mode [= 'quality'] is not a distinct or separate existent—·something over and above the one substance·—it must *be* its substance. So the extended universe, which is supposed to inhere ·as a mode or quality· in a simple, uncompounded substance, must be in a manner identified with that substance. But this is utterly impossible and inconceivable, unless the indivisible substance *expands* so as to correspond to the extended world, or the extended world *contracts* so as to match the indivisible substance.

This argument (·against Spinoza·) seems sound, as far as we can understand it; and it is clear that with some change in the wording it applies equally (·against the theologians·) to our extended perceptions and the simple substance of the soul. For the ideas of objects and of perceptions are in every respect the same, except for the supposition of a difference that is unknown and incomprehensible.

Secondly, it has been said ·against Spinoza· that

> we have no idea of *substance* that isn't applicable to *matter*, and no idea of *a distinct substance* that isn't applicable to every *distinct portion of matter*. So matter is not a mode ·or quality· but a substance, and each part of matter is not a distinct mode but a distinct substance.

I have already proved that we have no perfect idea of substance, but that taking 'substance' to mean 'something that can exist by itself' it is obvious that every perception is a substance and every distinct part of a perception is a distinct substance. So in this respect each hypothesis labours under the same difficulties as does 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 everything, must at the very same instant be modified into forms that are contrary and incompatible. The round and square figures are incompatible in the same substance at the same time. How then is it possible for one substance to be modified into that square table and into this round one?

I ask the same question about the *impressions of* these tables, and I find that the answer is no more satisfactory in one case than in the other. ·So any embarrassment for Spinoza along these lines is equally an embarrassment for the theologians·.

It appears, then, that whichever way we turn the same difficulties follow us, and that we can't advance one step towards the establishing the simplicity and immateriality of the soul without preparing the way for a dangerous and incurable atheism. The situation is the same if, instead of calling thought a modification ·or quality· of the soul, we give it the more ancient and yet more fashionable name of 'action'. By an action we mean much the same thing as what is commonly called an 'abstract mode'— that is, something that strictly speaking isn't distinguishable or separable from its substance, and is conceived only through a distinction of reason, that is, an abstraction. ·For example, a *dance* is not distinguishable or separable from *the dancer*, but from the totality that is the dancer we *abstract* one aspect, which we call her *dance*·. But nothing is gained by this switch from 'modification' to 'action': it doesn't free us from a single difficulty. . . . [Hume explains and defends this claim in two paragraphs which are not included here.]

·THE CAUSE OF OUR PERCEPTIONS·

From these hypotheses about the •location and the •substance of our perceptions, let us pass to another that is

more intelligible than •the latter and more important than •the former, namely concerning the *cause* of our perceptions. The Aristotelians say this:

> Matter and motion, however varied, are still ·only· matter and motion, and cause only differences in where bodies are and how they are oriented. Divide a body as often as you please, it is still body. Give it any shape and nothing will result but shape (which is the relation of parts). Move it in any way and all you will get is motion (which is a change of relation ·to other bodies·). It is absurd to imagine that motion in a circle should be merely •motion in a circle while motion in an ellipse should also be •a passion or moral reflection; or that the collision of two spherical particles should become •a sensation of pain while the collisions of two triangular ones yields •pleasure. Now, as these different collisions and variations and mixtures are the only changes of which matter is capable, and as they never give us any idea of thought or perception, it follows that thought cannot possibly be caused by matter.

Few have been able to resist the seeming force of this argument, yet nothing in the world is easier than to refute it! We need only reflect on what I have proved in general, namely we never sense any connection between causes and effects, and that it is only through our experience of their constant conjunction that we can arrive at any knowledge of the causal relation. Now,

> •no two real objects are contrary to one another, and
> •objects that are not contrary are capable of being constantly conjoined,

and from these two principles I have inferred in 15_{iii} that

> •to consider the matter *a priori*, **anything could produce anything**, and we shall never discover a reason why any object may or may not be the cause of any other, however alike or unalike they may be.

This obviously destroys the foregoing reasoning about the cause of thought or perception. For though no connection between motion or thought appears to us, neither does any connection between any 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 •movement-force that depends on their distances from the centre, any more than a •force of thought and perception. So if you claim to prove *a priori* that •*a position of bodies can never cause thought* because, turn it which way you will, it is nothing but a position of bodies, you must by the same line of reasoning conclude that •*a position of bodies can never produce motion*, since there is no more apparent connection in that case than in the other. But the latter conclusion is contrary to evident experience, ·which shows that how a body moves may depend on how it is situated·; and we *could* come to have similar experiences in the operations of the mind, perceiving a constant conjunction of thought with motion. So you reason too hastily when you conclude, from merely attending to the ideas, that motion cannot possibly produce thought and that a different position of parts cannot produce a different passion or reflection. Indeed, it is not only *possible* for us to have such an experience, but it is certain that we *do* have it, for everyone can perceive that the different dispositions of his body change his thoughts and sentiments. You might say: 'This ·is a special case, because it· depends on the union of soul and body.' To that I reply that we must separate the question about •the substance of the mind from the one about •the cause of its thought; and that if we take the latter question on its own,

> we find by comparing their ideas that thought and

> motion are different from each other,

and

> we find by experience that thought and motion are constantly united.

Such constant uniting is all we demand for the causal relation when we are considering the effects of matter on matter; so we can confidently conclude that motion *can be* and *actually is* the cause of thought and perception.

We seem to be left with a dilemma. Either •nothing can be the cause of something else unless the mind can perceive a connection between the ideas of the two items, or •all objects that we find constantly conjoined are on that account to be regarded as causes and effects. If we choose the first horn of the dilemma, the consequences are as follows. First, we are really saying that there is no such thing in the universe as a cause or productive force, not even God himself, since our idea of that Supreme Being is derived from particular impressions, none of the ideas of which have any perceptible connection with ·the idea of· any other existent. You may object: 'The connection between the idea of an infinitely powerful being and that of any effect that he wills is necessary and unavoidable.' To this I make two replies. •We have no idea of a being endowed with any power, much less of one endowed with infinite power. And if ·in order to avoid this point· you seek to *define* 'power', you will have to do it in terms of 'connection'; and then in saying that

> the idea of an infinitely powerful being is connected with that of every effect that he wills

you are really saying only that

> a being whose volition is connected with every effect is connected with every effect;

which is an identical proposition—·a tautology·—and gives us no insight into the nature of this power or connection. •Supposing that God were the great and effective force that makes up for what is lacking in all ·other· causes, this leads us into the grossest impieties and absurdities. It involves having recourse to God in natural operations, saying that matter can't of itself communicate motion or produce thought because matter has no perceptible connection with motion or thought, ·so that when matter seems to cause something it is really God at work·; and I say that on this account we must acknowledge that God is the author of all our volitions and perceptions, for they also have no perceptible connection with one another or with the supposed but unknown *substance* of the soul. Father Malebranche and other Cartesians have taken this view of all the actions of the mind, except for volition, or rather an inconsiderable part of volition—though it's easy to see that this exception is a mere dodge to avoid the dangerous consequences of their doctrine. If nothing is active except what has a perceptible apparent power, thought is never any more active than matter; and if this inactivity must make us fall back on a Deity ·to explain what seem to be cause-effect relations·, God is the real cause of all our actions, bad as well as good, vicious as well as virtuous.

