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Principles of Human Knowledge

By George Berkeley

Introduction	1
1-33	11
34-84.....	19
85-118.....	34
118-134.....	45
135-56.....	50

Introduction

1 intro. Philosophy is just the study of wisdom and truth, so one might reasonably expect that those who have spent most time and care on it would enjoy a greater calm and serenity of mind, know things more clearly and certainly, and be less disturbed with doubts and difficulties than other men. But what we find is ·quite different, namely that· the illiterate majority of people, who walk the high road of plain common sense and are governed by the dictates of nature, are mostly comfortable and undisturbed. To them nothing that is familiar appears hard to explain or to understand. They don't complain of any lack of certainty in their senses, and are in no danger of becoming sceptics. But as soon as we depart from sense and instinct to follow the light of a higher principle - ·that is·, to reason, meditate, and reflect on the nature of things - a thousand doubts spring up in our minds concerning things that we previously seemed to understand fully. We encounter many prejudices and errors of the senses; and when we try to correct these by reason, we are gradually drawn into crude paradoxes, difficulties, and inconsistencies, which multiply and grow upon us as our thoughts progress; until finally, having wandered through many intricate mazes, we find ourselves back where we started or - which is worse - we sit down in a forlorn scepticism.

2 intro. The cause of this is thought to be the obscurity of things or the natural weakness and imperfection of our understandings. It is said our faculties are few in number and are designed by nature ·merely· to promote survival and comfort, not to penetrate into the inward essence and constitution of things. Besides, it is not surprising that the *finite* mind of man runs into absurdities and contradictions - ones from which it cannot possibly

escape - when it tackles things that involve *infinity*, because it is of the nature of the infinite not to be comprehended by anything that is finite.

3 intro. But when we lay the blame for our paradoxes and difficulties on our faculties rather than on our wrong use of them, perhaps we are letting ourselves down too lightly. It is hard to believe that right deductions from true principles should ever lead to conclusions that can't be maintained or made consistent. We should believe that God has been more generous with men than to give them a strong desire for knowledge that he has placed out of their reach. That would not square with the kindly ways in which Providence, having given creatures various desires, usually supplies them the means - if used properly - to satisfy them. I am inclined to think that most if not all of the difficulties that have in the past puzzled and deceived philosophers and blocked the way to knowledge are entirely of our own making. We have first raised a dust, and then we complain that we cannot see.

4 intro. My purpose therefore is to try to discover what the underlying sources are of all that doubtfulness and uncertainty, those absurdities and contradictions, into which the various sects of philosophy have fallen - and indeed fallen so badly that the wisest men have thought our ignorance to be incurable, thinking that it comes from the natural dullness and limitedness of our faculties. Surely it is well worth the trouble to make a strict enquiry into the first principles of human knowledge, to sift and examine them on all sides; especially since there may be some grounds to suspect that those obstacles and difficulties that block and confuse the mind in its search for truth don't spring from any darkness and intricacy in the objects, or any natural defect in the understanding, but come rather from false principles that have been insisted on and might have been avoided.

5 intro. When I consider how many great and extraordinary men have already tried to do this, my own attempt seems difficult and discouraging. But I have some hope of success, because the largest views are not always the clearest, and he who is shortsighted will have to bring the object nearer to him, and may by looking closely at the fine details notice things that have escaped far better eyes.

6 intro. You will understand the rest of this work more easily if I begin by discussing the nature of language and how it can be misused. I need especially to attend to a doctrine that seems to have played a large part in making people's theories complex and confusing, and to have caused endless errors and difficulties most branches of knowledge. I am referring to the theory that the mind has a power of forming *abstract* ideas or notions of things. Anyone who knows anything about the writings and disputes of philosophers must realize that a great part of them is spent on abstract ideas, which are thought to be especially the object of the sciences of logic and metaphysics, and of all learning of the supposedly most abstracted and elevated kind. In all of these studies, almost every discussion assumes that there are abstract ideas in the mind, and that it is quite familiar with them.

7 intro. Everyone agrees that the qualities of things never really exist in isolation from one another; rather, they are mixed and blended together, several in the same object. But, we are told by the supporters of 'abstract ideas', the mind can consider each quality on its own, abstracted from the others with which it is united in the object, and in that way the

mind forms abstract ideas. For example, your eyesight presents you with an object that is extended, coloured, and moving; and your mind resolves this mixed or compound idea into its simple, constituent parts, and views each in isolation from the rest; which is how it forms the abstract ideas of *extension*, of *colour*, and of *motion*. It is not possible for colour or motion to exist without extension: but according to these 'abstract idea' theorists the mind can by abstraction form the idea of colour without extension, and of motion without either colour or extension.

8 intro. [This section continues to expound the theory of abstract ideas, in preparation for an attack on it.] Again, the mind observes that the extended things that we perceive by sense, although they vary in size, shape and so on, also all have something in common; and it singles out and isolates the common element, thereby forming a highly abstract idea of *extension*. This is neither line, surface, nor solid, and it has no particular shape or size; it is an idea entirely separated out from all these features that distinguish extended things from one another. Similarly the mind can leave out all the differences amongst the colours that are seen, retaining only what is common to them all; and in this way it makes an idea of *colour*, which is not red, blue, white or any other specific colour. Again, by considering motion on its own - separated out not only from the body that moves but also from how it moves, in what direction and how fast - the mind forms an abstract idea of *motion*, which is equally applicable to all particular movements that we can perceive through our senses - the movement of a beckoning finger and the movement of Venus around the sun.

9 intro. [The exposition of the theory of abstract ideas continues, becoming increasingly ironical in tone.] The kind of mental separation through which the mind forms abstract ideas of qualities taken singly also enables it to achieve abstract ideas of more complex items each of which includes a number of qualities that exist together in a single object. For example, having observed that Peter, James, and John have certain features of shape etc. in common, the mind forms a complex idea that leaves out whatever differentiates these men from one another or from other men, and retains only what is common to all; and in this way it makes an abstract idea that applies equally to all men, excluding any details that might tie it down to any one man in particular. This (they say) is how we come to have the abstract idea of *man* (or of *humanity* or *human nature*, if you like). This idea includes colour, because every man has some colour; but then it can be neither white, nor black, nor any particular colour, because there is no one colour that all men have. The idea also includes height because every man has some height or other, but it is neither tall nor short nor middling, but something abstracted from all these because there is no one height that all men have. Similarly for all the rest. Furthermore, many sorts of creatures correspond in some ways but not all to the complex idea of *man*; and the mind, leaving out the features that are special to men and retaining only the ones that are shared by all the living creatures, forms the idea of *animal*. This abstracts not only from all particular men, but also all birds, beasts, fishes, and insects. The constituent parts of the abstract idea of animal are *body*, *life*, *sense*, and *spontaneous motion* [= 'the ability to move without being pushed or pulled']. By 'body' is meant body without any particular shape or size, because no one shape or size is common to all animals. The idea does not include any specific kind of covering - hair or feathers or scales, etc. - but nor does it specify bare skin; for various animals differ in respect of whether they have hair, feathers, scales, or bare skin, so that all

those differences must be left out of the abstract idea of *animal*. For the same reason, the spontaneous motion must not be walking, flying or creeping; but it is a motion all the same. What kind of motion it can be is not easy to conceive.

10 intro. Whether others have this amazing ability to form abstract ideas, they will know better than I. Speaking for myself: I find that I do indeed have a faculty of imagining, or representing to myself the ideas of particular things that I have perceived, and of splitting those ideas up and re-assembling them in various ways. I can imagine a man with two heads, or the upper parts of a man joined to the body of a horse. I can consider the hand, the eye, the nose, each by itself abstracted or separated from the rest of the body. But then whatever hand or eye I imagine, it must have some particular shape and colour. Similarly, any idea that I form of a man must be of a specific kind of man: he must be white or black or brown, straight or crooked, tall or short or middling. Try as I may, I can't get into my mind the abstract idea of *man* that is described in the preceding section. And I find it equally impossible to form an abstract idea of *motion* that leaves out the thing that moves and is neither swift nor slow, curved nor straight. The same holds for absolutely all abstract ideas. I freely admit that I can perform 'abstraction' in a certain sense, namely: when several parts or qualities are united in an object, I can have the thought of one of them separated from the others *if it could really exist apart from them*. But I deny that I can perform 'abstraction' in the standard meaning of that word, which covers two kinds of mental performance: (i) conceiving abstractly and in isolation a quality that could not exist in isolation ·as we are said to do with colour and motion·; and (ii) forming a general notion by abstracting from particulars in the way I have described ·as we are said to do with man and animal·. There is reason to think that most people are like me in this respect. The majority of people, who are simple and illiterate, never claim to have abstract notions. Such notions are described ·by those who believe in them· as difficult to form; it takes hard work, we are told, to make an abstract idea. So we can reasonably conclude that if there are any abstract ideas they are all in the minds of learned people.

11 intro. Let us see what can be said in defence of this theory of abstract ideas. What attracts philosophers to a view that seems to be so remote from common sense? A rightly admired philosopher who died not long ago certainly helped to make the doctrine popular when he suggested that the biggest intellectual difference between man and beast is that men can form abstract ideas while beasts cannot. [Berkeley's *Principles* was published in 1710; Locke had died in 1704. In their time 'brute' and 'beast' were standard terms for non-human animals.] He wrote

What perfectly distinguishes men from brutes is that men have general ideas, this being something that the faculties of brutes are not capable of. Clearly, we see in them not the faintest trace of the use of general signs to stand for universal ideas; so we can reasonably suppose that they lack the ability to abstract, i.e. to make general ideas, since they have no use of words or any other general signs. (Locke, *Essay Concerning Human Understanding* II.xi.10)

A little later he wrote:

So we are entitled to conclude that this is what marks off the species of brutes from men. It creates a clear gap between them, which eventually broadens out to a great width. If the brutes have any ideas at all rather than being mere machines (as

some people think they are), we can't deny that they have a certain degree of reason. That some of them sometimes *reason* seems to me as obvious as that they *sense* things; but when they reason, it is only with particular ideas, just as they receive them from their senses. Even the highest of the brutes are confined within those narrow limits, I believe, and have no capacity to widen their intellectual range through any kind of abstraction. (11)

I readily agree with this learned author that brutes have no capacity for abstraction. But if that is to be our criterion for whether something is a brute, I am afraid that many who are accepted as men should be counted among the brutes! We have no evidence that brutes have abstract general ideas, the author said, because we do not observe them using words or other general signs. He was assuming that one cannot use words unless one has general ideas; from which it follows that men who use language are able to abstract or make their ideas general. That the author was thinking along these lines can be seen in how he answered his own question: 'Since all things that exist are only particulars, how do we come by general terms?' His answer was, 'Words become general by being made the signs of general ideas' (III.iii.6). But I maintain, on the contrary, that it seems that a word becomes general by being made the sign not of *one abstract* general idea but of *many particular* ideas, any one of which it may suggest to the mind. Consider for example the propositions *A thing's change of motion is proportional to the force that is exerted on it*, and *Whatever is extended can be divided*. These axioms are to be understood as holding for motion and extension in general; but that does not imply that they suggest to my thoughts an idea of motion without a body moved, and with no determinate direction or velocity, or that I must conceive an abstract general idea of extension, which is neither line, surface, nor solid, neither large nor small, not black or white or red or of any other determinate colour. All that is needed is that the first axiom is true for *every* motion that I consider, whether it be swift or slow, perpendicular or horizontal or oblique, and in whatever object; and that the second axiom holds for *every* specific extension, whether line or surface or solid, and whether of this or that size or shape.

12 intro. We shall be better placed to understand what makes a word a general term if we first understand how ideas become general. (I emphasize that I don't deny that there are general ideas - only that there are *abstract* general ideas. In the passages I have quoted, every mention of general ideas carries the assumption that they are formed by abstraction in the manner described in sections 7 and 9 above.) If we want to speak meaningfully and not say things that we can't make sense of, I think we shall agree to the following. An idea, which considered in itself is particular, becomes general in its meaning by being made to represent or stand for all other particular ideas of the same sort as itself. Suppose for example that a geometrician, proving the validity of a procedure for cutting a line in two equal parts, draws a black line one inch long. As used in this geometrical proof, this particular line is general in its significance because it is used to represent all particular lines, so that what is proved regarding it is proved to hold for all lines. And just as that particular *line* becomes general by being used as a sign, so the *word* 'line' - which in itself is particular - is used as a sign with a general meaning. The line is general because it is the sign not of an abstract or general line but of all particular straight lines that could exist, and the word is general for the same reason - namely that it stands equally well for each and every particular line.

13 intro. To give the reader a still clearer view of what abstract ideas are supposed to be like, and of how we are supposed to need them, I shall quote one more passage from the *Essay Concerning Human Understanding*:

For children and others whose minds have not yet been put to work much, abstract ideas are not as easy to form as particular ones are. If adults find them easy, that is only because they have had so much practice. For when we reflect carefully and in detail on them, we shall find that general ideas are mental fictions or contrivances that are quite difficult to construct; we don't come by them as easily as we might think. The general idea of a triangle, for example, though it is not one of the most abstract, comprehensive, and difficult ideas, cannot be formed without hard work and skill. For that idea must be neither oblique nor rectangle, neither equilateral, equicrural, nor scalenon, but all and none of these at once. In effect, it is something imperfect that cannot exist, an idea in which parts of several different and inconsistent ideas are put together. It is true that because of our imperfect human condition, the mind needs such ideas for two of its main purposes - communication, and the growth of knowledge - so it moves as fast as it can to get them. Still, there is reason to suspect that such ideas indicate how imperfect we are. Anyway, what I have said is enough to show that the ideas that come earliest and most easily to the mind are not abstract and general ones, and that our earliest knowledge does not involve them.' (IV.vii.9)

If anyone thinks he can form in his mind an idea of a triangle such as the one described in that passage, I shan't waste my time trying to argue him out of it. I merely ask you, the reader, to find out for sure whether you have such an idea. This cannot be very difficult. What is easier than for you to look a little into your own thoughts and to discover whether you *do* or *can* have an idea that fits the description we have been given of the general idea of a triangle - 'neither oblique nor rectangle, neither equilateral, equicrural, nor scalenon, but all and none of these at once'?

