

his mind. We also find that the compound ideas that are the meanings of words in one language are usually also the meanings of words in others, even when there can be no question of the languages' having influenced one another. This is conclusive evidence that the simple ideas of which the compound ones are made up were linked by some universal factor that had an equal influence on all mankind.

The fact that different ideas are connected is too obvious to be overlooked; yet I haven't found any philosopher trying to list or classify all the sources of association. This seems to be worth doing. To me there appear to be only three factors connecting ideas with one another, namely, •resemblance, •contiguity [= 'nextness'] in time or place, and •cause or effect.

I don't think there will be much doubt that our ideas are

connected by these factors. •A picture naturally leads our thoughts to the thing that is depicted in it; •the mention of one room naturally introduces remarks or questions about other rooms in the same building; and •if we think of a wound, we can hardly help thinking about the pain that follows it. But it will be hard to prove to anyone's satisfaction—the reader's or my own—that these three are the *only* sources of association among our ideas. All we can do is to consider a large number of instances where ideas are connected, find in each case what connects them, and eventually develop a really general account of this phenomenon.¹ The more cases we look at, and the more care we employ on them, the more assured we can be that our final list of principles of association is complete.

Section 4: Sceptical doubts about the operations of the understanding

All the objects of human reason or enquiry fall naturally into two kinds, namely *relations of ideas* and *matters of fact*. The first kind include geometry, algebra, and arithmetic, and indeed every statement that is either intuitively or demonstratively certain. *That the square of the hypotenuse is equal to the squares of the other two sides* expresses a relation between those figures. *That three times five equals half of thirty* expresses a relation between those numbers. Propositions of this kind can be discovered purely by thinking, with no need to attend to anything that actually exists anywhere in the

universe. The truths that Euclid demonstrated would still be certain and self-evident even if there never were a circle or triangle in nature.

Matters of fact, which are the second objects of human reason, are not established in the same way; and we cannot have such strong grounds for thinking them true. The contrary of every matter of fact is still *possible*, because it doesn't imply a contradiction and is conceived by the mind as easily and clearly as if it conformed perfectly to reality. *That the sun will not rise tomorrow* is just as intelligible as—and

¹ For instance, Contrast or Contrariety is also a connection among Ideas. But we might consider it as a mixture of Causation and Resemblance. Where two objects are contrary, one destroys the other; that is, causes its annihilation, and the idea of an object's annihilation implies the idea of its former existence.

no more contradictory than—the proposition *that the sun will rise tomorrow*. It would therefore be a waste of time to try to *demonstrate* [= ‘prove absolutely rigorously’] its falsehood. If it were demonstratively false, it would imply a contradiction and so could never be clearly conceived by the mind.

So it may be worth our time and trouble to try to answer this: What sorts of grounds do we have for being sure of matters of fact—propositions about what exists and what is the case—that aren’t attested by our present senses or the records of our memory? It’s a notable fact that neither ancient philosophers nor modern ones have attended much to this important question; so in investigating it I shall be marching through difficult terrain with no guides or signposts; and that may help to excuse any errors I commit or doubts that I raise. Those errors and doubts may even be useful: they may make people curious and eager to learn, and may destroy that ungrounded and unexamined *confidence* that people have in their opinions—a confidence that is the curse of all reasoning and free enquiry. If we find things wrong with commonly accepted philosophical views, that needn’t discourage us, but rather can spur us on to try for something fuller and more satisfactory than has yet been published.

All reasonings about matters of fact seem to be based on the relation of *cause and effect*, which is the only relation that can take us beyond the evidence of our memory and senses. If you ask someone why he believes some matter of fact which isn’t now present to him—for instance that his friend is now in France—he will give you a reason; and this reason will be some other fact, such as that he has received a letter from his friend or that his friend had planned to go to France. Someone who finds a watch or other machine on a desert island will conclude that there have been men on that island. All our reasonings concerning fact are like this.

When we reason in this way, we suppose that the present fact is *connected* with the one that we infer from it. If there were nothing to bind the two facts together, the inference of one from the other would be utterly shaky. Hearing the sounds of someone talking rationally in the dark assures us of the presence of some person. Why? Because such sounds are the effects of the human constitution, and are closely connected with it. All our other reasonings of this sort, when examined in detail, turn out to be based on the relation of cause and effect. The causal chain from the evidence to the ‘matter of fact’ conclusion may be short or long. And it may be that the causal connection between them isn’t direct but collateral—as when one sees light and infers heat, not because either causes the other but because the two are collateral effects of a single cause, namely fire.

So if we want to understand the basis of our confidence about matters of fact, we must find out how we come to know about cause and effect.

I venture to assert, as true without exception, that knowledge about causes is never acquired through *a priori* reasoning, and always comes from our experience of finding that particular objects are constantly associated with one other. [When Hume is discussing cause and effect, his word ‘object’ often covers *events* as well as *things*.] Present an object to a man whose skill and intelligence are as great as you like; if the object is of a kind that is entirely new to him, no amount of studying of its perceptible qualities will enable him to discover any of its causes or effects. Adam, even if his reasoning abilities were perfect from the start, couldn’t have inferred from the fluidity and transparency of water that it could drown him, or from the light and warmth of fire that it could burn him. The qualities of an object that appear to the senses never reveal the causes that produced the object or the effects that it will have; nor can our reason, unaided by

experience, ever draw any conclusion about real existence and matters of fact.