So we are necessarily brought to the other horn of the dilemma, namely that all objects that are found to be constantly conjoined are—for that reason and only for that reason—to be regarded as causes and effects. Now, as all objects that are not contrary are capable of being constantly conjoined, and as no real objects are contrary, it follows that (for all we can tell by considering the mere ideas of things) anything could be the cause or effect of anything; which obviously gives the advantage to the materialists ·who let matter do all the causing· over their antagonists ·who say that God must be brought into the causal story·.

The final verdict, then, must be this: •the question concerning the substance of the soul is absolutely unintelligible;

•some of our perceptions are unextended, so they can't *all* be located in the same place as something extended, and some of them are extended, so they can't *all* be co-located with something unextended; and as the constant conjunction of objects constitutes the very essence of cause and effect, matter and motion can often be regarded as the causes of thought, as far as we have any notion of the causal relation.

Philosophy's sovereign authority ought to be acknowledged everywhere; so it is a kind of indignity to oblige her on every occasion to apologize for her conclusions and justify herself to every particular art and science that may be offended by her. It's like a king being arraigned for high treason against his subjects! The only occasion when philosophy will think it necessary and even honourable to justify herself is when religion may seem to be in the least offended; for the rights of religion are as dear to philosophy as her own, and are indeed the same. So if anyone imagines that the arguments I have presented are in any way dangerous to religion, I hope the following explanation will remove his worries.

There is no foundation for any *a priori* conclusion about either the •operations or the •duration of any object that the human mind can conceive. Any object can be imagined suddenly to become entirely •inactive, or to be •annihilated, and it is an obvious principle that whatever we can imagine is possible. Now this is no more true of matter than of mind; no more true of an extended compounded substance than of a simple and unextended one. In both cases the •metaphysical arguments for the immortality of the soul are equally inconclusive; and in both cases the •moral arguments and those derived from the analogy of Nature are equally strong and convincing. If my philosophy doesn't add to the arguments for religion, I have at least the satisfaction of thinking that it doesn't take anything from them either. Everything remains precisely as before.

6: Personal identity

Some philosophers believe this:

> We are every moment intimately conscious of what we call our *self*; we feel its existence and its continuing to exist, and are certain—more even than any demonstration could make us—both of its perfect identity and of its simplicity. The strongest sensations and most violent emotions, instead of distracting us from this view ·of our self·, only focus it all the more intensely, making us think about how these sensations and emotions affect our *self* by bringing it pain or pleasure. To offer further evidence of the existence of one's self would make it less evident, not more, because no fact we could use as evidence is as intimately present to our consciousness as is the existence of our self. If we doubt the latter, we can't be certain of anything.

Unfortunately, all these forthright assertions are in conflict with the very experience that is supposed to support them. We don't so much as have an *idea* of self of the kind that is here described. From what impression could this idea be derived? This question can't be answered without obvious contradiction and absurdity; yet it must be answered if the idea of self is to qualify as clear and intelligible. Every real idea must arise from some one impression. But *self* or *per-*

son is not any one impression, but is rather that to which all our many impressions and ideas are supposed to be related. If the idea of self came from an impression, it would have to be an impression that remained invariably the same throughout our lives, because the self is supposed to exist in that way. But no impression is constant and invariable. Pain and pleasure, grief and joy, passions and sensations follow one other and never all exist at the same time. So it can't be from any of these impressions or from any other that the idea of self is derived. So there is no such idea.

Furthermore, if we retain this hypothesis about the self, what are we to say about all our particular perceptions? They are all different, distinguishable, and separable from one other—they can be separately thought about, and can exist separately—with no need for anything to support their existence. In what way do they *belong* to self? How are they connected with it? For my part, when I look inward at what I call *myself*, I always stumble on some particular perception of heat or cold, light or shade, love or hatred, pain or pleasure, or the like. I never catch myself *without* a perception, and never observe anything *but* the perception. When I am without perceptions for a while, as in sound sleep, for that period I am not aware of myself and can truly be said not to exist. If all my perceptions were removed by death, and I could not think, feel, see, love or hate after my body had decayed, I would be entirely annihilated—I cannot see that anything more would be needed to turn me into nothing. If anyone seriously and thoughtfully claims to have a different notion of himself, I can't reason with him any longer. I have to admit that he may be right about himself, as I am about myself. He may perceive something simple and continued that he calls himself, though I am certain there is no such thing in me.

But setting aside metaphysicians of this kind, I am willing to affirm of the rest of mankind that each of us is nothing but a bundle or collection of different perceptions that follow each other enormously quickly and are in a perpetual flux and movement. Our eyes can't turn in their sockets without varying our perceptions; our thought is even more variable than our sight; and all our other senses and faculties contribute to this change in our perceptions, with no one of them remaining unaltered for a moment. The mind is a kind of stage on which many perceptions successively make their appearance: they pass back and forth, glide away, and mingle in an infinite variety of positions and situations. Strictly speaking, there is no •simplicity in the mind at one time and no •identity through different times, no matter what natural inclination we may have to imagine that simplicity and identity. ·That is to say: It is not strictly true that •when a blue colour is seen and a whistling sound heard at the same time, one single unified mind has both these perceptions; nor is it strictly true that •the mind that has a certain perception at one time is the very same mind that has a perception at another time·. The 'stage' comparison must not mislead us. What constitutes the mind is just the successive perceptions; we haven't the faintest conception of *the place* where these scenes are represented or of the materials of which it is composed.

What, then, makes us so inclined to ascribe an identity to these successive perceptions, and to suppose that we have an invariable and uninterrupted existence through the whole course of our lives? To answer this question we must distinguish what we *think and imagine* about personal identity from the role of personal identity in *our emotions and desires*. The former is our present subject. To explain it perfectly we must dig fairly deep: first we must account for the identity that we attribute to plants and animals, because there is a great analogy between that and the identity of a self or

person.