14 intro. Much is said by Locke about how difficult abstract ideas are - about the care and skill that is needed in forming them. And everyone agrees that it takes hard mental work to free our thoughts from particular objects and elevate them to the level of speculations that involve abstract ideas. It would seem to follow that the forming of abstract ideas is too difficult to be necessary for communication, which is so easy and familiar for all sorts of people. But, we are told by Locke, replying to this point, if adults find abstract ideas easy to form, that is only because they have become good at it through long practice. Well, I would like to know *when* it is that people are busy overcoming that difficulty and equipping themselves with what they need for communication! It can't be when they are grown up, for by then they can communicate, so that it seems the difficulty is behind them; so it has to be something they do in their childhood. But surely the labour of forming abstract notions - with so many to be formed, and each of them so difficult - is too hard a task for that tender age. Who could believe that a couple of children cannot chatter about sugar-plums and toys until they have first tacked together numberless inconsistencies and so formed abstract general ideas in their minds, attaching them to every common name they make use of?

15 intro. Abstract ideas are no more needed, in my opinion, for the growth of knowledge than they are for communication. I entirely agree with the widespread belief that all knowledge and demonstration concerns universal notions; but I cannot see that those are formed by abstraction. The only kind of universality that I can grasp does not belong to anything's *intrinsic* nature; a thing's universality consists how it *relates* to the particulars that it signifies or represents. That is how things, names, or notions that are intrinsically particular are made to be universal through their relation to the many particulars that they represent. When I prove a proposition about triangles, for instance, I am of course employing the universal idea of a triangle; but that doesn't involve me in thinking of a triangle that is neither equilateral nor scalenon nor equicrural! All it means is that the particular triangle I have in mind, no matter what kind of triangle it may be, is 'universal' in the sense that it equally stands for and represents all triangles whatsoever. All this seems to be straightforward and free of difficulties.

16 intro. You may want to make this objection:

How can we know any proposition to be true of all particular triangles unless we first see it demonstrated of the abstract idea of a triangle that fits all the particular ones? Just because a property can be demonstrated to belong to some one particular triangle, it doesn't follow that it equally belongs to any other triangle that differs in some way from the first one. For example, having demonstrated of an *isosceles right-angled triangle* that *its three angles are equal to two right ones*, I cannot conclude from this that the same holds for *all other triangles* that don't have a right angle and two equal sides. If we are to be certain that this proposition is universally true, it seems, we must either \forall prove it for every particular triangle (which is impossible) or \forall prove it once and for all of the abstract idea of a triangle, in which all the particulars are involved and by which they are all equally represented.

To this I answer that although the idea I have in view while I make the demonstration may be (for instance) that of an isosceles right-angled triangle whose sides are of a determinate length, I can still be certain that it applies also to all other triangles, no matter what their sort or size. I can be sure of this because neither the right angle nor the equality of sides nor length of the sides has any role in the demonstration. It is true that the diagram I have in view in the proof includes all these details, but they are not mentioned in the proof of the proposition. It is not said that the three angles are equal to two right ones *because one of them is a right angle*, or *because the sides that form it are of the same length*. This shows that the demonstration could have held good even if the right angle had been oblique and the sides unequal. That is why I conclude that the proposition holds for all triangles, having \forall demonstrated it in a certain way to hold for a particular right-angled isosceles triangle - not because I \forall demonstrated it to hold for the abstract idea of a triangle! I do not deny that a man can *abstract* in that he can consider a figure merely as triangular, without attending to the particular qualities of the angles or relations of the sides. But that doesn't show that he can form an abstract general inconsistent idea of a triangle. Similarly, because all that is *perceived* is not *considered*, we may think about Peter considered as a man, or considered as an animal, without framing the abstract idea of *man* or of *animal*.

17 intro. It would be an endless and a useless task to trace the scholastic philosophers [that is, mediaeval followers of Aristotle], those great masters of abstraction, through all the tangling labyrinths of error and dispute that their doctrine of *abstract natures and notions* seems to have led them into. What bickerings and controversies have arisen about those matters, and [Berkeley adds sarcastically] what great good they have brought to mankind, are well enough known these days, and I need not go on about them. It would have been better if the bad effects of that doctrine of abstract natures and notions had been confined to the people who most openly adhered to it. But the bad effects have spread further. When men consider

that the advancement of knowledge has been pursued with great care, hard work, and high abilities, and yet most branches of knowledge remain full of darkness and uncertainty, and of disputes that seem likely never to end; and that even propositions thought to be supported by the most clear and compelling demonstrations contain paradoxes that are utterly at variance with the understandings of men; and that only a small portion of them brings any real benefit to mankind except as an innocent diversion and amusement;

the consideration of all this is apt to throw men into despondency, and give them a complete contempt for all study. Perhaps this will cease when we have a view of the false principles that have obtained in the world, of which I think the one that has had the widest influence over the thoughts of enquiring and theory-building men is the doctrine of abstract general ideas.

18 intro. This prevailing view about abstract ideas seems to me to have its roots in language. There is some evidence for this in what is openly said by the ablest supporters of abstract ideas, who acknowledge that they are made for the purpose of *naming*; from which it clearly follows that if there had been no such thing as speech or universal signs, abstraction would never have been thought of. (See *Essay* III.vi.39 and elsewhere.) So let us examine how words have helped to give rise to the mistaken view that there are abstract ideas. They have contributed to it through two mistakes about language, which I shall now discuss. (i) People assume that every name does or should have just one precise and settled signification. This encourages them to believe in abstract, determinate ideas, each serving as the true and only immediate signification of some general name, and to think further that a general name comes to signify any particular thing through the mediation of these abstract ideas. [Here, as in Locke's writings, a 'general name' is just a general word, such as 'pebble', 'daffodil' and 'triangle'. 'Signification' could often be replaced by 'meaning', but not always.] Whereas really no general name has a single precise and definite signification; each general name can equally well signify a great number of particular ideas. All of this clearly follows from what I have already said; reflect on it a little and you will agree. Here is a possible objection:

When a name has a definition, that ties it down to one determinate signification. For example, 'triangle' is defined as 'plane surface bounded by three straight lines'; and that definition confines the word 'triangle' to standing for one certain idea and no other.

To this I reply that definition of 'triangle' does not say whether the surface is large or small, black or white, nor whether the sides are long or short, equal or unequal, nor what angles they form. Each of these can vary greatly; so there is no one settled idea to which

the signification of the word 'triangle' is confined. It is one thing to make a name always obey the same definition, and another to make it always stand for the same idea: one is necessary, the other useless and impracticable.

19 intro. (ii) Words helped in another way to produce the doctrine of abstract ideas, namely through the widespread opinion that language is for the communicating of our ideas and for nothing else, and that every significant name stands for an idea. People who think this, and who can see the obvious fact that some names that are regarded as significant do not have particular specific ideas corresponding to them, conclude that such names must stand for abstract notions. Now, nobody will deny that many names that are in use amongst thoughtful people do not always put determinate particular ideas into the minds of listeners. And even when a name does stand for ideas, it doesn't have to arouse them in the listener's mind every time it is used, even in the strictest reasonings. That is because in reading and conversation names are mostly used as letters are in algebra: each letter stands for a particular number, but you can conduct a proof accurately without at each step having each letter bring to mind the particular number it is meant to stand for.

20 intro. Besides, the communicating of ideas through words is not the chief and only end of language, as people commonly think. Speech has other purposes as well: raising emotions, influencing behaviour, changing mental attitudes. The communication of ideas is often subservient to these other purposes, and sometimes it does not take place at all because the purposes can be achieved without it. I urge you to reflect on your own experience. When you are hearing or reading a discourse, doesn't it often happen that emotions of fear, love, hatred, admiration, disdain, and so on arise immediately in your mind when you see or hear certain words, without any ideas intervening between the words and the emotion? It may well be that those words did originally evoke ideas that produced those sorts of emotions; but I think you will find that, once the language has become familiar, hearing the sounds or seeing the words is often followed by those emotions immediately, entirely leaving out the ideas that used to be a link in the chain. For example, can we not be influenced by the promise of 'a good thing' without having an idea of what it is? Again, is not a threat of 'danger' enough to make us afraid, even if we don't think of any particular evil that is likely to befall us or even form an idea of danger in the abstract? If you reflect a little on your own situation in the light of what I have said, I think you will find it obvious that general names are often used, in a perfectly proper way, without the speaker's intending them as marks of ideas in his own mind that he wants to arouse in the mind of the hearer. Even proper names, it seems, are not always spoken with the intention of bringing into hearers' minds the ideas of those individuals who are named. For example, when a schoolman [= 'follower of Aristotle'] tells me 'Aristotle has said it,' I understand him merely to be trying to incline me to accept his opinion with the deference and submission that custom has linked with the name 'Aristotle', and my idea of Aristotle doesn't come into it. Innumerable examples of this kind could be given, but why should I go on about things that I'm sure are abundantly illustrated in your own experience?

21 intro. I think I have shown the impossibility of abstract ideas. I have considered what has been said on their behalf by their ablest supporters, and have tried to show they are of no use for the purposes for which they are thought to be necessary. And, lastly, I have traced them to their source, which appears to be language. It can't be denied that words

are extremely useful: they make it possible for all the knowledge that has been gained by the enquiries of men at many times and in all nations to be pulled together and surveyed by a single person. But at the same time it must be admitted that most branches of knowledge have been made enormously much darker and more difficult by the misuse of words and turns of phrase. Therefore, since words are so apt to influence our thoughts, when I want to consider any ideas I shall try to take them bare and naked, keeping out of my thoughts - as much as I can - the names that those ideas have been given through long and constant use. From this I expect to derive the following advantages:-

22 intro. ¶First, I shall be sure to keep clear of all purely verbal controversies - those *weeds* whose springing up, in almost all branches of knowledge, has been a principal hindrance to the growth of true and sound knowledge. ¶Secondly, this seems to be a sure way to extricate myself from that fine and delicate net of abstract ideas, which has so miserably perplexed and entangled the minds of men (with this special feature: the more sharp-witted and exploratory any man's mind is, the more completely he is likely to be trapped and held by the net). ¶Thirdly, so long as I confine my thoughts to my own ideas with the words peeled off, I don't see how I can be easily mistaken. The objects that I consider are all ones that I clearly and adequately know: I cannot fall into error by thinking I have an idea that I really do not have, or by imagining that two of my own ideas are alike (or that they are unlike) when really they are not. To observe how my ideas agree or disagree, and to see which ideas are included in any compound idea and which are not, all I need is to pay attention to what happens in my own understanding.

23 intro. But I cannot get all these advantages unless I free myself entirely from the deception of words. I hardly dare promise myself that, because the union between words and ideas began early and has been strengthened by many years of habit ·in thought and speech·, so that it is very difficult to dissolve. This difficulty seems to have been very much increased by the doctrine of abstraction. For so long as men thought their words have abstract ideas tied to them, it is not surprising that they used words *in place of* ideas: they found that they couldn't set aside the word and retain the abstract idea in the mind, because abstract ideas are perfectly inconceivable. That is the principal cause for the fact that men who have emphatically recommended to others that in their meditations they should lay aside all use of words and instead contemplate their bare ideas have failed to do this themselves. Recently many people have become aware of the absurd opinions and meaningless disputes that grow out of the abuse of words. And they had given good advice about how to remedy these troubles - namely that we should attend not to the *words that signify ideas* but rather to the *ideas themselves*. But however good this advice that they have given others may be, they obviously couldn't properly follow it themselves so long as they thought that ¶the only immediate use of words was to signify ideas, and ¶that the immediate signification of every general name was a determinate, abstract idea.

24 intro. But when you know that these are mistakes, you can more easily prevent your thoughts from being influenced by words. Someone who knows that he has only *particular* ideas will not waste his time trying to conceive the abstract idea that goes with any name. And someone who knows that names do not always stand for ideas will spare himself the labour of looking for ideas where there are none to be had. It is desirable, therefore, that everyone should try as hard as he can to obtain a clear view of the ideas he

wants to consider, separating from them all the clothing and clutter of words that so greatly blind our judgment and scatter our attention. In vain do we extend our view into the heavens, and presumably into the entrails of the earth; in vain do we consult the writings of learned men, and trace the dark footsteps of antiquity; we need only draw aside the curtain of words, to behold the fairest tree of knowledge, whose fruit, -namely, our 'bare naked ideas', is excellent and lies within reach of our hand.

25 intro. Unless we take care to clear the first principles of knowledge from being burdened and deluded by words, we can reason from them for ever without achieving anything; we can draw consequences from consequences and be never the wiser. The further we go, the more deeply and irrecoverably we shall be lost and entangled in difficulties and mistakes. To anyone who plans to read the following pages, therefore, I say: Make my words the occasion of your own thinking, and try to have the same sequence of thoughts in reading that I had in writing. This will make it easy for you to discover the truth or falsity of what I say. You will run no risk of being deceived by my words, and I do not see how you can be led into an error by considering your own naked, undisguised ideas.

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1. Anyone who surveys the objects of human knowledge will easily see that they are all *ideas* that are either *Y*actually imprinted on the senses or *Y*perceived by attending to one's own emotions and mental activities or *Y*formed out of ideas of the first two types, with the help of memory and imagination, by compounding or dividing or simply reproducing ideas of those other two kinds. By sight I have the ideas of light and colours with their different degrees and variations. By touch I perceive hard and soft, heat and cold, motion and resistance, and so on; and each of these also admits of differences of quantity or degree. Smelling supplies me with odours; the palate with tastes; and hearing conveys sounds to the mind in all their variety of tone and composition. And when a number of these are observed to accompany each other, they come to be marked by one name and thus to be thought of as one thing. Thus, for example, a certain colour, taste, smell, shape and consistency having been observed to go together, they are taken to be one distinct thing, called an 'apple'. Other collections of ideas constitute a stone, a tree, a book, and similar perceptible things; and these can arouse the emotions of love, hate, joy, grief, and so on, depending on whether they please or displease us.

2. In addition to all that endless variety of ideas, or objects of knowledge, there is also something that knows or *perceives* them, and *acts* on them in various ways such as willing, imagining, and remembering. This perceiving, active entity is what I call 'mind', 'spirit', 'soul', or 'myself'. These words do not refer to any one of my ideas, but rather to a thing that is entirely distinct from them. It is something *in* which they *exist*, or *by* which they *are perceived*. Those are two ways of saying the same thing, because the existence of an idea consists in its being perceived.