The proposition that *causes and effects are discoverable not by reason but by experience* will be freely granted **(1)** with regard to objects that we remember having once been altogether unknown to us; for in those cases we remember the time when we were quite unable to tell what would arise from those objects. Present two smooth pieces of marble to a man who has no knowledge of physics—he will not be able to work out that they will stick together in such a way that it takes great force to separate them by pulling them directly away from one another, while it will be easy to slide them apart. **(2)** Events that aren't much like the common course of nature are also readily agreed to be known only by experience; and nobody thinks that the explosion of gunpowder, or the attraction of a magnet, could ever be discovered by arguments *a priori*—i.e. by simply *thinking* about gunpowder and magnets, without bringing in anything known from experience. **(3)** Similarly, when an effect is thought to depend on an intricate machinery or secret structure of parts, we don't hesitate to attribute all our knowledge of it to experience. No-one would assert that he can give the ultimate reason why milk or bread is nourishing for a man but not for a lion or a tiger.

But this same proposition—that causes and effects cannot be discovered by reason—may seem less obvious when it is applied to events of kinds **(1)** that we have been familiar with all our lives, **(2)** that are very like the whole course of nature, and **(3)** that are supposed to depend on the simple perceptible qualities of objects and not on any secret structure of parts. We are apt to imagine that we could discover *these* effects purely through reason, without experience. We fancy that if we had been suddenly brought into this world, we could have known straight off that when one billiard ball

strikes another it will make it move—knowing this for certain, without having to try it out on billiard balls. Custom has such a great influence! At its strongest it not only hides our natural ignorance but even conceals *itself*: just because custom is so strongly at work, we aren't aware of its being at work at all.

If you're not yet convinced that absolutely all the laws of nature and operations of bodies can be known only by experience, consider the following. If we are asked to say what the effects will be of some object, without consulting past experience of it, how can the mind go about doing this? It must invent or imagine some event as being the object's effect; and clearly this invention must be entirely arbitrary. The mind can't possibly find the effect *in* the supposed cause, however carefully we examine it, for the effect is totally different from the cause and therefore can never be discovered *in* it. Motion in the second billiard ball is a distinct event from motion in the first, and nothing in the first ball's motion even hints at motion in the second. A stone raised into the air and left without any support immediately falls; but if we consider this situation *a priori* we shall find nothing that generates the idea of a downward rather than an upward or some other motion in the stone.

Just as the first imagining or inventing of a particular effect is arbitrary if it isn't based on experience, the same holds for the supposed tie or connection between cause and effect—the tie that binds them together and makes it impossible for that cause to have any effect but that one. Suppose for example that I see one billiard ball moving in a straight line towards another: even if the contact between them should *happen* to suggest to me the idea of motion in the second ball, aren't there a hundred different events that I can conceive might follow from that cause? May not both balls remain still? May not the first bounce straight

back the way it came, or bounce off in some other direction? All these suppositions are consistent and conceivable. Why then should we prefer just one, which is no more consistent or conceivable than the rest? Our *a priori* reasonings will never reveal any basis for this preference.

In short, every effect is a distinct event from its cause. So it can't be discovered *in* the cause, and the first invention or conception of it *a priori* must be wholly arbitrary. Also, even after it has been suggested, the linking of it with the cause must still appear as arbitrary, because plenty of other possible effects must seem just as consistent and natural from reason's point of view. So there isn't the slightest hope of reaching any conclusions about causes and effects without the help of experience.

That's why no reasonable scientist has ever claimed to know the ultimate cause of any natural process, or to show clearly and in detail what goes into the causing of any single effect in the universe. It is agreed that the most human reason can achieve is to make the principles that govern natural phenomena simpler, bringing many particular effects together under a few general causes by reasoning from analogy, experience and observation. But if we try to discover the causes of these general causes, we shall be wasting our labour. These ultimate sources and principles are totally hidden from human enquiry. Probably the deepest causes and principles that we shall ever discover in nature are these four: •elasticity, •gravity, •cohesion of parts -which makes the difference between a pebble and a pile of dust-, and •communication of motion by impact -as when one billiard ball hits another-. We shall be lucky if by careful work we can explain particular phenomena in terms of these four, or something close to them. The perfect philosophy of the natural kind [= 'the perfect physics'] only staves off our ignorance a little longer; just as, perhaps, the most perfect

philosophy of the moral or metaphysical kind [= 'the most perfect *philosophy*', in the 21st century sense of the word] serves only to show us more of how ignorant we are. So both kinds of philosophy eventually lead us to a view of human blindness and weakness—a view that confronts us at every turn despite our attempts to get away from it.

Although geometry is rightly famous for the accuracy of its reasoning, when it is brought to the aid of physics it can't lead us to knowledge of ultimate causes, thereby curing the ignorance I have been discussing. Every part of applied mathematics works on the assumption that nature operates according to certain established laws; and abstract reasonings are used either to help experience to discover these laws or to work out how the laws apply in particular cases where exactness of measurement is relevant. Here is an example. It is a law of motion, discovered by experience, that *the force of any moving body is proportional to its mass and to its velocity*; so we can get a small force to overcome the greatest obstacle if we can devise a machine that will increase the velocity of the force so that it overwhelms its antagonist. Geometry helps us to apply this law by showing us how to work out the sizes and shapes of all the parts of the machine that we make for this purpose; but the law itself is something we know purely from experience, and no amount of abstract reasoning could lead us one step towards the knowledge of it. When we reason *a priori*, considering some object or cause merely as it appears to the mind and independently of any observation of its behaviour, it could never prompt us to think of any *other* item, such as its effect. Much less could it show us the unbreakable connection between them. It would take a very *clever* person to discover by reasoning that heat makes crystals and cold makes ice without having had experience of the effects of heat and cold!