We have a clear idea of an object that remains invariable and uninterrupted while time supposedly passes. We call this the idea of *identity* or *sameness*. We have also a clear idea of many different objects existing successively in a close relation to one another; and this, properly understood, is just as good an example of *diversity* as it would be if the objects were not related to one another in any way. ·As the sand runs in the hour-glass, *this* grain is distinct from *that* one that falls a tenth of a second later and a micromillimetre behind; they are diverse from one another, which is simply to say that they are two grains, not one; and the fact that they are closely related to one another (in space, in time, and in being alike) makes no difference to that. They are as distinct from one another—they are as clearly *two*—as the Taj Mahal and the Grand Canyon·. But though these two ideas of *identity* and *a sequence of related objects* are perfectly distinct from one another and even contrary, yet in our everyday thinking they are often confused with one another, treated as though they were the same. ·I now explain what leads us into that confusion·. Here are two mental activities:

(1) thinking about a sequence of related objects, and
(2) thinking about one uninterrupted and invariable object.

Although these are distinct, and involve different activities of the imagination, they *feel the same*. The activity in **(1)** doesn't require much more effort than the activity in **(2)**: in **(1)** the relation between the objects helps the mind to move easily from one to the next, making its mental journey as smooth as if it were contemplating one continued object as in **(2)**. This resemblance between these two kinds of thought generates the confusion in which we mistakenly substitute the notion of **(2)** *identity* for that of **(1)** *related objects*. When contemplating a sequence of related objects, at one moment we think of it as **(1)** variable or interrupted, ·which it is·, yet the very next moment we ·wrongly· think of it as **(2)** a single, identical, unchanging and uninterrupted thing. ·That completes the explanation·. The resemblance that I have mentioned ·between the two acts of the mind· gives us such a strong tendency to make this mistake that we make it without being aware of what we are doing; and though we repeatedly correct ourselves and return to a more accurate and philosophical way of thinking, we can't keep this up for long, and we fall back once more into the mistake. Our only way out ·of this oscillation between truth and error· is to give in to the error and boldly assert that these different related objects are really the same, even though they are interrupted and variable. To justify this absurdity to ourselves, we often feign [= 'create a fiction of'] some new and unintelligible thing that connects the objects together and prevents them from being interrupted and variable. The perceptions of our senses are *intermittent*—·there are gaps between them·—but we disguise this by feigning that they exist continuously; and they *vary*, but we disguise this by bringing in the notion of a soul or self or substance ·which stays the same under all the variation·. Even in contexts where we don't indulge in such fictions, we are so strongly inclined to confuse identity with relatedness that we are apt to imagine something unknown and mysterious connecting the parts, other than the relations between them; and this is what I think happens when we ascribe identity to plants. When even *this* ·kind of fiction-making· doesn't take place, we still feel impelled to confuse these ideas with one another, though we can't give a satisfactory account of what we are doing or find anything invariable and uninterrupted to justify our notion of identity.

Thus the controversy about identity is not a merely verbal dispute. For when we attribute identity in an improper sense to variable or interrupted objects, we are not just

using words wrongly but are engaging in a fiction, a false thought, either of something •invariable and uninterrupted or of something •mysterious and inexplicable. To convince a fair-minded person that this is so, we need only to show him through his own daily experience that when variable or interrupted objects are supposed to continue the same, they really consist only in a sequence of parts, connected together by resemblance, contiguity [= 'nextness'], or causation. Such a sequence obviously fits our notion of *diversity*, so it can only be by mistake that we attribute an *identity* to it; and this mistake must arise from the fact that when the imagination moves from one of the related parts to the next, this act of the mind resembles the act in which we contemplate one continued object. What I mainly have to prove, then, is that whenever we ascribe identity to something that we do not observe to be unchanging and uninterrupted, what we are really talking about is ·not a single object, but rather· a sequence of related objects.

To get started on this, suppose we have in front of us a mass of matter whose parts are contiguous and connected; clearly we have to attribute a perfect identity to this mass so long as it continues uninterruptedly to contain the very same parts, even if those parts move around within it. Now suppose that some very small or inconspicuous part is added to the mass or removed from it. Strictly speaking, it is no longer the same mass of matter; but we—not being accustomed to think so accurately—don't hesitate to say that a mass of matter is still 'the same' if it changes only in such a trivial way. Our thought moves from the object before the change to the object after it so smoothly and easily that we are hardly aware that there is any movement; and this tempts us to think that it is nothing but a continued survey of the same object.

One aspect of this phenomenon is well worth noticing. Although a turnover in any *large* part of a mass of matter destroys the identity of the whole, ·that is, makes us unwilling to say that it continues to be the same thing·, what we count as *large* in this context depends not on the actual size of the part but rather on how big a proportion it is of the whole. We would count a planet as still 'the same' if it acquired or lost a mountain, but the change of a few inches could destroy the identity of some bodies. The only way to explain this is by supposing that objects interrupt the continuity of the mind's actions not according to their real size 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 movement of the thought that constitutes the imperfect identity, ·that is, that leads us to say that something is 'the same' when, strictly speaking, it is not the same·.

This is confirmed by another phenomenon. Although a change in any considerable part of a body destroys its identity, if the change is produced gradually and imperceptibly we are less apt to see it as destroying the identity. The reason for this must be that the mind, in following the successive changes of the body, slides easily along from surveying its condition at one moment to surveying it at another, and is never aware of any interruption in its actions.

However careful we are to introduce changes gradually and to make each a small proportion of the whole, when eventually they add up to a considerable change we hesitate to attribute identity to such different objects. But we have a device through which we can induce the imagination to go one step further ·in attributing identity where really there is none·—namely, relating the parts to one another through some common end or purpose. A ship of which a considerable part has been changed by frequent repairs is still considered 'the same' even if the materials of which it

is composed have come to be quite different. Through all the variations of the parts, they still serve the same common purpose; and that makes it easy for the imagination to move from the ship before the repairs to the ship after.

This happens even more strikingly when we see the parts as being causally related to one another in everything they do, in ways that reflect their common end. This ·is not the case with ships, but it· is the case with all animals and vegetables: not only are the parts taken to have some over-all purpose, but also they depend on and are connected with one another ·in ways that further that purpose·. The effect of this relation is that, although in a very few years both plants and animals go through a total change, with their form, size and substance being entirely altered, yet we still attribute identity to them. An oak that grows from a small plant to a large tree is still the same oak, ·we say·, though there is not one particle of matter or shape of its parts that is the same. An infant becomes a man, and is sometimes fat, sometimes thin, without any change in his identity.