3. Everyone will agree that our thoughts, emotions, and ideas of the imagination exist only in the mind. It seems to me equally obvious that the various sensations or ideas that are imprinted on our senses cannot exist except in a mind that perceives them - no matter how they are blended or combined together (that is, no matter what objects they constitute).

You can know this intuitively [= ‘you can see it as immediately self-evident’] by attending to what is meant by the term ‘exist’ when it is applied to perceptible things. The table that I am writing on *exists*, that is, I see and feel it; and if I were out of my study I would still say that it existed, meaning that \forall if I were in my study I would perceive it, or that \exists some other spirit actually does perceive it. There was an odour, that is, it was smelled; there was a sound, it was heard; there was a colour or shape, it was seen or felt. This is all that I can understand by such expressions as these. There are those who speak of things that ‘unlike spirits’ do not think and ‘unlike ideas’ exist whether or not they are perceived; but that seems to be perfectly unintelligible. For unthinking things, *to exist* is *to be perceived*; so they couldn’t possibly exist out of the minds or thinking things which perceive them.

4. It is indeed widely believed that all perceptible objects - houses, mountains, rivers, and so on - really exist independently of being perceived by the understanding. But however widely and confidently this belief may be held, anyone who has the courage to challenge it will - if I am not mistaken - see that it involves a manifest contradiction. For what are houses, mountains, rivers etc. but things we perceive by sense? And what do we perceive besides our own ideas or sensations? And isn’t it plainly contradictory that these, either singly or in combination, should exist unperceived?

5. If we thoroughly examine this belief ‘in things existing independently of the mind’ it will, perhaps, be found to depend basically on the doctrine of abstract ideas. For can there be a more delicate and precise strain of abstraction than to distinguish the existence of perceptible things from their being perceived, so as to conceive them existing unperceived? Light and colours, heat and cold, extension and shapes, in a word the things we see and feel - what are they but so many sensations, notions, ideas, or sense impressions? And can any of *these* be separated, even in thought, from perception? Speaking for myself, I would find it no easier to do that than to divide a thing from itself! I don’t deny that I can abstract (if indeed this is properly called abstraction) by *conceiving* separately objects that *can exist* separately, even if I have never experienced them apart from one another. I can for example imagine a human torso without the limbs, or conceive the smell of a rose without thinking of the rose itself. But my power of conceiving or imagining goes no further than that: it doesn’t extend beyond the limits of what can actually exist or be perceived. Therefore, because I cannot possibly *see or feel a thing* without having an actual sensation of it, I also cannot possibly *conceive of a perceptible thing* distinct from the sensation or perception of it.

6. Some truths are so close to the mind, and so obvious, that as soon as you open your eyes you will see them. Here is an important truth of that kind:

All the choir of heaven and furniture of the earth, in a word all those bodies that compose the mighty frame of the world, have no existence outside a mind; for them to exist is for them to be perceived or known; consequently so long as they are not actually perceived by me, or do not exist in my mind or that of any other created spirit, they must either have no existence at all or else exist in the mind of some eternal spirit; because it makes no sense - and involves all the absurdity of abstraction - to attribute to any such thing an existence independent of a spirit.

To be convinced of this, you need only to reflect and try to separate in your own thoughts the existence of a perceptible thing from its being perceived.

7. From what I have said it follows that the only *substances* are *spirits* - things that perceive. Another argument for the same conclusion is the following -down to the end of the section-. The perceptible qualities are colour, shape, motion, smell, taste and so on, and these are ideas perceived by sense. Now it is plainly self-contradictory to suppose that an idea might exist in an unperceiving thing, for *to have an idea* is just the same as *to perceive*: so whatever *has* colour, shape and so on must *perceive* these qualities; from which it clearly follows that there can be no unthinking substance or substratum of those ideas.

8. 'But', you say, 'though the ideas themselves do not exist outside the mind, still there may be things like them of which they are copies or resemblances, and *these* things may exist outside the mind in an unthinking substance.' I answer that *the only thing an idea can resemble is another idea*; a colour or shape can be like nothing but another colour or shape. Pay just a little attention to your own thoughts and you will find that you cannot conceive of any likeness except between your ideas. Also: tell me about those supposed originals or external things of which our ideas are the pictures or representations - are *they* perceivable or not? If they are, then they are ideas, and I have won the argument; but if you say they are not, I appeal to anyone whether it makes sense to assert that a colour is like something that is invisible; that hard or soft is like something intangible; and similarly for the other qualities.

9. Some philosophers distinguish 'primary' from 'secondary' qualities: they use the former term to stand for extension, shape, motion, rest, solidity and number; by the latter term they denote all other perceptible qualities, such as colours, sounds, tastes, and so on. Our ideas of secondary qualities don't resemble anything existing outside the mind or unperceived, they admit; but they insist that our ideas of primary qualities are patterns or images of things that exist outside the mind in an unthinking substance which they call 'matter'. By 'matter', therefore, we are to understand an inert, senseless substance in which extension, shape and motion actually exist. But I have already shown that extension, shape, and motion are quite clearly nothing but ideas existing in the mind, and that an idea can be like nothing but another idea, and that consequently neither they nor things from which they are copied can exist in an unperceiving substance. So the very notion of so-called 'matter', or corporeal substance, clearly involves a contradiction.

10. Those who assert that shape, motion and the other primary qualities exist outside the mind in unthinking substances say in the same breath that colours, sounds, heat, cold, and other secondary qualities do not. These, they tell us, are sensations that exist in the mind alone, and depend on the different size, texture, and motion of the minute particles of matter. They offer this as an undoubted truth which they can prove conclusively. Now if it is certain that (1) primary qualities are inseparably united with secondary ones, and can't be abstracted from them even in thought, it clearly follows that (2) primary qualities exist only in the mind, just as the secondary ones do. I now defend (1)-. Look in on yourself, and see whether you can perform a mental abstraction that enables you to conceive of a body's being *extended* and *moving* without having any other perceptible qualities. Speaking for myself, I see quite clearly that I can't form an idea of an extended, moving body unless I also give it some colour or other perceptible quality which is admitted -by the philosophers I have been discussing- to exist only in the mind. In short, extension,

shape and motion, abstracted from all other qualities, are inconceivable. It follows that these primary qualities must be where the secondary ones are - namely in the mind and nowhere else.

11. Here is a further point about extension and motion. Large and small, and fast and slow, are generally agreed to exist only in the mind. That is because they are entirely relative: whether something is large or small, and whether it moves quickly or slowly, depends on the condition or location of the sense-organs of the perceiver. [See the end of section 14 for a little light on the quick/slow part of this point.] So if there is extension outside the mind, it must be neither large nor small, and extra-mental motion must be neither fast nor slow. I conclude that there is no such extension or motion. (If you reply 'They do exist; they are extension *in general* and motion *in general*', that will be further evidence of how greatly the doctrine about extended, movable substances existing outside the mind depends on that strange theory of abstract ideas.) So unthinking substances cannot be extended; and that implies that they cannot be solid either, because it makes no sense to suppose that something is solid but not extended.

12. Even if we grant that the other primary qualities exist outside the mind, it must be conceded that *number* is entirely created by the mind. This will be obvious to anyone who notices that the same thing can be assigned different numbers depending on how the mind views it. Thus, the same distance is one or three or thirty-six, depending on whether the mind considers it in terms of yard, feet or inches. Number is so obviously relative and dependent on men's understanding that I find it surprising that anyone should ever have credited it with an absolute existence outside the mind. We say one book, one page, one line; all these are equally units - that is, each is *one* something - yet the book contains many pages and the page many lines. In each case, obviously, what we are saying there is *one* of is a particular combination of ideas arbitrarily put together by the mind, for example, the arbitrary combination of ideas that we choose to call 'a book'.

13. Some philosophers, I realize, hold that *unity* is a simple or uncompounded idea that accompanies every other idea into the mind. I do not find that I have any such idea corresponding to the word 'unity'. I could hardly overlook it if it were there in my mind: it ought to be the most familiar to me of all my ideas, since it is said to accompany all my other ideas and to be perceived by all the ways of sensation and reflection. In short, it is an abstract idea!

14. Here is a further point. Some modern philosophers argue that certain perceptible qualities have no existence in matter or outside the mind; their arguments can be used to prove the same thing of all perceptible qualities whatsoever. They point out for instance that a body that appears cold to one hand seems warm to the other, from which they infer that heat and cold are only states of the mind and don't resemble anything in the corporeal substances that cause them. If that argument is good, then why can't we re-apply it to prove that shape and extension do not resemble any fixed and determinate qualities existing in matter, because they appear differently to the same eye in different positions, or eyes in different states in the same position? Again, they argue that sweetness is not really in the thing that is described as 'sweet', because sweetness can be changed into bitterness without there being any alteration in the thing itself - because the person's palate has been affected by a fever or some other harm. Is it not equally

reasonable to argue that motion is not outside the mind because a thing will appear to move more or less quickly - without any change in the thing itself - depending on whether the succession of ideas in the observer's mind is slow or fast?

15. In short, the arguments that are thought to prove that colours and tastes exist only in the mind have as much force to prove the same thing of extension, shape and motion. Really, though, these arguments *don't* prove that there is no extension or colour in an outward object, but only that our senses do not tell us what its true extension or colour is. My own previous arguments do better: they clearly show it to be impossible that any colour or extension or other perceptible quality should exist in an unthinking thing outside the mind, or indeed that there should be any such thing as an object outside the mind.

16. But let us examine the usual opinion a little further. It is said that extension is a quality of matter, and that matter is the substratum that supports it. Please explain to me what is meant by matter's 'supporting' extension. You reply: 'I have no idea of matter; so I can't explain it.' I answer: Even if you have no *positive* meaning for 'matter' - that is, have no idea of what matter is like in itself - you must at least have a *relative* idea of it, so that you know how matter relates to qualities, and what it means to say that it 'supports' them. If you don't even know *that*, you have no meaning at all in what you are saying. Explain 'support', then! Obviously it cannot be meant here in its usual or literal sense, as when we say that pillars support a building: in what sense, then, are we to understand it?

17. When we attend to what the most accurate philosophers say they mean by 'material substance', we find them admitting that the only meaning they can give to those sounds is the idea of *being in general*, together with the relative notion of its *supporting qualities*. The general idea of being seems to me the most abstract and incomprehensible of all. As for its 'supporting qualities': since this cannot be understood in the ordinary sense of those words (as I have just pointed out), it must be taken in some other sense; but we are not told what that other sense is. I am sure, therefore, that there is no clear meaning in either of the two parts or strands that are supposed to make up the meaning of the words 'material substance'. Anyway, why should we trouble ourselves any further in discussing this material substratum or support of shape and motion and other perceptible qualities? Whatever we make of its details - the notions of being in general, and of support - it is clearly being said that shape and motion and the rest exist outside the mind. Isn't this a direct contradiction, and altogether inconceivable?

18. Suppose it were possible for solid, figured, movable substances to exist outside the mind, corresponding to the ideas we have of bodies - how could we possibly know that there are any such things? We must know it either by *sense* or by *reason*. Our senses give us knowledge only of our sensations - ideas - things that are immediately perceived by sense - call them what you will! They do not inform us that outside the mind (that is, unperceived) there exist things that resemble the items that are perceived. The materialists themselves admit this. So if we are to have any knowledge of external things, it must be by reason, *inferring* their existence from what is immediately perceived by sense. But what reasons can lead us from the ideas that we perceive to a belief in the existence of bodies outside the mind? The supporters of matter themselves don't claim that there is any necessary connection between material things and our ideas. We could have all the ideas that we now have without there being any bodies existing outside us that resemble them;

everyone admits this, and what happens in dreams, hallucinations and so on puts it beyond dispute. Evidently, then, we are not compelled to suppose that there are external bodies as causes of our ideas. Those ideas are *sometimes*, so they could be *always*, produced without help from bodies yet falling into the patterns that they do in fact exhibit.

19. ‘Even though external bodies are not absolutely needed to explain our sensations,’ you might think, ‘the course of our experience is easier to explain on the supposition of external bodies than it is without that supposition. So it is at least *probable* there are bodies that cause our minds to have ideas of them.’ But this is not tenable either. The materialists admit that they cannot understand how body can act upon spirit, or how it is possible for a body to imprint any idea in a mind; and that is tantamount to admitting that they don’t know how our ideas are produced. So the production of ideas or sensations in our minds can’t be a reason for supposing the existence of matter or corporeal substances, because it admittedly remains a mystery with or without that supposition. So even if it were possible for bodies to exist outside the mind, the belief that they actually do so must be a very shaky one; since it involves supposing, without any reason at all, that God has created countless things that are entirely useless and serve no purpose.

20. In short, if there were external bodies, we could not possibly come to know this; and if there were not, we might have the very same reasons to think there were that we have now. No-one can deny the following to be possible: A thinking being might, without the help of external bodies, be affected with the same series of sensations or ideas that you have, imprinted in the same order and with similar vividness in his mind. If that happened, would not that thinking being have all the reason to believe ‘There are corporeal substances that are represented by my ideas and cause them in my mind’ that you can possibly have for believing the same thing? Of course he would; and that consideration is enough, all on its own, to make any reasonable person suspect the strength of whatever arguments he may think he has for the existence of bodies outside the mind.

21. If, even after what has been said, more arguments were needed against the existence of matter, I could cite many errors and difficulties (not to mention impieties) that have sprung from that doctrine. It has led to countless controversies and disputes in philosophy, and many even more important ones in religion. But I shan’t go into the details of them here, because I think arguments about ‘materialism’s’ bad consequences are unnecessary for confirming what has, I think, been well enough proved *a priori* regarding its intrinsic defects, and the lack of good reasons to support it. [The word ‘materialism’ does not occur in the *Principles*. It is used in this version, in editorial interventions, with the meaning that Berkeley gives it elsewhere, namely as naming the doctrine that there is such a thing as mind-independent matter, not restricting it to the view that there is nothing but matter.]

22. I am afraid I have given you cause to think me needlessly long-winded in handling this subject. For what is the point of hammering away at something that can be proved in a line or two, convincing anyone who is capable of the least reflection? Look into your own thoughts, and *try* to conceive it possible for a sound or shape or motion or colour to exist outside the mind, or unperceived. Can you do it? This simple thought-experiment may make you see that what you have been defending is a downright contradiction. I am willing to stake my whole position on this: if you can so much as conceive it *possible* for

one extended movable substance - or in general for any one idea or anything like an idea - to exist otherwise than in a mind perceiving it, I shall cheerfully give up my opposition to matter; and as for all that great apparatus of external bodies that you argue for, I shall admit its existence, even though you cannot either give me any reason why you believe it exists, or assign any use to it when it is supposed to exist. I repeat: the bare possibility of your being right will count as an argument that you are right.