Part 2

But we haven't yet found an acceptable answer to the question that I initially asked. Each solution raises new questions that are as hard to answer as the first one was, and that lead us on to further enquiries. To the question *What is the nature of all our reasonings concerning matter of fact?* the proper answer seems to be that they are based on the relation of cause and effect. When it is further asked, *What is the foundation of all our reasonings about cause and effect?* we can answer in one word, *experience*. But if we persist with questions, and ask, *What are inferences from experience based on?* this raises a new question that may be harder still. Philosophers—for all their air of superior wisdom—are given a hard time by people who persist with questions, pushing them from every corner into which they retreat, finally bringing them to some dangerous dilemma [= 'a choice between two alternatives that both seem wrong']. The best way for us to avoid such an embarrassment is not to claim too much in the first place, and even to find the difficulty for ourselves before it is brought against us as an objection. In this way we can make a kind of merit even of our ignorance!

In this section I shall settle for something easy, offering only a •negative answer to the question I have raised •about what inferences from experience are based on•. It is this: even after we have experience of the operations of cause and effect, *the conclusions we draw from that experience are •not based on reasoning or on any process of the understanding*. I shall try to explain and defend this answer.

It must be granted that nature has kept us at a distance from all its secrets, and has allowed us to know only a few superficial qualities of objects, concealing from us the powers and energies on which the influence of the objects entirely

depends. Our senses tell us about the colour, weight and consistency of bread; but neither the senses nor reason can ever tell us about the qualities that enable bread to nourish a human body. Sight or touch gives us an idea of the *motion* of bodies; but as for the amazing *force* that keeps a body moving for ever unless it collides with other bodies—we cannot have the remotest conception of that. Despite this ignorance of natural powers² and forces, however, we always assume that the same sensible qualities [= 'qualities that can be seen or felt or heard etc.'] will have the same secret powers, and we expect them to have the same effects that we have found them to have in our past experience. If we are given some stuff with the colour and consistency of bread that we have eaten in the past, we don't hesitate to repeat the experiment •of eating it•, confidently expecting it to nourish and support us. •That's what we do every morning at the breakfast table: confidently *experimenting* with bread-like stuff by eating it!• I would like to know what the basis is for this process of thought. Everyone agrees that a thing's sensible qualities aren't connected with its secret powers in any way that we know about, so that the mind isn't led to a conclusion about their constant and regular conjunction through anything it knows of their nature. All that past experience can tell us, directly and for sure, concerns the behaviour of the particular objects we observed, at the particular time when we observed them. •My experience directly and certainly informs me that *that* fire consumed coal *then*; but it's silent about the behaviour of the same fire a few minutes later, and about other fires at any time•. Why should this experience be extended to future times and to other objects, which for all we know may only *seem* similar?—that's what I want to know. The bread that I formerly ate nourished me; i.e. a body with

² The word 'power' is here used in a loose and popular sense. Using it more accurately would add strength to this argument. See Section 7.

such and such sensible qualities did at that time have such and such secret powers. But does it follow that other bread must also nourish me at other times, and that the same perceptible qualities must always be accompanied by the same secret powers? It doesn't seem to follow necessarily. Anyway, it must be admitted that in such a case as this the mind draws a conclusion; it takes a certain step, goes through a process of thought or inference, which needs to be explained. These two propositions are far from being the same:

- I have found that such and such an object has always had such and such an effect.
- I foresee that other objects which appear similar will have similar effects.

The second proposition is always inferred from the first; and if you like I'll grant that it is rightly inferred. But if you insist that the inference is made by a chain of reasoning, I challenge you to produce the reasoning. The connection between these propositions is not intuitive [i.e. the second doesn't self-evidently and *immediately* follow from the first]. If the inference is to be conducted through reason alone, it must be with help from some intermediate step. But when I try to think what that intermediate step might be, I am defeated. Those who assert that it really exists and is the origin of all our conclusions about matters of fact owe us an account of what it is.

They haven't given any account of this, which I take to be evidence that none can be given. If many penetrating and able philosophers try and fail to discover a connecting proposition or intermediate step through which the understanding can perform this inference from past effects to future ones, my negative line of thought about this will eventually be found entirely convincing. But as the question is still new, the reader may not trust his own abilities enough to conclude that because he can't find a certain argument it doesn't exist.

In that case I need to tackle a harder task than I have so far undertaken—namely, going through all the branches of human knowledge one by one, trying to show that none can give us such an argument.

All reasonings fall into two kinds: **(1)** demonstrative reasoning, or that concerning relations of ideas, and **(2)** factual reasoning, or that concerning matters of fact and existence. That no demonstrative arguments are involved in **(2)** seems evident; since there is no outright contradiction in supposing that the course of nature will change so that an object that seems like ones we have experienced will have different or contrary effects from theirs. Can't I clearly and distinctly conceive that snowy stuff falling from the clouds might taste salty or feel hot? Is there anything unintelligible about supposing that all the trees will flourish in December and lose their leaves in June? Now, if something is intelligible and can be distinctly conceived, it implies no contradiction and can never be proved false by any demonstrative argument or abstract *a priori* reasoning.

So if there are arguments to justify us in trusting past experience and making it the standard of our future judgment, these arguments can only be *probable*; i.e. they must be of the kind **(2)** that concern matters of fact and real existence, to put it in terms of the classification I have given. But probable reasoning, if I have described it accurately, can't provide us with the argument we are looking for. According to my account, all arguments about existence are based on the relation of cause and effect; our knowledge of that relation is derived entirely from experience; and in drawing conclusions from experience we assume that the future will be like the past. So if we try to prove *this* assumption by probable arguments, i.e. arguments regarding existence, we shall obviously be going in a circle, taking for granted the very point that is in question.