We should also consider two further noteworthy facts. The first is that though we can usually distinguish quite exactly between numerical and specific identity, yet sometimes we mix them up and use one in place of the other in our thinking and reasoning. [Numerical identity is real identity, or being *the very same thing*. It is called 'numerical' because it affects counting: if x is not numerically identical with y, then x and y are two. By 'specific identity' Hume means *similarity*, qualitative likeness, being of the same species, sort, or kind.] Thus, a man who hears a noise that is frequently interrupted and renewed says it is still 'the same noise', though clearly the sounds have only a specific identity, that is, a resemblance, and there is nothing numerically the same but the cause that produced them. Similarly, when an old brick church fell to ruin, we may say that the parish rebuilt 'the same church' out of sandstone and in a modern architectural style. Here neither the form nor the materials are the same; the buildings have nothing in common except their relation to the inhabitants of the parish; and yet this alone is enough to make us call them 'the same'. It is relevant that in these cases ·of the noises and the churches· the first object is in a manner annihilated before the second comes into existence. That protects us from being presented at any one time with the idea of difference and multiplicity; ·that is, we are not in a position to pick out both noises (or both churches) at the same time, and have the thought '*This* is one and *that* is another'·; and that increases our willingness to call them 'the same'.

Secondly, although in general we don't attribute identity across a sequence of related objects unless the change of parts is gradual and only partial, with objects that are by nature changing and inconstant we will say they are 'the same' even if the changes are quite sudden. For example, the nature of a river consists in the motion and change of parts, so that there is a total turnover of these in less than twenty-four hours, but this does not stop the river from being 'the same' for centuries. What is natural and essential to a thing is expected, and what is expected makes less impression and appears less significant than what is unusual and extraordinary. A big change of an expected kind looks smaller to the imagination than the most trivial unexpected alteration; and by making less of a break in the continuity of the thought it has less influence in destroying the ·supposition of· identity.

I now proceed to explain the nature of personal identity, which has become such a great issue in philosophy. The line of reasoning that has so successfully explained the identity of plants and animals, of ships and houses, and of all changing complex things—natural and artificial—must be applied to personal identity too. The identity that we ascribe to the mind of man is fictitious; it is like the identity we ascribe to

plants and animals. So it can't have a different origin from the latter, but must come from a similar operation of the imagination on similar objects.

That argument strikes me as perfectly conclusive, but if you aren't convinced by it you should consider the following even tighter and more direct argument. It is obvious that the identity we attribute to the human mind, however perfect we may imagine it to be, cannot make *many different* perceptions become *one* by making them lose the distinctness and difference that are essential to them. Every distinct perception that enters into the mind's make-up is a distinct existence, and is different and distinguishable and separable from every other perception (whether occurring at the same time or at other times). Yet we suppose the whole sequence of perceptions to be united by identity—·we say that the members of the sequence are all perceptions of a single person·—which naturally raises a question about this relation of identity. Is it something that really binds together our various *perceptions themselves*, or does it only associate *the ideas of them* in the imagination? In other words, when we speak about the identity of a person, do we observe some real bond among his perceptions, or do we merely feel a bond among the ideas we form of those perceptions? The question is easy to answer, if we remember what I have already proved, namely that the understanding never observes any real connection among objects, and that even the cause-effect relation, when strictly examined, comes down to a customary association of ideas. For that clearly implies that identity doesn't really belong to these different perceptions, holding them together, but is merely a quality that we attribute to them because of how the ideas of them are united in the imagination when we think about them. Now, the only qualities that can unite ideas in the imagination are the three I have mentioned. They are the uniting principles in the world of ideas; without them every distinct object is separable by the mind and can be separately thought about, and seems to be disconnected from *every* other object, not merely from ones that are very dissimilar or distant. So identity must depend on some of the three relations of *resemblance*, *contiguity*, and *causation*. Now, the very essence of these relations consists in their making ideas follow one another easily; so our notions of personal identity must proceed entirely from the smooth and uninterrupted movement of thought along a sequence of connected ideas, in the way I have explained.

The only remaining question is: *Which* of the three relations produce this uninterrupted movement of our thought when we consider the successively existing perceptions that we take to constitute a mind or thinking person? Obviously contiguity has little or nothing to do with it; so we must attend to resemblance and causation.

Let us take resemblance first. If someone always remembers a large proportion of his past perceptions, this will contribute greatly to the holding of a certain relation within the sequence of his perceptions, varied as they may be. For memory is just a faculty by which we raise up images of past perceptions; and an image of something must resemble it. So ·each memory involves a perception that resembles some past perception the person has had; and· the frequent occurrence of these resembling ·pairs of· perceptions in the chain of thought makes it easier for the imagination to move from one link in the chain to another, making the whole sequence seem like the continuation of a single object. In this way, therefore, memory doesn't merely *show* the identity but also helps to *create* it, by bringing it about that many of the perceptions resemble one another. The account given in this paragraph applies equally to one's sense of one's own identity and to one's thoughts about the identity of others.

Causation also has a role. The true idea of the human mind is the idea of a system of different perceptions that are linked by the cause-effect relation, through which they mutually produce, destroy, influence, and modify each other. Our impressions *give rise to* corresponding ideas, which in their turn *produce* other impressions. One thought chases another and draws after it a third by which it is expelled in its turn. In this respect the soul is very like a republic or commonwealth, in which the members are united by the links that connect rulers with subjects; these members cause others to come into existence ·by begetting or giving birth to them·, and these in their turn keep the same republic continuously in existence throughout all the unceasing changes of its parts. And just as the same individual republic may change not only its members but also its laws and constitution, so also the same person can vary his character and disposition as well as his impressions and ideas. Whatever changes he undergoes, his various parts are still connected by causation. Our emotions contribute to our identity just as our impressions and ideas do, by making some of our perceptions influence others that occur at very different times. This is what happens when we have a present concern for our past or future pains or pleasures.

Memory should be regarded as the source of personal identity, mainly because without it we wouldn't know of the existence of this lengthy and continuous sequence of perceptions. If we had no memory, we would never have any notion of causation or, consequently, of the chain of causes and effects that constitute our self or person. Once we have acquired this notion of causation from our memory, we can extend the same chain of causes—and consequently the identity of our persons—beyond our memory, stretching it out to include times, circumstances and actions that we have entirely forgotten but which we suppose on general grounds to have existed. How many of our past actions do we actually remember? Who can tell me, for instance, what he thought and did on the 1st of January 1715, the 11th of March 1719 and the 3rd of August 1733? Or will he overturn all the most established notions of personal identity by saying that because he has forgotten the incidents of those days his present self is not the same person as the self of that time? Looked at from this angle, memory can be seen not so much to *create* personal identity as to *reveal* it, by showing us the relation of cause and effect among our different perceptions. Those who contend that memory alone produces our personal identity ought to explain how we can in this way extend our identity beyond our memory.