23. 'But', you say, 'surely there is nothing easier than to imagine trees in a park, for instance, or books in a closet, with nobody there to perceive them.' I reply that this is indeed easy to imagine; but let us look into what happens when you imagine it. You form in your mind certain ideas that you call 'books' and 'trees', and at the same time you omit to form the idea of anyone who might perceive them. But while you are doing this, *you* perceive or think of them! So your thought- experiment misses the point; it shows only that you have the power of imagining or forming ideas in your mind; but it does not show that you can conceive it possible for the objects of your thought to exist outside the mind. To show that, you would have to *conceive* them existing *unconceived* or unthought-of, which is an obvious contradiction. However hard we try to conceive the existence of external bodies, all we achieve is to contemplate our own ideas. The mind is misled into thinking that it can and does conceive bodies existing outside the mind or unthought-of because it *pays no attention to itself*, and so does not notice that *it* contains or thinks of the things that it conceives. Think about it a little and you will see that what I am saying is plainly true; there is really no need for any of the other disproofs of the existence of material substance.

24. It takes very little enquiry into our own thoughts to know for sure whether we can understand what is meant by 'the absolute existence of perceptible objects outside the mind'. To me it is clear that those words mark out either a direct contradiction or else nothing at all. To convince you of this, I know no easier or fairer way than to urge you to attend calmly to your own thoughts: if that attention reveals to you the emptiness or inconsistency of those words, that is surely all you need to be convinced. So that is what I insist on: the phrase 'the absolute existence of unthinking things' has either no meaning or a self-contradictory one. This is what I repeat and teach, and urge you to think about carefully.

25. All our ideas - sensations, things we perceive, call them what you will - are visibly inactive; there is no power or agency in them. One idea or object of thought, therefore, cannot produce or affect another. To be convinced of this we need only to attend to our ideas. They are wholly contained within the mind, so whatever is in them must be perceived. Now, if you attend to your ideas, whether of sense or reflection, you will not *perceive* any power or activity in them; so *there is* no power or activity in them. Think about it a little and you will realize that passiveness and inertness are of the essence of an idea, so that an idea cannot *do* anything or be the *cause* (strictly speaking) of anything; nor can it resemble anything that is active, as is evident from section 8. From this it clearly follows that extension, shape and motion cannot be the cause of our sensations. So it must be false to say our sensations result from powers that things have because of the arrangement, number, motion, and size of corpuscles in them.

26. We perceive a continual stream of ideas: new ones appear, others are changed or totally disappear. These ideas must have a cause - something they depend on, something that produces and changes them. It is clear from section 25 that this cause cannot be any quality or idea or combination of ideas, because that section argues that ideas are inactive, i.e. have no causal powers; and thus qualities have no powers either, because qualities *are* ideas. So the cause must be a substance because reality consists of nothing but substances and their qualities. It cannot be a corporeal or material substance, because I have shown that there is no such thing. We must therefore conclude that the cause of ideas is an incorporeal active substance - a spirit.

27. A spirit is an active being. It is simple, in the sense that it does not have parts. When thought of as something that perceives ideas, it is called 'the understanding', and when thought of as producing ideas or doing things with them, it is called 'the will'. But understanding and will are different powers that a spirit has; they are not *parts* of it. It follows that *no-one can form an idea of a soul or spirit*. We have seen in section 25 that all ideas are passive and inert, and therefore no idea can represent an active thing, which is what a spirit is, because no idea can resemble an active thing. If you think about it a little, you will see clearly that it is absolutely impossible to have an idea that is like an active cause of the change of ideas. The nature of spirit (i.e. that which acts) is such that it cannot itself be perceived; all we can do is to perceive the effects it produces. To perceive a spirit would be to have an idea of it, that is, an idea that resembles it; and I have shown that no idea can resemble a spirit because ideas are passive and spirits active. If you think I may be wrong about this, you should look in on yourself and try to form the idea of a power or of an active being, that is, a thing that *has* power. To do this, you need to have ideas of two principal powers called 'will' and 'understanding', these ideas being distinct from each other and from a third idea of substance or being in general, which is called 'soul' or 'spirit'; and you must also have a relative notion of spirit's supporting or being the subject of those two powers. Some people say that they have all that; but it seems to me that the words 'will' and 'spirit' do not stand for distinct ideas, or indeed for any idea at all, but for something very different from ideas. Because this 'something' is an agent, it cannot resemble or be represented by any *idea* whatsoever. Though it must be admitted that we have some *notion* of soul, spirit, and operations of the mind such as willing, loving and hating, in that we understand the meanings of those words.

28. I find I can arouse ideas in my mind at will, and vary and shift the mental scene whenever I want to. I need only to will, and straight away this or that idea arises in my mind; and by willing again I can obliterate it and bring on another. It is because the mind makes and unmakes ideas in this way that it can properly be called *active*. It certainly *is* active; we know this from experience. But anyone who talks of 'unthinking agents' or of 'arousing ideas without the use of volition' is merely letting himself be led astray by words.

29. Whatever power I may have over my own thoughts, however, I find that the ideas I get through my senses don't depend on my will in the same way. When in broad daylight I open my eyes, it is not in my power to choose whether or not I shall see anything, or to choose what particular objects I shall see; and the same holds for hearing and the other senses. My will is not responsible for the ideas that come to me through any of my senses. So there must be some other will - some other spirit - that produces them.

30. The ideas of sense are stronger, livelier, and clearer than those of the imagination; and they are also steady, orderly and coherent. Ideas that people bring into their own minds at will are often random and jumbled, but the ideas of sense are not like that: they come in a regular series, and are inter-related in admirable ways that show us the wisdom and benevolence of the series' author. The set rules or established methods whereby the mind we depend on - that is, God - arouses in us the ideas of sense are called the *laws of nature*. We learn what they are by experience, which teaches us that such and such ideas are ordinarily accompanied or followed by such and such others.

31. This gives us a sort of foresight that enables us to regulate our actions for the benefit of life. Without this we would always be at a loss: we could not know how to do anything to bring ourselves any pleasure or save us from any pain. That food nourishes, sleep refreshes, and fire warms us; that to sow in the spring is the way to get a harvest in the fall, and in general that such and such means are the way to achieve such and such ends - we know all this not by discovering any necessary connection between our ideas but only by observing the settled laws of nature. Without them we would be utterly uncertain and confused, and a grown man would have no more idea of how to manage himself in the affairs of life than a new-born infant.

32. This consistent, uniform working obviously displays the goodness and wisdom of God, the governing Spirit whose will constitutes the laws of nature. And yet, far from leading our thoughts *towards* him, it sends them *away from* him in a wandering search for second causes - that is, for causes that come between God and the effects we want to explain. For when we perceive that certain ideas of sense are constantly followed by other ideas, and we know that this is not our doing, we immediately attribute power and agency to the ideas themselves, and make one the cause of another - than which nothing can be more absurd and unintelligible. Thus, for example, having observed that when we perceive by sight *a certain round luminous figure*, we at the same time perceive by touch *the idea or sensation called heat*, we infer that the sun causes heat. Similarly, when we perceive that *a collision of bodies* is accompanied by *sound*, we are inclined to think the latter an effect of the former.

33. The [1] ideas imprinted on the senses by the Author of Nature are called 'real things'; and those [2] that are caused by the imagination, being less regular, vivid, and constant, are more properly called 'ideas' or 'images' of things that they copy and represent. But our [1] sensations, however vivid and distinct they may be, are nevertheless *ideas*; that is, they exist in the mind, or are perceived by it, as truly as [2] the ideas that mind itself makes. The [1] ideas of sense are agreed to have more reality in them - that is, to be more strong, orderly, and coherent than ideas made by the mind; but this does not show that they exist outside the mind. They are also less dependent on the spirit or thinking substance that perceives them, for they are caused by the will of another and more powerful spirit, -namely God-; but still they are ideas, and certainly no idea - whether faint or strong - can exist otherwise than in a mind perceiving it.

34. Before we move on, I have to spend some time in answering objections that are likely to be made against the principles I have laid down. I shall answer twelve of them, ending in section 72; and further objections will occupy sections 73-84. My answer to the first of the twelve will run to the end of section 40. If fast-thinking readers find me too long-

winded about this, I hope they will pardon me. My excuse is that people are not all equally quick in getting a grasp on topics such as this, and I want to be understood by everyone. **First**, then, this will be objected:

By your principles everything real and substantial in nature is banished out of the world, and replaced by a chimerical [= 'unreal or imaginary'] system of ideas. All things that exist do so only in the mind according to you, that is, they are purely notional. Then what becomes of the sun, moon, and stars? What must we think of houses, rivers, mountains, trees, stones - even of our own bodies, for that matter? Are all these mere illusions, creatures of the imagination?

To all this - and any other objections of the same sort - I answer that the principles I have laid down don't deprive us of any one thing in nature. Whatever we see, feel, hear, or in any way conceive or understand remains as secure as ever, and is as real as ever. There is a real world, and the distinction between realities and chimeras retains its full force. This is evident from sections 29, 30, and 33, where I have shown what is meant by 'real things' in opposition to chimeras or ideas made by us; but by that account real things and chimeras both exist in the mind, and in that sense are alike in being ideas.

35. I do not argue against the existence of any one thing that we can take in, either by sense or reflection. I don't in the least question that the things I see with my eyes and touch with my hands do exist, really exist. The only thing whose existence I deny is what philosophers call 'matter' or 'corporeal substance'. And in denying this I do no harm to the rest of mankind - that is, to people other than philosophers - because they will never miss it. The atheist indeed will lose the rhetorical help he gets from an empty name, -namely 'matter', which he uses to support his impiety; and the philosophers may find that they have lost a great opportunity for word-spinning and disputation.

36. If you think that this detracts from the existence or reality of things, you are very far from understanding what I have said in the plainest way I could think of. Here it is again, in brief outline. There are spiritual substances, minds, or human souls, which cause Ideas in themselves through acts of the will, doing this as they please; but these ideas are faint, weak, and unsteady as compared with other Ideas that minds perceive by sense. The latter ideas, being impressed upon minds according to certain rules or *laws of nature* tell us that they are the effects of a mind that is more powerful and wise than human spirits. The latter are said to have more reality in them than the former: by which is meant that they are more forceful, orderly, and distinct, and that they are not fictions of the mind that perceives them. In this sense, the sun that I see by day is the real sun, and what I imagine by night is the idea of the former. In the sense I am here giving to 'reality', it is evident that every plant, star, rock, and in general each part of the system of the world, is as much a real thing by my principles as by any others. Whether you mean by 'reality' anything different from what I do, I beg you to look into your own thoughts and see.

37. You will want to object: 'At least it is true that you take away all corporeal substances.' I answer that if the word 'substance' is taken in the ordinary everyday sense - standing for a combination of perceptible qualities such as extension, solidity, weight, etc. - I cannot be accused of taking substance away. But if 'substance' is taken in a philosophic sense - standing for the support of qualities outside the mind - then indeed I agree that I take it away, if one may be said to 'take away' something that never had any existence, not even in the imagination.

38. ‘But’, you say, ‘it sounds weird to say that \dot{Y} we eat and drink ideas, and are clothed with them.’ So it does, because the word ‘idea’ is not used in ordinary talk to signify the combinations of perceptible qualities that are called *things*; and any expression that differs from the familiar use of language is bound to seem weird and ridiculous. But this does not concern the truth of the proposition, which in other words merely says that \dot{Y} we are fed and clothed with things that we perceive immediately by our senses. The hardness or softness, the colour, taste, warmth, shape and such like qualities, which combine to constitute the various sorts of food and clothing, have been shown to exist only in the mind that perceives them; and this is all I mean by calling them ‘ideas’; which word, if it was as ordinarily used as ‘thing’, would sound no weirder or more ridiculous than ‘thing’ does in the statement that we eat and drink things and are clothed with them. My concern is not with the propriety of words but with the truth of my doctrine. So if you will agree with me that what we eat, drink, and clothe ourselves with are immediate objects of sense that cannot exist unperceived or outside the mind, I will readily agree with you that it is more proper - more in line with ordinary speech - to call them ‘things’ rather than ‘ideas’.

39. Why do I employ the word ‘idea’, rather than following ordinary speech and calling them ‘things’? For two reasons: first, because the term ‘thing’, unlike ‘idea’, is generally supposed to stand for something existing outside the mind; and secondly, because ‘thing’ has a broader meaning than ‘idea’, because it applies to spirits, or thinking things, as well as to ideas. Since the objects of sense \dot{Y} exist only in the mind, and also \dot{Y} are unthinking and inactive - which spirits are not -, I choose to mark them by the word ‘idea’, which implies those properties.

40. You may want to say: ‘Say what you like, I will still believe my senses, and will never allow any arguments, how plausible they may be, to prevail over the certainty of my senses.’ Be it so, assert the obvious rightness of the senses as strongly as you please - I shall do the same! What I see, hear, and feel *exists* - that is, *is perceived by me* - and I do not doubt this any more than I doubt my own existence. But I don’t see how the testimony of the senses can be brought as proof of the existence of anything that is *not* perceived by sense. I do not want anyone to become a sceptic, and to disbelieve his senses; on the contrary, I give the senses all the emphasis and assurance imaginable; nor are there any principles more opposite to scepticism than those I have laid down, as will be clearly shown later on.

41. Secondly [of the twelve objections mentioned in section 34], it will be objected that there is a great difference between (for instance) real fire and the idea of fire, between actually being burnt and dreaming or imagining oneself to be burnt. The answer to this - and to all the similar objections that may be brought against my position - is evident from what I have already said. At this point I shall add only this: if real fire is very different from the idea of fire, so also is the real pain that comes from it very different from the idea of that pain; but nobody will maintain that real pain could possibly exist in an unperceiving thing, or outside the mind, any more than the idea of it can.

42. Thirdly, it will be objected that we see things actually outside us, at a distance from us; and these things do not exist in the mind, for it would be absurd to suppose that things that are seen at the distance of several miles are as near to us as our own thoughts. In answer to this I ask you to consider the fact that in dreams we often perceive things as

existing at a great distance off, and yet those things are acknowledged to exist only in the mind.