In reality, all arguments from experience are based on the similarities that we find among natural objects—which lead us to expect that the effects of the objects will also be similar. Although only a fool or a madman would ever challenge the authority of experience or reject it as a guide to human life, still perhaps a philosopher may be allowed to ask what it is about human nature that gives this mighty authority to experience and leads us to profit from the similarities that nature has established among different objects. Our inferences from experience all boil down to this: *From causes that appear similar we expect similar effects*. If this were based on reason, we could draw the conclusion as well after a single instance as after a long course of experience. But that isn't in fact how things stand. Nothing so similar as eggs; yet no-one expects them all to taste the same! When we become sure of what will result from a particular event, it is only because we have experienced many events of that kind, all with the same effects. Now, where is that process of reasoning that infers from one instance a conclusion that was not inferred from a hundred previous instances just like this single one? I ask this for the sake of information as much as with the intention of raising difficulties. I can't find—I can't *imagine*—any such reasoning. But I am willing to learn, if anyone can teach me.

It may be said that from a number of uniform experiences we *infer a connection* between the sensible qualities and the secret powers; but this seems to raise the same difficulty in different words. We still have to ask what process of argument *this* inference is based on. Where is the intermediate step, the interposing ideas, which join propositions that are so different from one another? It is agreed that the colour, consistency and other sensible qualities of bread don't appear to be inherently connected with the secret powers of nourishment and life-support. If they were, we

could infer these secret powers from a first encounter with those qualities, without the aid of long previous experience; and this contradicts what all philosophers believe and contradicts plain matters of fact. Start by thinking of us in our natural state of ignorance, in which we know nothing about the powers and influence of anything. How does experience cure this ignorance? All it does is to show us that certain similar objects had similar effects; it teaches us that those particular objects had such and such powers and forces at those particular times. When a new object with similar perceptible qualities is produced, we expect similar powers and forces and look for a similar effect. We expect for instance that stuff with the colour and consistency of bread will nourish us. But this surely is a movement of the mind that needs to be explained. When a man says

'I have found in all past instances such and such sensible qualities conjoined with such and such secret powers',

and then goes on to say

'Similar sensible qualities will always be combined with similar secret powers',

he isn't guilty of merely repeating himself; these propositions are in no way the same. The second proposition is inferred from the first', you may say; but you must admit that the inference isn't intuitive [= 'can't be seen at a glance to be valid'], and it isn't demonstrative either [= 'can't be carried through by a series of steps each of which can be seen at a glance to be valid']. What kind of inference is it, then? To call it 'experiential' is to assume the point that is in question. For all inferences from experience are based on the assumption that the future will resemble the past, and that similar powers will be combined with similar sensible qualities. As soon as the suspicion is planted that the course of nature may change, so that the past stops being a guide to the future, all experience becomes

useless and can't support any inference or conclusion. So no arguments from experience can *support* this resemblance of the past to the future, because all such arguments are *based on* the assumption of that resemblance. However regular the course of things has been, that fact on its own doesn't prove that the future will also be regular. It's no use your claiming to have learned the nature of bodies from your past experience. Their secret nature, and consequently all their effects and influence, may change without any change in their sensible qualities. This happens •sometimes with regard to •some objects: Why couldn't it happen •always with regard to •all? What logic, what process of argument, secures you against this? You may say that I don't *behave* as though I had doubts about this; but that would reflect a misunderstanding of why I am raising these questions. When I'm considering how to act, I am quite satisfied that the future will be like the past; but as a philosopher with an *enquiring*—I won't say *sceptical*—turn of mind, I want to know what this confidence is based on. Nothing I have read, no research I have done, has yet been able to remove my difficulty. Can I do better than to put the difficulty before the public, even though I may not have much hope of being given a solution? In this way we shall at least be aware of our ignorance, even if we don't increase our knowledge.

It would be inexcusably arrogant to conclude that because I haven't discovered a certain argument it doesn't really exist. Even if learned men down the centuries have searched for something without finding it, perhaps it would still be rash to conclude with confidence that the subject must surpass human understanding. Even though we examine all the

sources of our knowledge and conclude that they are unfit for a given subject, we may still suspect that the list of sources is not complete or our examination of them not accurate. With regard to our present subject, however, there are reasons to think that my conclusion is certainly right and that I am not arrogant in thinking so.

It is certain that the most ignorant and stupid peasants, even infants, indeed even brute beasts, improve by experience and learn the qualities of natural objects by observing their effects. When a child has felt pain from touching the flame of a candle, he will be careful not to put his hand near any candle, and will expect a similar effect from any cause that is similar in its appearance. If you assert that the child's understanding comes to this conclusion through a process of argument, it is fair for me to demand that you produce that argument, and you have no excuse for refusing to do so. You can't say that the argument has eluded you because it is so difficult and complex, because you have just said that a mere infant finds it easy! So if you hesitate for a moment, or if after reflection you produce any intricate or profound argument, you have in effect given up your side in this dispute: you have as good as admitted that *it isn't through reasoning that we are led to suppose the future to resemble the past and to expect similar effects from apparently similar causes*. This is the proposition that I intended to establish in the present section. If I'm right about it, I don't claim it as any great discovery. If I am wrong, then there is an argument ·from past to future· which was perfectly familiar to me long before I was out of my cradle, yet now I can't discover it. What a backward scholar I must be!