The whole of this doctrine leads us to the very important conclusion that all the precise, subtle questions about personal identity can never be settled, and should be seen as verbal difficulties rather than philosophical ones. Identity depends on the relations of ideas; and these relations produce identity by means of that easy movement of thought that they give rise to. But the relations in question are matters of degree, and so is the easiness of the mental movement that depends on them; so we have no correct standard by which to settle when they acquire or lose their entitlement to the name 'identity'. ·Just because the basis of our identity judgments consists in matters of degree, there can be borderline cases— just as there are borderlines for baldness, tallness and so on·. All the disputes about the identity of connected objects are merely verbal, except in so far as the relation of parts gives rise to some fiction—some imaginary source of union—such as I have described.

What I have said about the origin and the uncertainty of our notion of the *identity* of the human mind can also be applied—with little or no change—to our notion of *simplicity*, ·that is, the notion of a thing's not having parts·. An object

whose different *coexistent* parts are closely related strikes the mind in much the same way as one that is perfectly simple and indivisible, and the thought of it doesn't require a much greater mental stretch. Because contemplating it is like contemplating something simple, we regard as though it *were* simple, and we invent a principle of union as the support of this simplicity and as the centre of all the different parts and qualities of the object.

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[After Book I of the *Treatise of Human Nature* had been published, Hume had some afterthoughts that were published in an Appendix to Book III. Here is the afterthought that he asks us to insert at this point.]

·START OF THE APPENDIX PASSAGE·

I had hoped that however deficient my theory of the *intellectual* world might be, it would at least be free from those contradictions and absurdities that seem to infect every explanation that human reason can give of the *material* world. But reconsidering more carefully the section on personal identity I find myself involved in such a labyrinth that I don't know how to correct my former opinions, nor do I know how to make them consistent. If this is not a good general reason for scepticism, it is at least a sufficient one (as if I didn't already have plenty) for me to be cautious and modest in all my conclusions. I shall present the arguments on both sides, starting with those that led me to deny the strict and proper identity and simplicity of a self or thinking being. ·I offer seven of these, each pretty much independent of the others·.

(1) When we talk of *self* or *substance* we must associate ideas with these terms, otherwise they would be meaningless. Every idea is derived from previous impressions; and we have no impression of self or substance as something simple and individual. We have, therefore, no idea of them in that sense.

(2) Whatever is distinct is distinguishable, and whatever is distinguishable is separable by the thought or imagination. All perceptions are distinct. They are, therefore, distinguishable, and separable, and may be thought of as separately existent, and may exist separately, without any contradiction or absurdity.

When I view this table and that chimney, nothing is present to me but particular perceptions that are of the same kind as all other perceptions. This is the doctrine of philosophers. But this table and that chimney can and do exist separately. This is the doctrine of the common man, and it implies no contradiction. So there is no contradiction in extending the same doctrine to all perceptions—·that is, the doctrine that they can exist separately. The next paragraph gives an argument for this·.

The following reasoning seems satisfactory on the whole. All ideas are borrowed from previous perceptions. So our ideas of objects are derived from that source. Therefore any proposition that is intelligible and consistent with regard to *objects* must be equally so when applied to *perceptions*. But it is intelligible and consistent to say that objects exist independently, without having to inhere in any common simple substance. So it can't be absurd to say the same thing about perceptions. ·We are therefore not entitled to insist that there *must* be some self or substance in which our perceptions exist·.

(3) When I look in on myself, I can never perceive this self without some one or more perceptions; nor can I ever perceive anything but the perceptions. It is a complex of these perceptions, therefore, that constitutes the self.

(4) We can conceive a thinking being to have as few perceptions as we like—even to be reduced to the level (below that of an oyster) of having only one perception, such as that of thirst or hunger. In considering such a mind, do you

conceive anything more than merely that one perception? Have you any notion of self or substance? If not, the addition of other perceptions can never give you that notion.

(5) The annihilation that some people suppose to follow on death, and which entirely destroys this self, is nothing but an extinction of all particular perceptions—love and hatred, pain and pleasure, thought and sensation. So these must be the same as the self, since the one cannot survive the other.

(6) Is self the same as substance? If it is, then there can be no question of the same self remaining when there is a change of substance. If on the other hand self and substance are distinct, what is the difference between them? For my part, I have no notion of either when they are conceived as distinct from particular perceptions.

(7) Philosophers are beginning to be reconciled to the principle that we have no idea of *external* substance distinct from the ideas of particular qualities. This should pave the way for a similar principle regarding the mind, namely that we have no notion of it distinct from the particular perceptions.

All of this seems clear and true. But having started my account with our particular perceptions all loose and separate, when I proceed to explain the principle of connection that binds them together, making us attribute to them a real simplicity and identity, I come to realize that my account is very defective, and that I wouldn't have accepted it if it weren't for the seeming power of the foregoing arguments.

[Hume now re-states his own theory of personal identity, in a manner that is favourable to it. His subsequent worries and doubts start to surface only at the end of this paragraph.] If perceptions are distinct existences, they form a whole only by being connected together. But the human understanding can never discover connections among distinct existences; we only *feel* a connection in our mind when our thought is compelled to pass from one object to another. It follows, then, that personal identity is merely *felt* by our thought: this happens when our thought reflects on the sequence of past perceptions that compose a mind, and feels its the ideas of them to be interconnected and to follow on from one another in a natural way. Extraordinary though it is, this conclusion need not surprise us. Most philosophers today seem inclined to think that personal identity arises from consciousness, and consciousness is nothing but a thought or perception directed inwards towards oneself. To that extent, this present philosophy of mine looks promising. [Now comes the trouble.] But all my hopes vanish when I come to explain the principles$_c$ that unite our successive perceptions in our thought or consciousness. I cannot discover any satisfactory theory about this.

In short, there are two principles that I cannot render consistent, nor can I give either of them up: **(1)** all our distinct perceptions are distinct existences, and **(2)** the mind never perceives any real connection among distinct existences. If our perceptions either inhered in something simple and individual, or if the mind perceived some real connection among them, there would be no difficulty. For my part, I must plead the privilege of a sceptic and confess that this problem is too hard for my understanding. I don't say outright that it is absolutely insoluble. Perhaps someone else—or even myself after further reflection—will discover some hypothesis that will reconcile those contradictions.

·NOW BACK TO SECTION 6·

Thus I have finished my examination of the various systems of philosophy, both of the intellectual and the moral world; and, in my miscellaneous way of reasoning I have been led into several topics that will either illustrate and confirm some of what I have been saying or prepare the way for what is to come. It is now time to return to a closer examination of our subject, and to proceed in the accurate anatomy of human nature, having fully explained the nature of our judgment and understanding.