43. In order to clear up this matter more thoroughly, let us think about *how* we perceive distance, and things placed at a distance, by sight. For if we really do see external space, and bodies actually existing in it at various distances from us, that does seem to tell against my thesis that bodies exist nowhere outside the mind. It was thinking about this difficulty that led me to write my *Essay towards a New Theory of Vision*, which was published recently. In that work I show that distance or externality is not immediately of itself perceived by sight, nor is it something we grasp or believe in on the basis of lines and angles, or anything that has a necessary connection with it. Rather, it is only *suggested* to our thoughts by certain visible ideas and sensations that go with vision - ideas which in their own nature are in no way similar to or related to either distance or things at a distance. By a connection taught us by experience they come to signify and suggest distances and distant things to us, in the same way that the words of a language suggest the ideas they are made to stand for. There is nothing intrinsic to the word 'red' that makes it the right name for that colour; we merely learn what it names through our experience of general usage. Similarly, there is nothing intrinsic to my present visual idea that makes it an idea of a tree in the middle distance; but ideas like it have been connected with middle-distance things in my experience. Thus, a man who was born blind, and afterwards made to see, would not at first sight think the things he saw to be outside his mind or at any distance from him because he would not have had any experience enabling him to make that connection. See section 41 of the *New Theory*.

44. The ideas of *sight* and of *touch* make two species, entirely distinct and different from one another. The former are marks and forward-looking signs of the latter. (Even in my *New Theory* I showed - though this was not its central purpose - that the items that are perceived only by sight don't exist outside the mind and don't resemble external things. Throughout that work I supposed that tangible objects - ones that we *feel* - do exist outside the mind. I didn't need that common error in order to establish the position I was developing in the book; but I let it stand because it was beside my purpose to examine and refute it in a treatment of *vision*.) Thus, the strict truth of the matter is this: when we see things at a distance from us, the ideas of sight through which we do this do not suggest or mark out to us things actually existing at a distance, but only warn us about what ideas of touch will be imprinted in our minds if we act in such and such ways for such and such a length of time. On the basis of what I have already said in the present work, and of section 147 and other parts of the *New Theory*, it is evident that visible ideas are the *language* in which the governing Spirit on whom we depend - God - tells us what tangible ideas he is about to imprint upon us if we bring about this or that motion in our own bodies. For a fuller treatment of this point, I refer you to the *New Theory* itself.

45. Fourthly, this will be objected:

It follows from your principles that things are at every moment annihilated and created anew. The objects of sense according to you exist only when they are perceived; so the trees are in the garden and the chairs in the parlour only as long as there is somebody there to perceive them. When I shut my eyes all the furniture in the room is reduced to nothing, and merely from my opening them it is again created.

In answer to all this, I ask you to look back at sections 3, 4, etc. and then ask yourself whether you mean by 'the actual existence' of an idea anything but *its being perceived*. For my part, after the most carefully precise enquiry I could make, I cannot discover that I mean anything else by those words. I ask you again - as I did at the end of the Introduction - to examine your own thoughts, and not to allow yourself to be imposed on by words. If you can conceive it to be possible for either your ideas or things of which they are copies to exist without being perceived, then I throw in my hand; but if you cannot, you will admit that it is unreasonable for you to stand up in defence of you knows not what, and claim to convict me of absurdity because I do not assent to propositions that at bottom have no meaning in them.

46. It would be as well to think about how far the commonly accepted principles of philosophy are themselves guilty of those alleged absurdities. It is thought to be highly absurd that when I close my eyes all the visible objects around me should be reduced to nothing; but isn't this what philosophers commonly admit when they all agree that light and colours - which are the only immediate objects of sight and only of sight - are mere sensations, and exist only while they are perceived? Again, some may find it quite incredible that things should be coming into existence at every moment; yet this very notion is commonly taught in the schools [= the Aristotelian philosophy departments]. For the schoolmen, though they acknowledge the existence of matter, and say that the whole world is made out of it, nevertheless hold that matter cannot go on existing without God's *conserving* it, which they understand to be his continually *creating* it.

47. Furthermore, a little thought will show us that even if we do admit the existence of matter or corporeal substance, it will still follow *from principles that are now generally accepted*, that no particular bodies of any kind exist while they are not perceived. For it is evident from section 11 and the following sections that the *matter* philosophers stand up for is an incomprehensible *something*, having none of those particular qualities through which the bodies falling under our senses are distinguished one from another. To make this more plain, bear in mind that *the infinite divisibility of matter* is now accepted by all, or at least by the most approved and considerable philosophers, who have demonstrated it conclusively from principles that are generally accepted. Now consider the following line of thought, starting from the premise of the infinite divisibility of matter.

Each particle of matter contains an infinite number of parts that are not perceived by sense because they are too small. Why, then, does any particular body seem to be of a finite magnitude, or exhibit only a finite number of parts to our senses? Not because it *has* only finitely many parts, for it contains an infinite number of parts. Rather, it is because our senses are not acute enough to detect any more. Therefore, in proportion as any of our senses becomes more acute, it will perceive more parts in the object; that is, the object will appear larger, and its shape will be different because parts near its outer edges - ones that before were unperceivable - will appear to give it a boundary whose lines and angles are very different from those perceived by the sense before it became sharper. If the sense in question became infinitely acute, the body would go through various changes of size and shape, and would eventually seem infinite. All this would happen with no alteration in the body, only a sharpening of the sense. Each body, therefore, considered in itself, *is infinitely extended* and consequently *has no shape*.

From this it follows that even if we grant that the existence of matter is utterly certain, it is equally certain - as the materialists are forced by their own principles to admit - that the particular bodies perceived through the senses do not exist outside the mind, nor does anything like them. According to them each particle of matter is *infinite and shapeless*, and it is the mind that makes all that variety of bodies that compose the visible world, none of which exists any longer than it is perceived.

48. When you think about it, the objection brought in section 45 turns out not to provide reasonable support for any accusation against my views. I do indeed hold that the things we perceive are nothing but ideas that can't exist unperceived, but it doesn't follow that they have no existence except when they are perceived by us; for there may be some other spirit that perceives them when we do not. Whenever I say that bodies have no existence outside 'the mind', I refer not to this or that particular mind but to all minds whatsoever. So it doesn't follow from my principles that bodies are annihilated and created every moment, or that they don't exist at all during the intervals between our perception of them.

49. Fifthly, it may be objected that if extension and shape exist only in the mind, it follows that the mind is extended and shaped, because extension is a quality or attribute, which is predicated of the subject in which it exists. I answer, that those qualities are 'in the mind' only in that they are *perceived by it* - that is, not as qualities or attributes but only as ideas. It no more follows that the soul or mind is extended because extension exists only in it than it follows that the mind is red or blue because (as everyone agrees) those colours exist only in it. As to what philosophers say of subject and mode [= quality], that seems very groundless and unintelligible. For instance, in the proposition *A die is hard, extended, and square* they hold that the word 'die' refers to a subject or substance that is distinct from the hardness, extension, and squareness that are predicated of it - a subject *in* which those qualities exist. I cannot make sense of this. To me a die seems to be nothing over and above those things that are termed its qualities. And to say that a die is hard, extended, and square is not to attribute those qualities to a subject distinct from and supporting them, but only to explain the meaning of the word 'die'.

50. Sixthly, you will object like this:

Many things have been explained in terms of *matter* and *motion*. if you take away these you will destroy the whole corpuscular philosophy [that is, the approach to physics in which the key concepts are those of matter, motion, and structure], and undermine those mechanical principles which have been applied with so much success to explain the phenomena. In short, whatever advances have been made in the study of nature by ancient scientists or by modern ones have all built on the supposition that *corporeal substance* or *matter* really exists.

To this I answer that every single phenomenon that is explained on that supposition could just as well be explained without it, as I could easily show by going through them all one by one. Instead of that, however, I shall do something that takes less time, namely show that the supposition of matter *cannot* explain any phenomenon. To explain *the phenomena* is simply to show why *upon such and such occasions we are affected with such and such ideas*. But how matter should operate on a mind, or produce any idea in it, is something that no philosopher or scientist will claim to explain. So, obviously, there can

be no use of the concept of *matter* in natural science. Besides, those who try explain things do it not by *corporeal substance* but by *shape, motion* and other qualities; these are really just mere ideas and therefore cannot cause anything, as I have already shown. See section 25.

51. Seventhly, from what I have said you will want to protest:

It seems absurd to take away natural causes, and attribute everything to the immediate operation of spirits! According to your principles, we must no longer say that fire heats or water cools, but that a spirit heats, and so forth. If someone actually talked like that, wouldn't he be laughed at, and rightly so?

Yes, he would. In matters like this we ought to think with the learned and speak with the vulgar [= 'with the common people']. People who are perfectly convinced of the truth of the Copernican system in astronomy still say that 'the sun rises', 'the sun sets', 'the sun is high in the sky'; and it would surely seem ridiculous to speak in any other way. Think about this a little and you will see that the acceptance of my doctrines would not even slightly disturb or alter the common use of language.

52. In the ordinary affairs of life, we can go on using any turns of phrase - even ones that are false when taken in a really strict sense - so long as they arouse in us appropriate thoughts or feelings or dispositions to act in ways that are good for us. Indeed, this is unavoidable, because the standards for *proper* speech are set by what is *customary*, so that language has to be shaped by commonly held opinions, which are not always the truest. So even in the strictest philosophic reasonings we cannot alter the outlines of the English language so completely that we never provide fault-finders with an opportunity to accuse us of difficulties and inconsistencies in what we say. But a fair and honest reader will gather what is meant by a discourse from its over-all tendency and from how its parts hang together, making allowances for those inaccurate turns of phrase that common use has made inevitable.

53. As for the thesis that there are no corporeal causes - that is, no bodies that have causal powers - this used to be maintained by some of the schoolmen, and also more recently by some modern philosophers such as Malebranche. The latter philosophers did believe that matter exists, but they insisted that God alone is the immediate cause of everything. They saw that none of the *objects of sense* has any power or activity included in it, from which they inferred that the same holds for the *bodies which they thought to exist outside the mind*. Yet they went on believing in such bodies! That is, they believed in a vast multitude of created things that were admittedly incapable of producing any effects in nature, so that there was no point in God's creating them since He could have done everything just as well without them. Even if this were possible, it would still be a very puzzling and extravagant supposition.

54. In the **eighth** place, some may think that matter, or the existence of external things, is shown by the fact that all mankind believe in it. Must we suppose the whole world to be mistaken? - the objection runs - and if so, how can we explain such a wide-spread and predominant error? I answer, first, that when we look into it carefully we may find that the existence of matter or of things outside the mind is not really believed in by as many people as the objector imagines. Strictly speaking, it is impossible to believe something

that involves a contradiction, or has no meaning in it; and I invite you to consider impartially whether ‘matter’ and ‘things outside the mind’ are not of that sort. In one sense indeed, men may be said to ‘believe that matter exists’: that is, they *act as if* the immediate cause of their sensations, which affects them every moment and is so nearly present to them, were some unsensing and unthinking being. But that they should clearly have any meaning for those words, and make out of them *a settled theoretical opinion*, is what I cannot conceive. This is not the only case where men deceive themselves by imagining they believe propositions that they have often heard but basically have no meaning in them.

55. But in any case (and this is my second reply), Even if some proposition is firmly believed by nearly everyone, that is a weak argument for its truth to anyone who considers what a vast number of prejudices and false opinions are everywhere accepted with the utmost tenacity by unreflecting people - who make up the great majority of them. There was a time when even learned men regarded as monstrous absurdities the view that there are lands on the opposite side of the globe, and the view that the earth moves; and when we consider what a small proportion of mankind *they* are, we can expect that even now those notions are not widely accepted in the world.

56. But I am challenged to explain this prejudice ·that there is matter outside the mind·, and to account for its popularity. I now do so. Men became aware that they perceived various ideas of which they themselves were not the authors, because these ideas were not caused from within, and didn’t depend on the operation of their wills. This led them to think that those ideas or objects of perception had an existence independent of the mind and outside it; and it never entered their heads that a contradiction was involved in those words. But philosophers plainly saw that the immediate objects of perception do not exist outside the mind, and this led them to correct, up to a point, the mistake of the common man. In doing this, though, they ran into another mistake that seems equally absurd, namely: that certain objects really exist outside the mind, having an existence distinct from being perceived, and our ideas are only images or resemblances of these objects, imprinted by the objects on the mind. And this view of the philosophers has the same source as the common man’s mistake: they realized that they were not the authors of their own sensations, which they clearly knew were imprinted from outside and must therefore have some cause distinct from the minds on which they were imprinted.

57. Why did they suppose that the ideas of sense are caused in us by things that they resemble, rather than attributing them to ·the causal action of· spirit, which is the only kind of thing that can act? ·There are three parts to the explanation·. First, the philosophers were not aware of the inconsistency of *Y*the supposition of things like our ideas existing outside minds, and of *Y*the attribution to such supposed things of power or activity. Second, the supreme spirit that causes those ideas in our minds is not presented to us by any particular finite collection of perceptible ideas, in the way that human agents are marked out by their size, skin-colour, limbs, and motions. Third, the supreme spirit’s operations are regular and uniform. Whenever the course of nature is interrupted by a miracle, men are ready to admit that a superior being is at work; but when we see the course of events continue in the ordinary way, we are not prompted to reflect on this.

Although the order and interlinking of events is evidence for the greatest wisdom, power, and goodness in their creator, it is so constant and familiar to us that we don't think of the events as the immediate effects of a free spirit - especially since inconstancy and changeability in acting, though really an imperfection, is looked on as a sign of freedom.

58. Tenthly, this will be objected:

The views you advance are inconsistent with various sound truths in science and mathematics. For example, *the motion of the earth* is now universally accepted by astronomers as a truth grounded in the clearest and most convincing reasons; but on your principles there can be no such motion. For motion is only an idea; so it does not exist except as perceived; but the motion of the earth is not perceived by sense.

I answer that the doctrine that the earth moves, if rightly understood, will be found to agree with my principles. The question *Does the earth move?* amounts in reality to just this: *Do we have reason to conclude from what astronomers have observed that if we were placed in such and such circumstances, and such or such a position and distance both from the earth and sun, we would perceive the earth to move among the choir of the planets and to appear in all respects like one of them?* The answer is Yes. This is a conclusion we can reasonably draw from the phenomena through the established rules of nature, which we have no reason to mistrust.