Section 5: Sceptical solution of these doubts

The passion for philosophy, like that for religion, involves a certain danger. Although it aims to correct our behaviour and wipe out our vices, it may—through not being handled properly—end up merely encouraging us to carry on in directions that we're already naturally inclined to follow. We may set out to achieve philosophical wisdom and firmness, and to become satisfied with the pleasures of the mind—as distinct from those of the body—, yet reason ourselves out of all virtue as well as all social enjoyment, ending up with a philosophy which (like that of Epictetus and other Stoics) is only a more refined system of selfishness. While we meditate on the vanity of human life, and focus our thoughts on the empty and transitory nature of riches and honours, perhaps we are really just finding excuses for our idleness, trying to get reason's support for our lazy unwillingness to be busy in the world. However, one kind of philosophy seems to run little risk of this drawback, because it doesn't join forces with any disorderly passion of the human mind, and can't get mixed up with any of our natural tendencies or inclinations; and that is the sceptical philosophy. The sceptics always talk of doubt and suspending judgment, of the danger of deciding too quickly, of keeping intellectual enquiries within narrow limits, and of giving up all theorizing that isn't in touch with common life and practice. So their philosophy is as opposed as it could be to the mind's idleness, its rash arrogance, its grandiose claims, and its superstitious credulity. This philosophy has a humbling effect on every passion except the love of truth; and *that* could never be carried too far. Given that this philosophy is almost always harmless and innocent, it's surprising that it should so often be criticized and stigmatized as libertine, profane,

and irreligious. Perhaps the very feature that makes it so innocent also brings hatred and resentment against it. It doesn't encourage any bad feelings or habits, so it has few supporters; but it does oppose many vices and follies, which is why it has so many enemies!

When it tries to limit our enquiries to common life, this philosophy runs no risk of going too far and undermining the reasonings that we use *in* common life, pushing its doubts so far as to destroy all action and belief. Nature will always maintain its rights, and prevail in the end over any abstract reasoning whatsoever. That is, we shall continue to think and act in the ways that our human nature dictates—the ways that are *natural* to us—with no risk of our being deflected from these by philosophical considerations. For example, I showed in the preceding section that whenever we reason from experience we take a step that isn't supported by any argument or intellectual considerations; but these experiential reasonings are the basis for almost all the knowledge we have, and there's no chance of their being dislodged by the discovery that they can't be justified by arguments. If we aren't led by argument to make inferences from past experience, we must be led by something else that is just as powerful—some other force that will have power in our lives as long as human nature remains the same. It would be worthwhile to explore what that other force is.

Suppose that a highly intelligent and thoughtful person were suddenly brought into this world; he would immediately observe one event following another, but that is all he could discover. He wouldn't be able by any reasoning to reach the idea of cause and effect, because (firstly) the particular powers by which all natural operations are performed are

never perceived through the senses, and (secondly) there is no *reason* to conclude that one event causes another merely because it precedes it. Their occurring together may be arbitrary and casual, with no causal connection between them. In short, until such a person had more experience he could never reason about any matter of fact, or be sure of anything beyond what was immediately present to his memory and senses.

Now suppose that our person gains more experience, and lives long enough in the world to observe similar objects or events occurring together constantly; *now* what conclusion does he draw from this experience? He immediately infers the existence of one object from the appearance of the other! Yet all his experience hasn't given him any idea or knowledge of the secret power by which one object produces another; nor can any process of reasoning have led him to draw this inference. But he finds that he *can't help* drawing it: and he won't be swayed from this even if he becomes convinced that there is no intellectual support for the inference. Something else is at work, compelling him to go through with it.

It is *custom* or *habit*. When we are inclined to behave or think in some way, not because it can be justified by reasoning or some process of the understanding but just because we have behaved or thought like that so often in the past, we always say that this inclination is the effect of 'custom'. In using that word we don't claim to give the basic reason for the inclination. All we are doing is to point out a fundamental feature of human nature which everyone agrees is there, and which is well known by its effects. Perhaps that is as far as we can go. Perhaps, that is, we can't discover the cause of this cause, and must rest content with it as the deepest we can go in explaining our conclusions from experience. Our ability to go that far should satisfy us; if our faculties won't take us any further,

we oughtn't to *complain* about this. We do at least have here a very intelligible proposition and perhaps a true one: *After the constant conjunction of two objects—heat and flame, for instance, or weight and solidity—sheer habit makes us expect the one when we experience the other.* Indeed, this hypothesis seems to be the only one that could explain why we draw from a thousand instances an inference which we can't draw from a single one that is exactly like each of the thousand. •Reason isn't like that. The conclusions it draws from considering one circle are the same as it would form after surveying all the circles in the universe. But no man, having seen only one body move after being pushed by another, could infer that every other body will move after a similar collision. All inferences from experience, therefore, are effects of custom and not of •reasoning.

·START OF A VAST FOOTNOTE·

Writers often distinguish reason from experience, taking these kinds of argumentation to be entirely different from each other. Reason's arguments are thought to result purely from our intellectual faculties, which establish principles of science and philosophy by considering *a priori* the nature of things, examining the effects that must follow from their operation. Arguments from experience are supposed to be derived entirely from sense and observation, through which we •learn what has actually resulted from the operation of particular objects and can •infer from this what their results will be in the future. For example, the limitations and restraints of civil government and a legal constitution may be defended either from reason which—reflecting on the great frailty and corruption of human nature—teaches that no man can safely be trusted with unlimited authority; or from experience and history, which inform us of the enormous abuses that have resulted in every age from an excess of such authority.

The same distinction between reason and experience is maintained in all our discussions about the conduct of life. While the experienced statesman, general, physician, or merchant is trusted and followed, the unpracticed novice, however talented he may be, is neglected and despised. Reason can enable one to make plausible estimates of what will be likely to ensue from x-type conduct in y-type circumstances, people say, but they regard reason as not good enough unless it gets help from experience. Only experience (they hold) can give stability and certainty to the results that are reached ·by reason· from study and reflection.

However, although this distinction is universally accepted, both in practical life and in intellectual inquiry, I do not hesitate to say that it is basically mistaken, or at least superficial.