7: Conclusion of this book

But before I launch out into those immense depths of philosophy that lie before me ·in Books II and III of this *Treatise*·, I want to stop for a moment at the place I have so far reached, and to ponder the voyage I have undertaken, which undoubtedly requires the utmost skill and hard work to be brought to a happy conclusion. I am like a man who, having grounded his ship on many shoals and nearly wrecked it in passing a small island, still has the nerve to put out to sea in the same leaky weather-beaten vessel, and even carries his ambition so far as to think of going around the globe in it. My memory of past errors and perplexities makes me unsure about the future. The wretched condition, the weakness and disorder, of the ·intellectual· faculties that I have to employ in my enquiries increase my anxiety. And the impossibility of amending or correcting these faculties reduces me almost to despair, and makes me resolve to die on the barren rock where I am now rather than to venture into that boundless ocean that goes on to infinity. This sudden view of my danger makes me gloomy; and as that above all is the passion that indulges itself, I can't help feeding my despair with all those down-casting reflections that the present subject provides in such abundance.

First, I am frightened and confused by the forlorn solitude in which my philosophy places me, and see myself as some strange uncouth monster who, not being able to mingle and unite in society, has been expelled from all human society and left utterly abandoned and disconsolate. I would like to run into the crowd for shelter and warmth, but I can't get myself to mix with such deformity. I call on others to join me so that we can make our own separate society, but no-one will listen. Everyone keeps at a distance, and dreads the storm that beats upon me from every side. I have exposed myself to the enmity of all metaphysicians, logicians, mathematicians, and even theologians—can I wonder at the insults I must suffer? I have declared my rejection of their systems—can I be surprised if they express a hatred of mine and of me? When I look outwards ·and ahead· I foresee on every side dispute, contradiction, anger, slander, and detraction. When I look inwards I find nothing but doubt and ignorance. All the world conspires to oppose and contradict me; and I am so weak that when •my opinions are not supported by the approval of others I feel •them loosen and fall away. I take every step with hesitation, and every new reflection makes me dread an error and absurdity in my reasoning.

·This is not unreasonable·; for what confidence can I have in venturing on such bold enterprises when, beside the countless infirmities that I personally have, I find so many that are common to human nature? Can I be sure that when I leave all established opinions I am following truth? and by what criterion shall I recognize her [= truth] even if fortune should at last guide me onto her path? After the most accurate and exact of my reasonings, I can give no *reason* why I should assent to it [= my conclusion]; I merely feel a *strong* disposition to consider objects *strongly* in the manner in which they appear to me ·as a result of that reasoning·. Experience is a force that instructs me in the various conjunctions of objects in the past; habit is another force that makes me expect the same in the future; and the two work together on the imagination, making me form certain ideas in a more intense and lively manner than other ideas that don't have the same advantages. This quality by which the mind enlivens some ideas more than others seems trivial, and has

no basis in reason; yet without it we could never assent to any argument, or carry our view beyond •the few objects that are present to our senses. Indeed, even to *those* objects we could never attribute any existence but •what was dependent on the senses, and must ·therefore· bring them entirely into that sequence of perceptions that constitutes our self or person. And even in relation to that sequence, we could ·at any given time· only accept the existence of •the perceptions that are immediately present to our consciousness ·at that moment·; the lively images with which the memory presents us could never be accepted as true pictures of past perceptions. The memory, senses, and understanding are therefore *all* founded on the imagination, or the liveliness of our ideas.

No wonder a force that is so inconstant and fallacious should lead us into errors when uncritically followed (as it must be) in all its variations. It is this force that •makes us reason from causes and effects, and that •convinces us of the continued existence of external objects when they are absent from the senses. But though these two operations are equally natural and necessary in the human mind, in some circumstances they are directly contrary to one another (section 4); so we can't reason soundly and regularly from causes and effects while at the same time believing in the continued existence of matter. How then shall we relate those two forces to one another? Which of them shall we prefer? Or if we prefer neither of them, and (as philosophers usually do) go sometimes with one and at other times with the other, how confidently can we give ourselves the glorious title of 'philosopher' when we thus knowingly accept an obvious contradiction? This contradiction (see 14_{iii}) would be more excusable if it were compensated by any degree of solidity and satisfaction in the other parts of our reasoning. But that is not how things stand. When we trace human understanding back to its first sources, we find that it leads us into opinions that seem to make a mockery of all our past trouble and work, and to discourage us from future enquiries. Nothing is more assiduously enquired into by the mind of man than the causes of every phenomenon; and we aren't content with knowing the *immediate* causes, but push our enquiries on until we arrive at the basic ultimate cause. We aren't willing to stop until we are acquainted with the energy in the cause by which it operates on its effect—the tie that connects cause and effect together—and the effective quality on which that tie depends. This is our aim in all our studies and reflections; so how disappointed we must be when we learn that this connection, tie, or energy lies merely in ourselves, and is nothing but that set of mind that custom creates, which causes us to make a transition from the impression of an object to the lively idea of its usual accompaniment! Such a discovery not only cuts off all hope of ever attaining satisfaction, but won't even let us *wish* for it; for it appears that when we say that we want to know 'the ultimate and operating force', regarding this as something that resides in the external object, we either contradict ourselves or talk without a meaning.

This deficiency in our ideas is not indeed perceived in common life. Indeed, we are not in general aware that in the most usual conjunctions of cause and effect we are as ignorant of the ultimate force that binds them together as we are in the most unusual and extraordinary cases. But this ·unawareness· comes merely from an illusion of the imagination; and the question is 'How far ought we to yield to these illusions?'. This question is very difficult, and the choice of answers forces us to confront a very dangerous dilemma. One option is to assent to every trivial suggestion of the imagination. But these suggestions are often contrary to one another; and anyway they lead us into such errors, absurdities, and obscurities that we must eventually become

ashamed of our credulity. Nothing is more dangerous to reason than the flights of the imagination, and nothing has led to more mistakes among philosophers. Men with bright imaginations may in this respect be compared to the angels whom the Scripture represents as *covering their eyes with their wings*! I have already shown so many instances of this that I can spare myself the trouble of going on about it any more.