59. From the experience we have had of the order and succession of ideas in our minds, we can often make something better than uncertain conjectures - indeed, *sure and well-grounded predictions* - concerning the ideas we shall have if we engage in this or that complex sequence of actions; and these predictions enable us to judge correctly what *would have* appeared to us if things *had been* in such and such specific ways - very different from those we are in at present. That is what *the knowledge of nature* consists in - an account that preserves the usefulness and certainty of such knowledge without conflicting with what I have said. It will be easy to re-apply this line of argument to any other objections of the same sort concerning the size of the stars or any other discoveries in astronomy or nature.

60. In the **eleventh** place, you will want to ask:

What purpose is served by the intricate organization of plants, and the wonderful mechanism in the parts of animals? All those internal parts so elegantly contrived and put together, because they are ideas, have no power, no capacity to operate in any way; nor are they necessarily connected with the effects that are attributed to them. So couldn't plants grow and send out leaves and blossoms, and animals move as they now do, just as well without all those inner parts as with them? If every effect is produced by the immediate action of a spirit, everything that is fine and skillfully put together in the works of man or of nature seems to be made in vain. According to this doctrine, a skilled watchmaker who makes the spring and wheels and other parts of a watch, putting them together in the way that he knows will produce the movements that he wants the hands to make, should think that he is wasting his time and that it is an intelligence - namely, God's - which steers the hands of the watch so that they tell the time. If so, why shouldn't the intelligence do it without *his* having to take the trouble to make the parts and put them

together? Why does not an empty watch-case serve as well as one containing a mechanism? Also, why is it that whenever a watch does not go right there is some corresponding fault to be found in its mechanism, and when the fault is repaired the watch works properly again? The same questions arise regarding the clockwork of nature, much of which is so wonderfully fine and subtle that it could hardly be detected by the best microscope.

61. Here are three preliminaries to my main answer to this. First, even if my principles do fail to solve some difficulties concerning how providence manages the world, and what uses it assigns to the various parts of nature, this objection could not carry much weight against the truth and certainty of those things that can be conclusively proved *a priori*. Secondly, the commonly accepted principles suffer from similar difficulties; for we can challenge *their* adherents to explain why God should take those round-about methods of getting results by instruments and machines, when everyone knows that he could have achieved them by the mere command of his will, without all that apparatus. Indeed (thirdly), if we think about it hard we shall find that this objection tells with *greater* force against those who believe in those machines outside the mind; for it has been made evident that solidity, bulk, shape, motion and the like have no activity or efficacy in them, and so cannot produce any one effect in nature. See section 25. So anyone who supposes them to exist (allowing the supposition to be possible) when they are not perceived does this obviously to no purpose; for the only use that is assigned to them, as they exist unperceived, is to produce those perceivable effects that in truth cannot be ascribed to anything but spirit.

62. But to come nearer the difficulty, it must be observed that though the making of all those parts and organs is not absolutely necessary for producing any effect, it is necessary for producing things in a constant, regular way according to the laws of nature. There are certain general laws that run through the whole chain of natural effects; we learn these by the observation and study of nature, and apply them in making artificial things for the use and ornament of life, as well as in explaining the various phenomena. Such an explanation consists only in showing how a particular phenomenon conforms to the general laws of nature, or (which is the same thing) in revealing the uniformity there is in the production of natural effects. Anyone can see this who attends to particular explanations that scientists have offered for phenomena. I showed in section 31 that the regular constant methods of working that the supreme agent keeps to have a great and obvious usefulness to us. And it is no less obvious that a particular size, shape, motion, and structure, though not absolutely necessary for any effect, are necessary for the effect to be produced according to the standing mechanical laws of nature. Thus, for instance, it cannot be denied that God (the intelligence that sustains and rules the ordinary course of things) could produce a miracle if he wanted to, causing all the motions on the dial of a watch, though nobody had ever supplied it with a working mechanism; but if he is to act in conformity with the rules of mechanism, established and maintained by him for wise ends, it is necessary that those actions of the watchmaker in which he makes and then adjusts the machinery precede the movements of the hands on the dial; and also that any disorder in those movement be accompanied by the perception of some corresponding disorder in the machinery, the correction of which cures the disorder.

63. It may indeed sometimes be necessary that the author of nature display his overruling power in producing some appearance that does not fit his ordinary pattern of events. Such exceptions from the general rules of nature are proper to surprise and awe men into an acknowledgment of the divine being; but then they are not to be used often, for if they were they would fail to have that effect. Besides, God seems to prefer \dot{Y} convincing our reason about what he is like through the works of nature, which reveal so much harmony and ingenuity in their structure and are such plain indications of wisdom and good-will in their author, to \dot{Y} astonishing us by anomalous and surprising events into believing that he exists.

64. The objection brought in section 60 really amounts only to the following. Ideas are not produced anyhow and at random; there is a certain order and connection amongst them, like that of cause and effect; and they come in various combinations that are put together in a very regular manner as though by design. These combinations seem like instruments in the hand of nature. Hidden behind the scenes, so to speak, they secretly operate in producing the appearances that are seen on the world's stage, though they themselves are detected only by the scientist who looks for them. But since one idea cannot cause another, what is the purpose of this order and connection? Since those 'instruments in the hand of nature' are mere powerless perceptions in the mind, and so cannot help in the production of natural effects, I am being asked why they exist at all. That is to ask why it is that when we closely inspect God's works He causes us to observe such a great variety of ideas, inter-related in ways that are so regular and look so much like the result of a designer's skill. It is not credible that He would to no purpose put himself to the expense (so to speak) of all that skillful design and regularity.

65. My answer to all this has two parts. First, \dot{Y} the connection of ideas does not imply the relation of cause and effect, but only of a mark or sign with the thing signified. The fire I see is not the cause of the pain I suffer when I come too close, but a sign that warns me of that pain. Similarly, the noise that I hear is not an effect of a collision of nearby bodies, but a sign of it. Secondly, \dot{Y} the reason why ideas are formed into machines, that is, regular combinations that manifest a designer's skill, is the same as the reason why letters are combined into words. If a few basic ideas are to signify a great number of effects and actions, there must be different ways of combining them; if these combinations are to be usable by *everyone*, they must be contrived wisely -so that they can carry vast amounts of information yet still be understood by us-; and if they are to be *always* available and helpful, they must be governed by rules -that do not change from time to time-. In this way we are given a great deal of information about what to expect from such and such actions, and how to go about arousing such and such ideas. And really that is all that is clearly meant when people say that by finding out the shape, texture, and structure of the inner parts of bodies, whether natural or artificial, we can discover what the thing is really like and how it can be used.

66. Hence it is evident that things that are \dot{Y} the wholly inexplicable source of great absurdities when they regarded as causes that help to produce effects, can be \dot{Y} very naturally explained, and have a proper and obvious use assigned them, when they are considered only as marks or signs for our information. What the scientist ought to be doing is to detect and decipher those signs (this language, so to speak) instituted by the

author of nature, not claiming to explain things in terms of corporeal causes - a claim that seems to have too much estranged the minds of men from ·God·, that active principle, that supreme and wise spirit, ‘in whom we live, move, and have our being’.

67. In the **twelfth** place, this may be objected:

It is clear from what you have said that there can be no such thing as an inert, senseless, extended, solid, shaped, movable substance existing outside the mind, which is how philosophers describe matter. But suppose someone leaves out of his idea of *matter* the positive ideas of extension, shape, solidity, and motion, and says that all he means by that word is *an inert senseless substance that exists outside the mind (or unperceived) and is the occasion of our ideas*, meaning ·by ‘occasion’· that God is pleased to cause ideas in us when matter is present. There seems to be no reason why matter in *this* sense of the word should not exist.

In answer to this I say first that it seems no less absurd to suppose a substance without qualities than it is to suppose qualities without a substance. Anyway, secondly, if this unknown substance exists *where* does it do so? We agree that it does not exist in the mind; and it is equally certain that it does not exist in some *place*, for all (place or) extension exists only in the mind, as I have already proved. So it exists nowhere at all!

68. Let us examine a little the description of matter that is here given to us. It neither acts, nor perceives, nor is perceived, for that is all it means to say that it is an inert, senseless, unknown substance - which is a definition entirely made up of negatives (except for the relative notion of its standing under or supporting, but notice that it supports ·no qualities, and therefore supports· nothing at all), so that it comes as close as you like to being the description of a nonentity. ‘But’, you say, ‘it is the unknown *occasion* at the presence of which ideas are caused in us by the will of God.’ I would like to know how anything can be *present* to us if it is not perceivable by sense or reflection, is not capable of producing any idea in our minds, is not at all extended, has no form, and exists in no place! The words ‘to be present’, as used here, have to be taken in some abstract and strange meaning that I cannot grasp.

69. Again, let us examine what is meant by ‘occasion’. So far as I can gather from the common use of language, that word signifies either \dot{Y} the agent that produces some effect, or \dot{Y} something that is observed to accompany or go before ·a kind of event· in the ordinary course of things. But when it is applied to matter as described in section 67, the word ‘occasion’ cannot be taken in either of those senses. For matter is said to be passive and inert, and so it cannot be an agent or cause. It is also unperceivable, because devoid of all perceptible qualities, and so it cannot be the occasion of our perceptions in the latter sense - as when burning my finger is said to be the occasion of the pain that goes with it. So what can be meant by calling matter an ‘occasion’? this term is used either with no meaning or with some meaning very distant from its commonly accepted one.

70. Perhaps you will say this:

Although matter is not perceived by us, it is perceived by God, and *to him* it is the occasion of causing ideas in our minds. We do observe that our sensations are imprinted on our minds in an orderly and constant manner, which makes it reasonable for us to suppose there are certain constant and regular *occasions* of their being produced. That is, there are certain permanent and distinct portions of

matter corresponding to our ideas; they do not cause the ideas in our minds or any other way immediately affect us, because they are altogether passive and unperceivable by us; but God can and does perceive them, and lets them serve as *occasions* to remind him when and what ideas to imprint on our minds, that so things may go on in a constant, uniform manner.

71. In answer to this I remark that on *this* account of matter we are no longer discussing the existence of a thing distinct from spirit and idea, from perceiving and being perceived. For matter is now being said to be perceived by God, and so our concern now is with the question of whether there are certain *ideas* (of I know not what sort) in the mind of God that are marks or notes that direct him how to produce sensations in our minds in a constant and regular method - in much the way that a musician is directed by the notes of music in the score to produce a tune, though the listeners do not perceive the notes and may be entirely ignorant of them. But this notion of matter seems too extravagant to deserve a refutation. And anyway it does not count against what I have been defending, namely the thesis that there is no senseless *unperceived* substance.

72. The constant, uniform way that our sensations run will, if we follow the light of reason, lead us to infer the goodness and wisdom of the spirit who causes them in our minds. But I cannot see anything else that we can reasonably infer. To me, I say, it is obvious that the existence of an infinitely wise, good, and powerful spirit is abundantly sufficient to explain all the appearances of nature. As for inert, senseless *matter*: nothing that I perceive has the slightest connection with it, or leads to the thoughts of it. I challenge anyone to explain any the natural phenomenon by it, however small, or show any sort of reason, even one yielding only a very low probability, that he has for believing in its existence, or even provide a tolerable sense or meaning for that supposition. The last point is not met by saying that matter is at least an occasion. For, as to its being an occasion, I think I have shown plainly that with regard to us it is no occasion; so if it is an occasion to anyone it must be to God - his occasion for causing ideas in us - and we have just seen what this amounts to.

73. It is worthwhile to reflect a little on the motives that induced men to suppose the existence of material substance. As we watch those motives or reasons gradually weaken and die, we can correspondingly withdraw the assent that was based on them. First, it was thought that colour, shape, motion, and the other perceptible qualities really do exist outside the mind; and this led them to think they needed to suppose some unthinking substratum or substance in which the qualities exist, since they could not be conceived to exist by themselves. Secondly, some time later men became convinced that colours, sounds, and the rest of the perceptible secondary qualities have no existence outside the mind; so they stripped those qualities off this substratum or material substance, leaving only the primary ones, shape, motion, and such like, which they still conceived to exist outside the mind and consequently to need a material support. But I have shown that none even of the primary qualities can possibly exist otherwise than in a spirit or mind that perceives them, so we are left with no remaining reason to suppose the existence of matter. Indeed it is utterly impossible that any such thing should exist, so long as 'matter' is taken to stand for an unthinking substratum of qualities, in which they exist outside the mind.

74. The materialists themselves conceded that matter was thought of only for the sake of supporting qualities. With that reason having entirely collapsed, one might expect that the mind would naturally and without reluctance give up belief that was based on it alone. Yet the prejudice is riveted so deeply in our thoughts that we can hardly tell how to part with it, and this inclines us, since *the thing itself* is indefensible, at least to retain *the name*, which we use to convey I know not what abstracted and indefinite notions of *being* or *occasion*, though without any show of reason, at least so far as I can see. Looking at it from our side: what do we perceive among all the ideas, sensations and notions that are imprinted on our minds by sense or reflection from which we can infer the existence of an inert, thoughtless, unperceived *occasion*? Looking at it from the side of ·God·, the all-sufficient spirit: why should we believe or even suspect that he is directed by an inert *occasion* to cause ideas in our minds?

75. We have here a very extraordinary and lamentable instance of the force of prejudice. Against all the evidence of reason, people remain devoted to a stupid, thoughtless *something* that they insert in such a way as to screen themselves off, so to speak, from the providence of God, and remove him further off from the affairs of the world. But even if they do all they can to secure the belief in matter, even if when reason forsakes them they try to support their opinion by the bare possibility of the thing, and even if they defend that poor possibility by an uninhibited use of imagination with no guidance from reason - still the most they get out of this is that *there are certain unknown ideas in the mind of God*; for this is what is meant (if indeed anything is meant) by ‘occasion with regard to God’. And this, at the bottom line, is no longer contending for the thing but only for the name.

76. I shan’t argue about whether there are such ideas in the mind of God, and whether they may be called ‘matter’. But if you stick to the notion of an unthinking substance, or support of extension, motion, and other perceptible qualities, then to me it is most evidently impossible there should be any such thing. Since it is a plain contradiction that those qualities should exist in or be supported by an unperceiving substance.