If we examine (1) arguments like those I have mentioned, which are supposed to involve nothing but reasoning and reflection, they turn out to be relying on some general principle based solely on observation and experience. The only difference between them and (2) the maxims that are commonly thought to come from pure experience is that (1) can't be established without some process of thought—some reflection on what we have observed, in order to sort out its details and trace its consequences—whereas in (2) the experienced event is exactly like the one we predict on the new occasion. The fear that if our monarchs were freed from the restraints of laws they would become tyrants might be arrived at (2) through our knowledge of the history of Tiberius or Nero; or (1) through our experience of fraud or cruelty in private life, which with a little thought we can take as evidence of the general corruption of human nature and of the danger of putting too much trust in mankind. In *each* case the ultimate basis for the fear that we arrive at is experience.

Any man, however young and inexperienced, will have been led by his experience to many general truths about human affairs and the conduct of life; but he will be apt to go wrong in putting them into practice, until time and further experience have broadened the scope of these truths and taught him how to apply them. Talented though he may be, he will be likely to overlook some apparently minor aspects of a situation which are in fact crucial to the conclusions he ought to draw and to how he ought to act. He must of course have had *some* experience. When we call someone an 'unexperienced reasoner', we mean only that he hasn't had *much* experience.

·END OF THE VAST FOOTNOTE·

Custom, then, is the great guide of human life. It alone is what makes our experience useful to us, and makes us expect future sequences of events to be like ones that have appeared in the past. Without the influence of custom, we would be entirely ignorant of every matter of fact beyond what is immediately present to the memory and senses. We would never know what means we should adopt in order to reach our ends; we couldn't employ our natural powers to produce any desired effect. There would be an end of all action and of most theorizing.

I should point out, however, that although our inferences from experience carry us beyond our memory and senses, and assure us of matters of fact that happened in distant places and at remote times, any such inference must start with a fact that is present to the senses or memory. A man who found in a desert country the remains of magnificent buildings would conclude that the country had long before had civilized inhabitants; but without the initial experience he could never infer this. We learn the events of bygone ages from history; but to do this we must read the books that give the information, and carry out inferences from one

report to another, until finally we arrive at the eye-witnesses and spectators of these distant events. In short, if we didn't start with some fact that is present to the memory or senses, our reasonings would be merely hypothetical; and however strong the particular links might be, the whole chain of inferences would have nothing to support it, and we couldn't use it to arrive at knowledge of any real existence. If I ask why you believe any particular matter of fact that you tell me of, you must tell me some reason; and this reason will be some other fact connected with it. But you can't go on like this for ever: eventually you must end up with some fact that is present to your memory or senses—or else admit that your belief has no foundation at all.

What are we to conclude from all this? Something that is far removed from the common theories of philosophy, yet is very simple:

All beliefs about matters of fact or real existence are derived merely from *something that is present to the memory or senses, and a customary association of that with some other thing.*

Or in other words: having found in many cases that two kinds of objects—flame and heat, snow and cold—have always gone together, and being presented with a new instance of flame or snow, the mind's habits lead it to expect heat or cold and to believe that heat or cold exists now and will be experienced if one comes closer. This belief is the inevitable result of placing the mind in such circumstances. That our minds should react in that way in those circumstances is as unavoidable as that we should feel love when we receive benefits, or hatred when we are deliberately harmed. These operations of the soul are a kind of *natural instinct*, which no reasoning or process of the thought and understanding can either produce or prevent.

At this point we could reasonably allow ourselves to stop

our philosophical researches. In most questions, we can never make a single step further; and in all questions, we must eventually stop, after our most restless and probing enquiries. But still our curiosity will be pardonable, perhaps commendable, if it carries us on to still further researches, and makes us examine more accurately the nature of this belief, and of the customary conjunction from which it is derived. This may bring us to some explanations and analogies that will give satisfaction—at least to those who love the abstract sciences and can enjoy speculations which, however accurate, may still retain a degree of doubt and uncertainty. As to readers whose tastes are different from that: Part 2 of this section is not addressed to them, and can be neglected without harm to their understanding of the rest.

Part 2

Nothing is more free than the imagination of man; and though it is confined to the original stock of ideas provided by the internal and external senses, it has unlimited power to mix, combine, separate and divide these ideas, in all the varieties of fiction and vision [= 'in every way that can be described or depicted'.] It can invent a sequence of events, with all the appearance of reality, ascribe to them a particular time and place, conceive them as really happening, and depict them to itself with as much detail as it could any historical event which it believes with the greatest certainty to have really happened. What, then, is the difference between such a fiction and belief? It is *not* this:

There is one special idea that is joined to every proposition that we assent to and not to any that we regard as fictional.

The reason why that is a wrong account is that the mind has authority over all its ideas, so that if this 'one special idea' existed the mind could voluntarily join it to any fiction, and consequently—according to this account—it would be able to believe anything it chose to believe; and we find by daily experience that it cannot. We can in putting thoughts together join the head of a man to the body of a horse; but we can't choose to *believe* that such an animal has ever really existed.

It follows that the difference between fiction and belief lies in some *sentiment or feeling* that goes with belief and not with fiction—a feeling that doesn't depend on the will and can't be commanded at pleasure. It must be caused by nature, like all other sentiments; and must arise from the particular situation that the mind is in at that particular moment. Whenever any object is presented to the memory or to the senses, it immediately leads the imagination—by the force of *custom*—to conceive the object that is usually conjoined to it; and this conception comes with a feeling or sentiment that is different from 'anything accompanying' the loose daydreams of the imagination. That is all there is to belief. For as there is no matter of fact that we believe so firmly that we can't conceive the contrary, there would be no difference between the conception assented to and that which is rejected if there weren't some 'feeling or' sentiment that distinguishes the one from the other. If I see a billiard-ball moving towards another on a smooth table, I can easily conceive it to stop on contact. This conception implies no contradiction; but still it *feels* very different from the conception by which I represent to myself the collision followed by the passing on of motion from one ball to the other.