The consideration of these troubles might make us resolve to reject all the *trivial* suggestions of the imagination, and adhere to the understanding—that is, to the imagination's *general and more established* properties. But even this resolution, if steadily kept to, would be dangerous and would bring the most fatal consequences. For I have already shown in section 1 that the understanding, when it acts alone and according to its most general principles, entirely subverts itself and leaves us without even the lowest level of conviction about any proposition, either in philosophy or common life. We save ourselves from this total scepticism only by means of a special and seemingly trivial property of the imagination—namely, its making it difficult for us to enter into remote views of things, not being able to accompany them with as strong an impression as we do things that are more easy and natural. Shall we, then, adopt it as a general maxim that *no refined or elaborate reasoning is ever to be accepted*? Consider well the consequences of such a principle! It cuts you off entirely from all science and philosophy; you proceed on the basis of one special quality of the imagination, and by parity of reasoning you should embrace them all; and you explicitly contradict yourself, because this maxim must be *based on* the preceding reasoning, which you must admit is sufficiently refined and metaphysical ·to fall under the principle and thus be *rejected* by it·! What side shall we choose among these difficulties? If we embrace this principle and condemn all refined reasoning, we run into the most manifest absurdities. If we reject it in favour of these reasonings, we entirely subvert the human understanding. We are left with a choice between •a false reason and •no reason at all. For my part, I don't know what *ought to be* done in the present case. I can only observe what commonly *is* done, namely: this difficulty is seldom or never thought of, and even when it is present to the mind it is quickly forgotten and leaves only a small impression behind it. Very refined reflections have little or no influence on us; and yet we don't and can't accept the rule that they ought not to have any influence, for that implies a manifest contradiction.

But what have I just said? That very refined and metaphysical reflections have little or no influence on us? I can scarcely refrain from retracting ·even· *this* opinion, and condemning it on the basis of my present feeling and experience. The intense view of all these contradictions and imperfections in human reason has so heated my brain that I am ready to reject *all* belief and reasoning, and can't see *any* opinion ·as true, or· even as more probable or likely than another.

> Where am I?
> What am I?
> What has caused me to exist, and to what condition shall I return ·after death·?
> Whose favour shall I court, and whose anger must I dread?
> What beings surround me? Which ones can I influence, and which have any influence on me?

I am bemused by all these questions, and begin to fancy myself in the most deplorable condition imaginable—surrounded by the deepest darkness, and utterly deprived of the use of every skill of body and mind.

Most fortunately it happens that since reason can't scat-

ter these clouds, Nature herself suffices for that purpose and cures me of this philosophical gloom and frenzy, either by reducing the intensity of these thoughts or by some pastime that makes lively impressions on my senses that obliterate all these chimeras. I dine, I play a game of backgammon, I converse cheerfully with my friends; and when after three or four hours' amusement I turn back to these speculations, they appear so cold, strained, and ridiculous that I can't find in my heart to enter into them any further.

Here, then, I find myself absolutely and necessarily made to live and talk and act like other people in the common affairs of life. But although my natural disposition and the course of my animal spirits and passions bring me to this lazy acceptance of the general maxims of the world, I still feel such remains of my earlier frame of mind that I am ready to throw all my books and papers into the fire, and resolve never again to turn away from the pleasures of life in order to resume reasoning and philosophy. For that's how I feel in the depressed mood that governs me at present. I may—I *must*—go with the current of Nature in my dealings with my senses and understanding, and in this blind obedience I show most perfectly my sceptical disposition and principles. But does it follow that I must go *against* the current of Nature that leads me to laziness and pleasure? that I must to some extent shut myself away from dealings with and the society of men that is so agreeable? that I must torture my brain with subtleties and sophistries, doing this at the very time when I can't satisfy myself that this painful activity is a reasonable thing to do and can't have any tolerable prospect of arriving through it at truth and certainty? ·Why *must* I?· What obliges me to misuse my time in that way? And what purpose can it serve, either for the service of mankind or for my own personal interests? No: if I must be a fool (and all those who reason or believe anything certainly *are* fools), 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 to wander into such dreary solitudes and rough passages as I have so far met with.

These are the sentiments of my depression and slackness; and indeed I must confess that philosophy has nothing to bring against them, and expects a victory more from the benefits of a serious good-humoured 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, it is only because it is too much trouble to think otherwise. Indeed, if we *are* philosophers, it ought only to be on sceptical principles—·not in the hope of arriving at assured truths, but only· because we feel inclined to employ ourselves in that way. Where reason is lively, and mixes itself with some disposition, it ought to be assented to. Where it doesn't, it can't have any right to operate on us.

Thus, at a time when I am tired with amusement and company, and have allowed myself a daydream in my room or in a solitary walk by a river-side, I feel my mind all collected within itself, and am *naturally inclined* to think about all those subjects about which I have met with so many disputes in the course of my reading and conversation. I can't help wanting to know the sources of moral good and evil, the nature and foundation of government, and the cause of the various passions and inclinations that move and govern me. I am •not contented with the thought that I approve of one thing and disapprove of another, call one thing beautiful and another ugly, and make decisions concerning truth and falsehood, reason and folly, without knowing what principles I am going by in all this. I am •concerned for the condition of the learned world that is so deplorably ignorant about all this. I •feel an ambition arising in me to contribute to the

instruction of mankind, and to make myself known through my discoveries. These •feelings spring up naturally in my present frame of mind; and if I tried to get rid of them by applying myself to any other activity or pastime, I feel I would be a loser in point of pleasure; and this is the origin of my philosophy.

But if this curiosity and ambition *didn't* carry me into speculations outside the sphere of common life, I would still inevitably be led into them by my own weakness. ·Let me explain·. It is certain that •superstition is much bolder in its systems and hypotheses than •philosophy is: whereas •philosophy contents itself with assigning new causes and explanations for the phenomena that appear in the visible world, •superstition opens up a world of its own, and presents us with scenes and beings and states of affairs that are altogether new. Now, it is almost impossible for the mind of man to stay—like the minds of lower animals—within the narrow circle of items that are the subject of daily conversation and action; ·so we are bound to stray outside that circle·, and all we have to deliberate about is our choice of guide ·when we do so·, looking for the one that is safest and most agreeable. In this respect I venture to recommend *philosophy*, and I don't hesitate to prefer it to superstition of every kind. 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. Philosophy stands in contrast to that. Sound philosophy can present us only with mild and moderate sentiments; and the opinions offered by false and extravagant philosophy are merely the objects of cool generalizing thought, and seldom go so far as to interrupt the course of our natural inclinations. The Cynics are an extraordinary instance of philosophers who, from purely philosophical reasonings, entered into extravagances of conduct as great as any monk or dervish that ever was in the world. Generally speaking, the errors in religion are dangerous; those in philosophy are only ridiculous.