77. You may say this:

But granting that there is no thoughtless support of extension and of the other qualities that we perceive, perhaps there is some inert unperceiving substance or substratum of some other qualities that are as incomprehensible to us as colours are to a man born blind, because we don’t have a sense adapted to them. If we had a new sense, perhaps we would no more doubt of their existence than a blind man doubts the existence of light and colours when he becomes able to see.

I answer first that if what you mean by ‘matter’ is only *the unknown support of unknown qualities*, it doesn’t matter whether there is such a thing or not, since it no way concerns us; and I don’t see what good it will do us to dispute about we know not what, and we know not why.

78. But secondly, if we had a new sense it could only furnish us with new ideas or sensations; and then we should have the same reason against their existing in an unperceiving substance that I have already offered with relation to shape, motion, colour, and the like. Qualities, as I have shown, are nothing but sensations or ideas, which exist

only in a mind perceiving them; and this is true not only of the ideas we are acquainted with at present but likewise of all possible ideas whatsoever.

79. You will insist:

What if I have no reason to believe in the existence of matter? What if I cannot find any use for it, or explain anything by it, or even conceive what is meant by that word? It is still not a contradiction to say 'Matter exists, and it is in general a substance, or occasion of ideas'; though admittedly there may be great difficulties in unfolding the meaning of those words, or standing by any particular account of what they mean.

I answer that when words are used without a meaning you may put them together as you please without danger of running into a contradiction. You may say, for example, that 'Twice two is equal to seven', so long as you declare that you don't intend those words in their usual meanings, but for marks of you know not what. And by the same reason you may say 'There is an inert thoughtless substance without qualities, which is the occasion of our ideas'. We shall understand just as much by one proposition as by the other.

80. In the last place, you will say:

What if we give up the cause of material substance, and say only that *matter* is an unknown *something*, neither substance nor quality, neither spirit nor idea, inert, thoughtless, indivisible, immovable, unextended, existing in no place? Whatever arguments may be brought against substance or occasion, or any other positive notion of matter, are of no effect so long as this negative definition of 'matter' is kept to.

I answer that you may, if you see fit, use 'matter' in the same sense that other men use 'nothing', thus making those terms equivalent. For, after all, this is what appears to me to be the result of that definition: when I attentively consider its parts, either all together or one at a time, I do not find there is any kind of effect or impression made on my mind different from what is caused by the term 'nothing'.

81. You may reply that this definition includes something that sufficiently distinguishes it from 'nothing', namely the positive, abstract idea of quiddity [= 'being-the-kind-of-thing-it-is'], entity, or existence. I admit that those who claim to be able to form abstract general ideas do talk as if they had such an idea; they call it the most abstract and general notion of all, while I call it the most incomprehensible. I see no reason to deny that there is a great variety of spirits, of different orders and capacities, whose abilities are far greater and more numerous than those the author of my being has bestowed on me. And for me to claim, on the basis of my own few, niggardly, narrow inlets of perception, what ideas the inexhaustible power of the supreme spirit may imprint upon them would certainly be the utmost folly and presumption. For all I know, there may be innumerable sorts of ideas or sensations that differ from one another, and from any that I have perceived, as much as colours differ from sounds. But however ready I am to acknowledge how little I grasp of the endless variety of spirits and ideas that might possibly exist, when someone claims to have a notion of *entity* or *existence* - abstracted from spirit and idea, from perceiving and being perceived - I suspect him of a downright inconsistency and of trifling with words. And now we should consider the objections that may be made on religious grounds.

82. Some people think this:

Although the arguments for the real existence of bodies that are drawn from reason do not amount to demonstrations, yet the Holy Scriptures are so clear about this that they will sufficiently convince every good Christian that bodies do really exist and are something more than mere ideas. Holy Writ relates innumerable facts that obviously involve the reality of timber, stone, mountains, rivers, cities, and human bodies.

I answer that any writing at all, religious or secular, which uses 'timber', 'stone' and such words in their common meanings, or so as to have *some* meaning, runs no risk of having its truth called into question by my doctrine. That all those things really exist, that there are bodies - and even *corporeal substances* when this phrase is taken in its ordinary-language sense - has been shown to be agreeable to my principles: and the difference between things and ideas, realities and chimeras, has been clearly explained. I do not think that either what philosophers call *matter*, or the existence of objects outside the mind, is mentioned anywhere in Scripture.

83. Whether or not there are external things, everyone agrees that the proper use of words is in signalling our conceptions, or things only as they are known and perceived by us; and from this it plainly follows that in the doctrines I have laid down there is nothing inconsistent with the correct meaningful use of language, and that discourse of any kind whatsoever, as long as it is intelligible, remains undisturbed. But all this seems so obvious from what I have already said that it is needless to insist on it any further.

84. But this will be urged:

Miracles, at least, become much less striking and important on your principles. What must we think of Moses' rod? Rather than its really being turned into a serpent, was there only a change of ideas in the minds of the spectators? Are we to suppose that all our Saviour did at the marriage-feast in Cana was to influence the sight, smell, and taste of the guests in such a way as to create in them the appearance or mere idea of wine? The same may be said of all other miracles. On your principles they must all be regarded as merely cheats, or illusions of the imagination.

To this I reply that the rod was changed into a real serpent, and the water into real wine. That this does not in the least contradict what I have elsewhere said will be evident from sections 34 and 35. But this business of *real* and *imaginary* has been already so plainly and fully explained, and so often referred to, and the difficulties about it are so easily answered by what I have already said, that it would be an insult to the reader's understanding to explain it all over again here. I shall only observe that if at table all who were present could see, smell, taste and drink wine, and feel the effects of it, that leaves me with no doubt as to its reality. So that in the final analysis the worry about real miracles is not raised by my principles but is raised by the received principles [= by materialism], so that it counts for rather than against my position.

85. I have finished with the objections, which I tried to present as clearly and with as much force and weight as I could. My next task is to consider the consequences of my principles. Some of these come to the surface immediately, for example that several difficult and obscure questions on which much speculation has been wasted, are on my principles entirely banished from philosophy. Can corporeal substance think? Is matter

infinitely divisible? How does matter act on spirit? These and similar questions have endlessly led philosophers astray in all ages; but because they depend on the existence of matter, they do not arise on my principles. Many other advantages, concerning religion as well as the sciences, can easily be deduced from what I have laid down. But this will appear more plainly in what follows - from here to the end of the work.

86. From the principles I have laid down, it follows that human knowledge can naturally be classified under two headings - knowledge of *ideas*, and of *spirits*. I shall take these separately. First, as to *ideas* or unthinking things, our knowledge of these has been very much obscured and confused, and we have been led into very dangerous errors, by supposing a two-fold existence of the objects of sense, *Y*one intelligible, or in the mind, *Y*the other real and outside the mind. The latter has been thought to give unthinking things a natural existence of their own, distinct from being perceived by spirits. This, which I think I have shown to be a most groundless and absurd notion, is the very root of scepticism: as long as men thought that real things existed outside the mind, and that their knowledge was real only to the extent that it conformed to real things, it followed that they could not be certain that they had any real knowledge at all. For how can it be known that the things that are perceived conform to those that are not perceived, that is, which exist outside the mind?

87. Colour, shape, motion, extension, and the like, considered only as so many sensations in the mind, are perfectly known, because there is nothing in them that is not perceived. But if they are looked on as signs or images that are meant to copy things existing outside the mind, then we are all involved in scepticism - through a line of thought that goes like this.

We see only the appearances, and not the real qualities of things. We cannot possibly know what a thing's size, shape or motion is, really and absolutely, in itself; all we can know is how its size etc. relate to our senses. Our ideas can vary while things remain the same, and which of our ideas - whether indeed *any* of them - represent the true quality really existing in the thing is something we have no way to discover. For all we know, everything that we see, hear, and feel may be only phantom and empty chimera, and not at all agree with the real things existing in the real world.

All this scepticism follows from supposing a difference between things and ideas, and that the former exist outside the mind, or unperceived. It would be easy to expand upon this topic and show how the arguments advanced by sceptics in all ages depend on the supposition of external objects.

88. So long as we credit unthinking things with having a real existence distinct from their being perceived, we can't possibly know for sure what the nature is of any real unthinking being, or even that it exists. And so we see philosophers distrust their senses, and doubt the existence of heaven and earth, of everything they see or feel, even of their own bodies. And after all their labour and struggle of thought, they are forced to admit that we cannot get any self-evident or conclusively proved knowledge of the existence of perceptible things. But all this doubtfulness, which so bewilders and confuses the mind and makes philosophy ridiculous in the eyes of the world, vanishes if we give our words meanings, and do not distract ourselves with the terms 'absolute', 'external', 'exist', and such like,

signifying we know not what. I can as well doubt my own existence as the existence of things that I actually perceive by sense. For it is a manifest contradiction to suppose that any perceptible object should be immediately perceived by sight or touch and at the same time have no existence in nature, because the very existence of an unthinking being consists in being perceived.

89. If we are to erect a firm system of sound and real knowledge that can withstand the assaults of scepticism, nothing is more important, it seems, than to provide it with a beginning in a distinct account of what is meant by 'thing', 'reality', 'existence': for it will be pointless to dispute concerning the real existence of things, or claim to have any knowledge of it, when we haven't fixed the meaning of those words. 'Thing' or 'being' is the most general name of all; it applies to two entirely distinct and unlike kinds of item, which have nothing in common but the name; they are *spirits* and *ideas*. The former are active, indivisible substances: the latter are inert, fleeting, dependent beings, which do not exist by themselves, but are supported by - or exist in - minds or spiritual substances. We comprehend our own existence by inward feeling or reflection, and that of other spirits by reason. We may be said to have some knowledge or notion of our own minds, of spirits and active beings, although we do not in a strict sense have *ideas* of them. Similarly we know and have a notion of relations between things or ideas, which relations are distinct from the ideas or things related, because the ideas may be perceived by us without our perceiving the relations. To me it seems that we can know about and talk about *ideas*, *spirits*, and *relations*, and that it would be improper to extend the term 'idea' to signify everything we know or have any notion of.

90. Ideas imprinted on the senses are real things, or do really exist. I do not deny that; but I deny that they can exist outside the minds that perceive them, and that they resemble anything existing outside the mind - since the very being of a sensation or idea consists in being perceived, and the only thing an idea can resemble is an idea. The things perceived by sense can be called 'external' with regard to their origin, because they are not generated from within by the mind itself, but imprinted from outside by a spirit other than the one that perceives them. Perceptible objects can also be said to be 'outside the mind' in another sense, namely, when they exist in some other mind. Thus when I shut my eyes, the things I saw may still exist, but it must be in another mind.

91. It would be a mistake to think that what I am saying here detracts in the least from the reality of things. It is acknowledged on the received principles [= materialism] that all perceptible qualities - extension, motion, and the rest - need a support because they cannot exist by themselves. But the objects perceived by sense are admitted to be nothing but combinations of those qualities, and so *they* cannot exist by themselves. Up to this point we all agree. So that when I deny that the things perceived by sense exist independently of a substance or support in which they may exist, I take nothing away from the received opinion of their reality, and am not guilty of any new doctrine in that respect. The only difference between myself and other philosophers is that according to me the unthinking beings perceived by sense have no existence distinct from being perceived, and cannot therefore exist in any substance other than those unextended, indivisible substances, or spirits, which act and think and perceive them; whereas the common run of philosophers hold that the perceptible qualities exist in an inert, extended, unperceiving substance that

they call ‘matter’, to which they attribute a natural existence, outside all thinking beings - that is, distinct from being perceived by any mind whatsoever, even the eternal mind of the Creator. The only ideas they suppose to be in God’s mind are ideas of the corporeal substances he has created, if indeed they allow that those substances *were* created.

92. Following on from that last remark: Just as the doctrine of matter or corporeal substance has - as I have shown - been the main pillar and support of *scepticism*, so likewise all the impious schemes of *atheism and irreligion* have been erected upon that same foundation. Indeed, it has been thought so difficult to conceive matter produced out of nothing that the most celebrated among the ancient philosophers, even of these who maintained the existence of a God, have thought matter to be uncreated and coeternal with God. I need not tell the story of how great a friend *material substance* has been to atheists in all ages. All their monstrous systems have so visible and necessary a dependence on it that when this corner-stone is once removed the whole structure falls to the ground; so that it is no longer worthwhile to attend separately to the absurdities of each wretched sect of atheists.

93. It is very natural that impious and profane people should readily accept systems that favour their inclinations, by mocking immaterial substance and supposing the soul to be divisible and subject to decay as the body is; systems that exclude all freedom, intelligence, and design from the formation of things, and instead make a self-existent, stupid, unthinking substance the root and origin of all things. It is also natural that they should listen to those who deny a Providence, or a superior mind surveying the affairs of the world, attributing the whole series of events either to blind chance or fatal necessity, arising from collisions of bodies. And when on the other hand men of better principles see the enemies of religion putting so much stress on unthinking matter, all of them working so hard and ingeniously to reduce every thing to it, I think they should rejoice to see them deprived of their grand support, and driven from their only fortress. Without that fortress of materialism, Epicureans, Hobbists and the like have not even the shadow of something to say, and become the most cheap and easy triumph in the world.

94. The existence of matter, or unperceived bodies, has been the main support not only of atheists and fatalists but also of idolatry in all its various forms. If men would only consider that the sun, moon, and stars, and every other object of the senses are nothing but sensations in their minds, having no existence except in being perceived, no doubt they would never fall down and worship their own ideas! Rather, they would do homage to that eternal invisible Mind that produces and sustains all things.

95. The same absurd principle of materialism, by mingling itself with the principles of our faith, has given considerable difficulties to Christians. For example, how many scruples and objections have been raised by Socinians and others concerning the resurrection? But don’t the most plausible of them depend on the supposition that *sameness* of a body comes not from its *form* (i.e. what is perceived by sense) but from the *material substance* that remains the same in different forms? All the dispute is about the identity of this material substance; take it away, and mean by ‘body’ what every plain ordinary person means by it - namely that which is immediately seen and felt, which is only a combination of perceptible qualities or ideas - and then the seemingly most unanswerable objections of the Socinians etc. come to nothing.

96. When matter is expelled out of nature, it drags with it so many sceptical and impious notions, such an incredible number of disputes and puzzling questions that have been thorns in the sides of divines as well as philosophers, and made so much fruitless work for mankind, that if the arguments that I have produced against it are not found to be perfectly conclusive (which I think they obviously *are*), I am sure all friends to knowledge, peace, and religion have reason to wish they were.