If we tried to define this feeling, we might find that hard if not impossible to do, like the difficulty of defining the feeling of cold or the passion of anger to someone who never

had any experience of these sentiments. 'Belief' is the true and proper name of this feeling; and everyone knows the meaning of that term because everyone 'has beliefs all the time, and therefore' is at every moment conscious of the feeling represented by it. Still, it may be worthwhile to try to describe this sentiment, in the hope of explaining it better with help from some analogies. In that spirit, I offer this:

Belief is nothing but a more vivid, lively, forcible, firm, steady conception of an object than any that the unaided imagination can ever attain.

This variety of terms—five of them!—may seem unphilosophical, but it is intended only to express that act of the mind which renders realities—or what we take to be realities—more present to us than 'what we take to be fictions, causing them to weigh more in the thought and giving them a greater influence on the passions and on the imagination. Provided we agree about the *thing*, it is needless to dispute about the *terms*. The imagination has the command over all its ideas, and can join and mix and vary them in every possible way. It can conceive fictitious objects with all the circumstances of place and time. It can set such fictions—*in a way*—before our eyes, in their true colours, just as they might have existed. But this faculty of imagination can never by itself produce a belief; and that makes it evident that belief doesn't consist in any special nature or order of ideas 'because the imagination has no limits with respect to those', but rather in the *manner* of their conception and in their *feeling* to the mind. I admit that it's impossible to explain perfectly this feeling or manner of conception. We can use words that express something near it 'as I have been doing'; but its true and proper name, as we observed before, is 'belief'—a term that everyone sufficiently understands in common life. And in philosophy we can go no further than to assert that *belief is something felt by the*

mind that distinguishes the ideas of the judgment from the fictions of the imagination. It

gives them more weight and influence,
 makes them appear of greater importance,
 strengthens them in the mind, and
 makes them the governing principle of our actions.

For example: right now I hear the voice of someone whom I know, the sound seeming to come from the next room. This impression of my ·auditory· senses immediately carries my thought to the person in question and to all the objects surrounding him. I depict them to myself as existing right now, with the same qualities and relations that I formerly knew them to have. These ideas take a firmer hold on my mind than would ideas of ·something I know to be fictitious, such as· an enchanted castle. They are very different to the feeling, and have a much greater influence of every kind, either to give pleasure or pain, joy or sorrow.

Let us, then, take in this doctrine in its full scope, and agree that

•the sentiment of belief is nothing but a conception that is more intense and steady than conceptions that are mere fictions of the imagination, and •this manner of conception arises from a customary conjunction of the object with something present to the memory or senses.

It will not be hard, I think, to find other operations of the mind analogous to belief (on this account of it), and to bring these phenomena under still more general principles. [See note on 'principle' on page 2.]

I have already remarked that nature has established connections among particular ideas, and that no sooner has one idea occurred to our thoughts than it introduces its correlative—i.e. the idea that nature has connected with it—and carries our attention towards it by a gentle

and imperceptible movement. These ·natural· principles of connection or association come down to three ·basic ones·, namely, •resemblance, •contiguity [= 'nextness'], and •causation. These three are the only bonds that unite our thoughts together, and generate that regular *sequence* of thought or talk that takes place among all mankind to a greater or lesser degree. Now a question arises on which the solution of the present difficulty will depend. Does it happen with each of these relations that, when an object is presented to the senses or memory the mind is not only carried to the *conception* of the correlative, but comes to have ·a *belief* in it, that is·, a steadier and stronger conception of it than it would otherwise have been able to attain? This seems to be what happens when beliefs arise from the relation of *cause and effect*. If it also holds for the other two relations or principles of association, this will be established as a general law that holds in all the operations of the mind.

As the first relevant experiment, let us notice that when we see the picture of an absent friend, our idea of him is evidently enlivened by the picture's *resemblance* to him, and that every feeling that our idea of him produces, whether of joy or sorrow, acquires new force and vigour. This effect is produced by the joint operation of •a relation ·of resemblance· and •a present impression. If the picture doesn't resemble him, or at least wasn't intended to be *of* him, it doesn't convey our thought to him at all. And when the picture and the person are both absent from us, though the mind may pass from the thought of the one to that of the other it feels its idea of the person to be weakened rather than strengthened by that transition. We take pleasure in viewing the picture of a friend, when it is set before us; but when it is not in our presence we would prefer considering him directly to considering him through a likeness of him that is both distant and dim.

The ceremonies of the Roman Catholic religion can be considered as instances of this phenomenon. When the devotees of that superstition are reproached for the ridiculous ceremonies it has them perform, they usually plead in their defence that they feel the good effect of those external motions and postures and actions, in enlivening their devotion and intensifying their fervour, which would decay if it were directed entirely to distant and immaterial objects—such as God. ‘We portray the objects of our faith’, they say, ‘in perceptible pictures and images; and the immediate presence of these pictures makes the objects more present to us than they could be merely through an intellectual view and contemplation.’ Perceptible objects always have a greater influence on the imagination than anything else does, and they readily convey this influence to the ideas to which they are related and which they resemble. All that I shall infer from these practices and this reasoning is that the effect of resemblance in enlivening ideas is very common; and because in every case a resemblance and a present impression must both be at work, we are supplied with plenty of empirical examples that support the truth of the foregoing principle.