I am aware that these two cases of the strength and weakness of the mind—·that is, philosophy and superstition·—don't cover all mankind, and that in England in particular there are many honest gentlemen who are always engaged in their domestic affairs, or amusing themselves in common recreations, and so have carried their thoughts very little beyond the objects that are every day exposed to their senses. I don't purport to make philosophers of these, and I don't expect them either to join in these researches or listen to their results. Such people do well to keep themselves in their present situation; and, rather than refining them into philosophers, I ·would like to make philosophers more like them; that is, I· wish we could give our founders of ·philosophical· systems a share of this gross earthy mixture, as an ingredient that they commonly need and don't have, an ingredient that would damp down those fiery particles of which they are composed! As long as philosophy makes room for a lively imagination and for hypotheses that are embraced merely because they are glittering and agreeable, we can never have any steady principles or any opinions that will square with common practice and experience. If such hypotheses were removed from philosophy, *then* we might hope to establish a system or set of opinions which—if not true (for that may be too much to hope for)—might at least be satisfactory to the human mind, and might stand the test of the most critical examination. Many flimsy systems that have arisen and then died, but this shouldn't make us despair of attaining this goal; consider the shortness of the period in which these questions have been the subjects of enquiry and reasoning. Two thousand years, with long interruptions and under mighty discouragements, are a small stretch of

time to bring the sciences to anything like completion; and perhaps the world is still too young for us to discover *any* principles that will stand up under examination by our remote descendants. Speaking for myself, my only hope is that I may contribute a little to the advancement of knowledge by giving in some respects a different turn to the speculations of philosophers, and more clearly indicating to them the only subjects in which they can expect assurance and conviction. *Human nature* is the only science of man; and yet it has been until now been the most neglected. I will be satisfied if I can bring it a little more into fashion; and the hope of this serves to bring me out of the depression and slackness that sometimes take me over. If you find yourself in the same easy disposition, follow me in my future speculations ·in Books II and III·. If not, follow your own inclination, and wait for the return of good humour and industriousness. The conduct of a man who studies philosophy in this careless manner is more truly sceptical than the conduct of one who, feeling in himself an inclination to it, nevertheless totally rejects it because he is overwhelmed with doubts and worries. A true sceptic will be cautious about his philosophical doubts as well as about his philosophical convictions; and he will never refuse any innocent satisfaction that offers itself on account of either of them.

It is proper that we should •in general indulge our inclination in the most elaborate philosophical researches, notwithstanding our sceptical principles, and also that we should •give rein to our inclination to be positive and certain about *particular points*, according to how we see them at any *particular instant*. It is easier •to give up examination and enquiry altogether than •to restrain such a natural disposition in ourselves and guard against the confidence that always arises from an exact and full survey of an object. At those moments we are apt to forget not only our scepticism but even our modesty, and make use of such expressions as 'it is evident', 'it is certain', 'it is undeniable', which a due deference to the public ought perhaps to prevent. I may have followed others into committing this fault, but in face of any objections that may be made against me on that account I declare that such expressions were dragged out of me by my view of the object at that moment; they don't imply any dogmatic spirit or conceited idea of my own judgment—attitudes that I am aware are not suitable for anybody, least of all a sceptic.

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Med vänlig hälsning,

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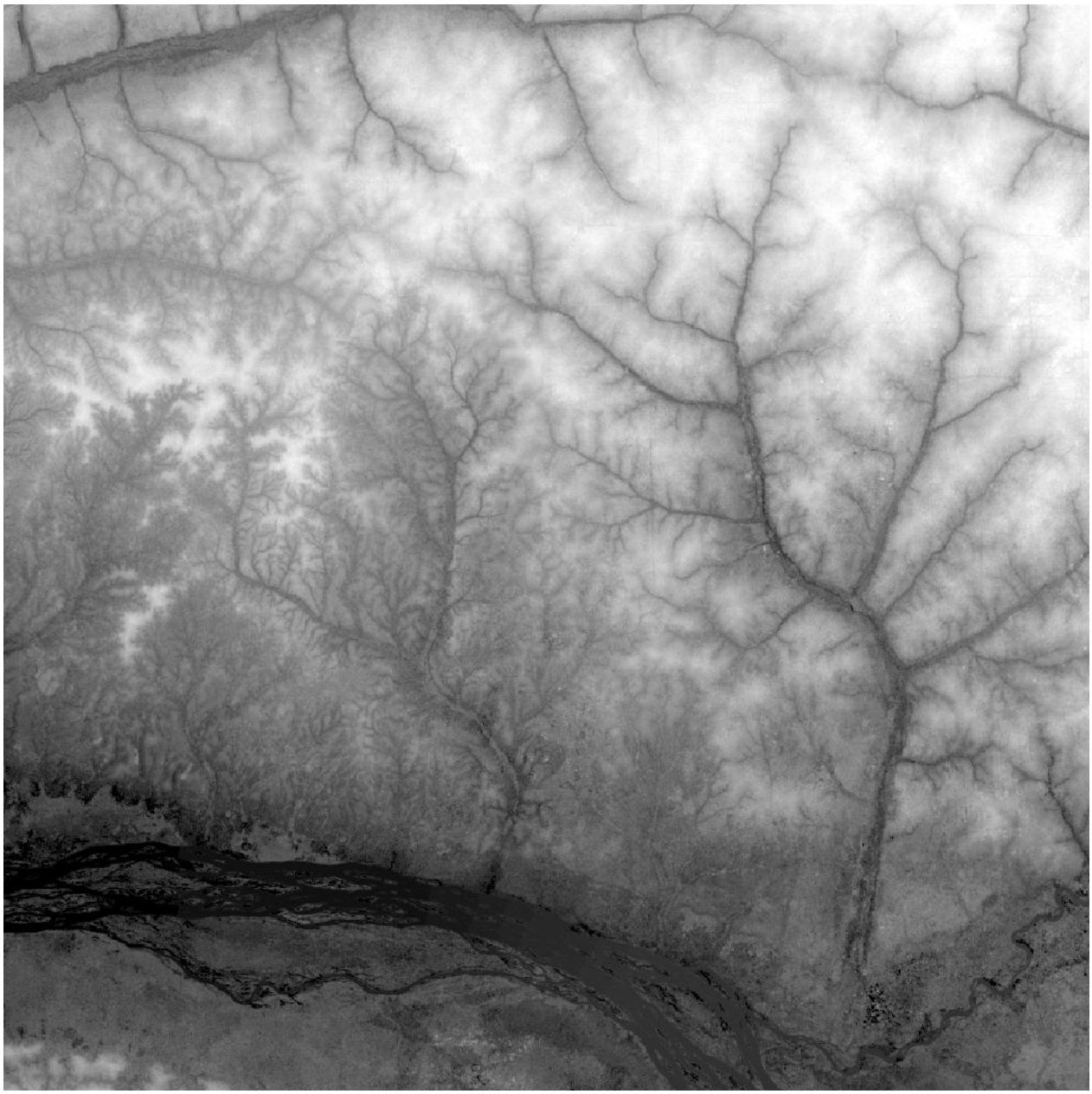

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