We may add force to these examples by others of a different kind, bringing in the effects of contiguity as well as of resemblance. It is certain that distance diminishes the force of every idea, and that as we get nearer to some object—even though our senses don’t show it to us—its influence on the mind comes to be like the influence of an immediate sensory impression. Thinking about an object

readily transports the mind to things that are contiguous to it; but it’s only the actual presence of an object that transports the mind with a greater liveliness. When I am a few miles from home, whatever relates to it touches me more nearly than when I am two hundred leagues away, though even at that distance reflecting on anything in the neighbourhood of my friends or family naturally produces an idea of them. But in cases like this, both the objects of the mind—what it is carried from and what it is carried to—are *ideas*—and not the livelier kind of perception that we call ‘impressions’. Although there is an easy transition between them, that transition alone can’t give either of them a liveliness greater than ideas have; and the reason for that is that in these cases no immediate impression is at work.³

No-one can doubt that *causation* has the same influence as the other two relations, *resemblance* and *contiguity*. Superstitious people are fond of the relics of saints and holy men for the same reason that they like to have pictures or images—namely to enliven their devotion and give them a more intimate and strong conception of those exemplary lives that they desire to imitate. Now it’s evident that one of the best relics that a devotee could procure would be something *made by* a saint; and if his clothes and furniture are ever considered in this light, it is because they were once at his disposal and were moved and affected by him. This lets us consider them as imperfect effects—of the saint; ‘imperfect’ because he didn’t cause them to exist, but merely caused them to go through various vicissitudes while they were in his possession. They are connected with him by a shorter chain

³ Cicero wrote: ‘Is it just a fact about our nature or is it because of some sort of error that we are more moved by seeing places where we have heard that notable people spent time than we are by hearing of their deeds or reading their writings? Indeed I am moved right now; for I remember Plato, who (we are told) was the first to hold discussions in this place. And these little gardens don’t just conjure up his memory; they seem to place the man himself before me. [Then some remarks about the place’s association with other people, whom the speaker names.] Such is the power of suggestion that places have. It is not without reason that memory-training is based on this.’ Cicero, *De Finibus*, book 5, section 2.

of consequences than any of the things—human testimony, gravestones, written records, etc.—by which we learn the reality of his existence.

Suppose we encounter the son of a friend of ours who has been long dead or absent; it's evident that this object (·the son·) would instantly revive its correlative idea (·namely, the idea of our friend·), and recall to our thoughts all our past intimacies and familiarities with the friend, in more lively colours than they would otherwise have appeared to us. This is another phenomenon that seems to prove the above-mentioned principle.

Notice that in each of these phenomena the person *believes* that the correlative object does or did exist. Without that the relation could have no effect. The influence of the picture requires that we *believe* our friend to have once existed. Being close to home can never stir up our ideas of home unless we *believe* that home really exists. Now I assert that •this *belief*, where it reaches beyond the memory or senses, is of a similar sort and arises from similar causes as •the transition of thought and liveliness of conception that I have just been explaining. When I throw a piece of dry wood into a fire, my mind is immediately carried to a thought of it as making the flame grow, not as extinguishing it. This transition of thought from the cause to the effect doesn't come from reason. Its sole origin is custom and experience. And as it first begins from an object that is present to the senses ·when I see the dry wood go into the fire·, it makes the idea or conception of flame more strong and lively than ·it would be in· any loose, floating reverie of the imagination. That idea ·of the increased flame· arises immediately. The thought moves instantly towards it, and conveys to it all the force of conception that comes from the impression present to the senses. It might happen by accident that when a glass of wine is presented to me my next ideas are those

of *wound* and *pain*; but they will not occur as strongly as they would if I had been presented with a sword levelled at my chest! But what is there in this whole matter to cause such a strong conception apart from a *present object* and a *customary transition to the idea of another object*, which *we have been accustomed to conjoin with the former*? This is all that our mind does in all our inferences concerning matters of fact and existence; and it is satisfactory to have found some analogies through which it can be explained. In every case, the transition from a *present object* gives strength and solidity to the related idea ·to which the transition is made·.

Here, then, is a kind of pre-established harmony [Hume's phrase, copied from Leibniz] between the course of nature and the sequence of our ideas; and though the powers and forces by which nature is governed are wholly unknown to us, we find that our thoughts and conceptions have occurred in an order matching the order of events in the other works of nature. This correspondence has been brought about by *custom*, which is so necessary to the survival of our species and to the regulation of our conduct in every circumstance and occurrence of human life. If it hadn't been the case that the presence of an object instantly arouses the idea of objects that are commonly conjoined with it, all our knowledge would have been limited to the narrow sphere of our memory and senses; and we would never have been able to suit our means to our ends, or to employ our natural powers in getting good results and avoiding bad ones. Those who delight in the discovery and contemplation of final causes [= 'purposiveness in nature'] have here a great deal to admire and wonder at.

Here is a point that further confirms the theory I have offered. This operation of the mind in which we infer like effects from like causes, and vice versa, is so essential to our survival that it probably *couldn't* have been entrusted to the fallacious deductions of our *reason*. For reason is slow in

its operations; very little of it appears in early infancy; and at best—even in adults—it is extremely liable to error and mistake. It fits better with the ordinary wisdom of nature that such a necessary an act of the mind should be secured by some instinct or automatic tendency, which can be

- infallible in its operations,
- present when life and thought first appear, and
- independent of all the laborious deductions of the

understanding.

As nature has taught us the use of our limbs without giving us knowledge of the muscles and nerves by which they are moved, so she has implanted in us an instinct that carries our thought forward along a course corresponding to the course she has established among external objects—though we are ignorant of those powers and forces on which this regular course and succession of objects totally depends.