97. Knowledge relating to ideas has suffered errors and difficulties not only from the belief in the external existence of the objects of perception but also from the doctrine of abstract ideas (as expounded in my Introduction). The plainest things in the world, those we are most intimately acquainted with and perfectly know, appear strangely difficult and incomprehensible when they are considered in an abstract way. Everybody knows what *time*, *place*, and *motion* are in particular cases; but when they are passed through the hands of a metaphysician they become too abstract and fine to be grasped by men of ordinary sense. Tell your servant meet you at such a time, in such a place, and he will never spend time thinking about the meanings of those words; he has no difficulty at all in understanding that particular time and place, or the movements he has to make to get there. But if *time* is separated from all the particular actions and ideas that diversify the day, and taken merely to be *the continuation of existence or duration* in the abstract, then even a philosopher may be at a loss to understand it.

98. Whenever I try to form a simple idea of *time*, abstracted from the succession of ideas in my mind - time that flows uniformly and is gone through by all beings - I am lost and entangled in inextricable difficulties. I have no notion of it at all. But I hear others say that *it is infinitely divisible*, and speak of it in a manner that leads me to entertain strange thoughts about my existence. That is because the doctrine that time is infinitely divisible absolutely requires me to think either \dot{Y} that I exist through innumerable ages without a thought, or else \dot{Y} that I am annihilated every moment of my life; and these seem equally absurd. Time is therefore nothing when it is abstracted from the succession of ideas in our minds; and from this it follows that the *duration* of any finite spirit must be estimated by the number of ideas or actions succeeding each other in that spirit or mind. This plainly implies that *the soul always thinks*; and indeed anyone who tries in his thoughts to separate or abstract the *existence* of a spirit from its *thinking* will, I believe, find it no easy task.

99. Similarly, when we try to abstract *extension* and *motion* from all other qualities and consider them by themselves, we immediately lose sight of them, and are led to wild conclusions. These all depend on a twofold abstraction: first, it is supposed that \dot{Y} *extension*, for example, can be abstracted from all other perceptible qualities; and secondly, that \dot{Y} the existence of extension can be abstracted from its being perceived. But if you think hard and take care to understand what you say, I think you will agree \dot{Y} that all perceptible qualities are sensations, and all are real; \dot{Y} that where extension is, colour is too - namely in your mind - and \dot{Y} that if they are copies from patterns it must be patterns existing in some other mind; and \dot{Y} that the objects of sense are nothing but those sensations combined, blended, or (if I may put it this way) *concreted* together - none of which can be supposed to exist unperceived. [Berkeley is making a mild pun here: 'concreted together' = 'fused together', and 'concrete' = opposite of 'abstract'.]

100. Everyone may think he knows what it is for a man to be *happy*, or an object to be *good*. But few people can claim to make an abstract idea of happiness separated from all particular pleasures, or of *goodness* separated from everything that is good. Similarly a man may be just and virtuous without having precise ideas of justice and virtue. The opinion that words like those stand for general notions, abstracted from all particular persons and actions, seems to have made morality difficult, and the study of it less useful to mankind. And in effect the doctrine of abstraction has contributed greatly towards spoiling the most useful parts of knowledge.

101. The two great provinces of speculative [= not practical, not moral] science that have to do with ideas received from sense are natural science and mathematics; and I shall make some remarks about each of these, starting with the former. This discussion will run up to the end of section 117, after which I shall turn to mathematics. It is with natural science that the sceptics seem to triumph: the great stock of arguments they produce, to belittle our faculties and make mankind appear ignorant and low, are drawn principally from the premise that we are incurably blind as to the true and real nature of things. They exaggerate this, and love to enlarge on it. We are miserably made fools of, they say, by our senses, and fobbed off with the outside, the mere appearance, of things. The real essence - the internal qualities and constitution of every little object - is hidden from our view; every drop of water, every grain of sand, contains something that it is beyond the power of human understanding to fathom or comprehend. But it is evident from what I have shown that this complaint is wholly groundless, and that false principles are making us mistrust our senses to such an extent that we think we know nothing of things that in fact we comprehend perfectly.

102. One great inducement to our pronouncing ourselves ignorant of the nature of things is the opinion - which is popular these day - that every thing contains within itself the cause of its own properties: or in other words that there is in each object an inner *essence* that is the source from which its perceptible qualities flow and on which they depend. Some have claimed to account for appearances by secret and mysterious qualities, but recently they are mostly explained in terms of mechanical causes, that is, the shape, motion, weight, etc. of imperceptible particles. But really the only agent or cause is *spirit*, because obviously motion and all the other ideas are perfectly inert. See section 25. Hence, to try to explain the production of colours or sounds by shape, motion, size, and the like, has to be wasted labour. That is why attempts of that kind can always be seen to be unsatisfactory. (The same can be said in general, of any 'explanation' that assigns one idea or quality as the *cause* of another. I need not say how many hypotheses and speculations we are spared by my doctrine, and how much simpler it makes the study of nature.

103. The great mechanical principle that is now in vogue is *attraction*, which seems to some people to provide a good enough explanation of a stone's falling to the earth, or the sea's swelling towards the moon. But how are we enlightened by being told this is done *by attraction*? Is it that this word signifies the kind of tendency that is involved, telling us that the event comes from bodies' pulling one another, rather than from their being pushed towards each other? But that tells us nothing about the manner of action, which (for all we know to the contrary) might as well be called *pushing* as *pulling*. Again, we see the parts

of steel hold firmly together, and this also is accounted for by attraction; but here as in the other examples I can't see that this does more than merely to describe the effect. As for *how* the effect is produced, or the *cause* that produces it, the 'explanation' in terms of attraction does not even try to tell us that.

104. It is true that if we consider a number of phenomena together, and compare them, we may observe some likeness and conformity amongst them. For example, in the falling of a stone to the ground, in the rising of the sea towards the moon, and in cohesion and crystallization, there is a similarity because each involves bodies' combining or approaching one another. So any phenomenon that is like that may not seem strange or surprising to a man who has accurately observed and compared the effects of nature. When we find an event strange or surprising, it is always something that is uncommon, a thing by itself, out of the ordinary course of our observation. We don't find it strange that bodies tend towards the centre of the earth, because that is what we perceive every moment of our lives. But bodies' having a similar gravitation towards the centre of the moon may seem odd and unaccountable to most men, because we see it only in the tides. But a scientist, whose thoughts take in a larger extent of nature, having observed that certain events in the heavens bear some likeness to ones on the earth, indicating that innumerable bodies tend to move towards each other, he gives this tendency the general name 'attraction', and thinks he has explained anything that can be shown to be an instance of it. Thus he explains the tides by the *attraction* of our earth-and-water globe towards the moon; he does not find that odd or anomalous, but sees it as only a particular example of a general rule or law of nature.

105. So if we consider how natural scientists differ from other men in respect of their knowledge of phenomena, we shall find that the difference consists, not in a more exact knowledge of the causes that produce phenomena (for that can only be the will of a spirit), but rather in a greater breadth of comprehension. Through this - that is, through the *amount* of data they take account of - scientists can discover analogies, harmonies, and agreements among the works of nature, and can explain particular effects. Such 'explaining' consists in bringing events under general rules (see section 62) that are based on the analogy and uniformness observed in the production of natural effects. We like such rules, and try to find them, because they extend our view beyond what is temporally present and spatially near to us, and enable us to make very probable conjectures about things that may have happened at very great distances of time and place, as well as to predict things to come. This sort of striving towards omniscience is something that the mind likes greatly.

106. But we should proceed cautiously in matters like this, for we are apt to lay too great a stress on analogies, and - at the expense of truth - to indulge the mind in its eagerness to extend its knowledge into general theorems. For example, *gravitation*, or mutual attraction, appears in many instances; and this leads some people to rush into calling it universal, maintaining that *attracting and being attracted by every other body* is an essential quality inherent in all bodies whatsoever. Whereas it appears that the fixed stars have no such tendency to move towards each other; and so far is gravitation from being essential to bodies that in some instances a quite contrary principle seems to show itself; as in the upward growth of plants, and the elasticity of the air. There is nothing necessary or

essential about any of this; it depends entirely on the will of the *governing spirit*, who causes certain bodies to stick together or tend towards each other, according to various laws, while he keeps others at a fixed distance; and to some he gives a quite contrary tendency to fly apart, just as he sees convenient.

107. After what I have said, I think we may lay down the following conclusions. First, it is clear that philosophers give themselves needless trouble when they enquire for any natural cause other than a mind or spirit. Secondly, considering that the whole creation is the work of a wise and good agent, scientists should think it fitting to employ their thoughts (contrary to what some hold) about the *purposes* of things; and I must confess that I see no reason why pointing out the various ends to which natural things are adapted, and for which they were originally with unspeakable wisdom contrived, should not be thought to be one good way of accounting for them, and altogether worthy of a scientist. Thirdly, what I have said provides no reason why men should not study how things go in the world, making observations and experiments. That these are useful to us, enabling us to draw general conclusions, results not from any unchangeable properties of, or relations between, things themselves, but only from God's goodness and kindness to men in his management of the world. See sections 30, 31. Fourthly, by diligently observing the phenomena within our view, we can discover the general laws of nature, and from them *deduce* further phenomena. I do not say *demonstrate* [= 'prove in a rigorously valid manner']; for all deductions of this kind depend on supposing that the Author of Nature always operates uniformly, constantly keeping to those rules that we regard as principles - though we cannot know for sure that they are.

108. Those men who make general rules from phenomena, and afterwards derive phenomena from those rules, seem to be considering *signs* rather than *causes*. A man may understand natural signs well without being able to say by what rule a one event is a sign of another. And just as it is possible to write improperly through too strictly observing general rules of grammar, so also in arguing from general rules of nature we may extend the analogy too far and thus run into mistakes.

109. In reading ordinary books a wise man will choose to fix his thoughts on the meaning of what he reads, and on its application to his life, rather than bringing to mind grammatical remarks on the language. Similarly in reading the book of nature, it seems beneath the dignity of the mind to make a show of exactness in bringing each particular phenomenon under general rules, or showing how it follows from them. We should aim at nobler views, ones that will relax and elevate the mind with a prospect of the beauty, order, extent, and variety of natural things; then enable us by proper inferences from them to enlarge our notions of the grandeur, wisdom, and kindness of the Creator; and lastly bring us to do our best to make the various parts of the creation subservient to the ends they were designed for - namely, God's glory and the life and comfort of ourselves and our fellow-creatures.

110. The best key to natural science is widely agreed to be a certain celebrated treatise of mechanics - Newton's *Principia*. At the start of that justly admired treatise, time, space, and motion are each distinguished into *absolute* and *relative*, or, giving the same distinction in different words, *true* and *apparent*, or in yet other words *mathematical* and *vulgar* [= 'that of the plain uneducated ordinary person']. According to the author's

extensive account of it, this distinction does presuppose that time, space and motion exist outside the mind, and that they are ordinarily conceived as relating to perceptible things; but really in their own nature they have no relation to them at all.

111. As for *time*, as it is taken by Newton in an absolute or abstracted sense, for the duration or continuance of the existence of things, I have nothing to add to what I said about this in sections 97, 98. For the rest, this celebrated author holds that there is an absolute space which, not being perceivable by the senses, is the same everywhere and is immovable: and he takes relative space to be the *measure* of absolute space, which being movable and defined by its situation in relation to perceptible bodies, is commonly taken to be immovable or absolute space. He defines *place* as that part of space that is occupied by some body. And according as the *space* is absolute or relative, so also is the *place*. *Absolute motion* is said to be the moving of a body from one absolute place to another, as *relative motion* is from one relative place to another. And because the parts of absolute space do not fall under our senses, instead of them we are obliged to use their perceptible measures, namely parts of relative space; and so we define both place and motion in relation to bodies that we regard as immovable. But, it is said by Newton, in scientific matters we must abstract from our senses, since it may be that none of those bodies that seem to be at rest are truly so: and a thing that is moved relatively may be really - that is, absolutely - at rest. Similarly, a single body may at one time be both in relative rest and in motion, or even be moving with contrary relative motions, according as its place is variously defined. All this indeterminacy is to be found in the apparent or relative motions, but not at all in the true or absolute ones, and so science should attend only to the latter. True motions, we are told by Newton, are distinguished from apparent or relative ones by the following properties. First, in true or absolute motion, anything that keeps the same position in relation to a whole undergoes any motions that the whole undergoes. Secondly, when a place is moved, anything that is in the place is also moved: so that a body moving in a place that is in motion undergoes the motion of its place. Thirdly, a body never starts to move or changes how it is moving unless a force acts upon it. Fourthly, a body's true motion is always changed when force acts on it. Fifthly, in circular motion that is merely relative, there is no centrifugal force; but in true or absolute circular motion there is centrifugal force, which is proportional to the quantity of motion.

112. Despite all this, it does not appear to me that there can be any motion except relative motion. To conceive motion, it seems to me, one must conceive at least two bodies that alter in their distance from, or position in relation to, each other. Hence if there was one only body in existence, it could not possibly be moved. This seems obvious, because the idea that I have of *motion* necessarily includes *relation*.

113. But although in every motion one must conceive two or more bodies, it can happen that one only is moved, namely the one that is acted on by the force causing the change of distance. Someone might define relative motion in such a way that a body counts as moving if it changes its distance from some other body, even if the force or action causing that change is not applied to it. But that would be a bad definition, and here is why. Relative motion is something we perceived by our senses, something we have to do with in the ordinary affairs of life; so it seems that every man of common sense knows what it is, as well as the best scientist. Now, I ask anyone whether, in this sense of 'motion', the

stones under his feet *move* as he walks along the street, because they change their distances from his feet? It seems to me that though motion includes a relation of one thing to another, it is not necessary that each of the related things be said to move. As a man may think of something that does not think, so a body may be moved to or from another body that does not move.

114. As the *place* of a thing happens to be variously defined, so its *motion* varies. A man in a ship may be said to be motionless in relation to the sides of the vessel, and yet to move in relation to the land. Or he may move eastward in respect of the ship and westward in respect of the land. In the common affairs of life, men never go beyond the earth to define the place of any body; and what is motionless in respect of that is thought of as absolutely motionless. But scientists, who have a greater extent of thought and more accurate notions of the system of things, have learned that even the earth itself moves. In order therefore to fix their notions, they seem to conceive the material world as finite, and its unmoving outer walls or shell to be the place in terms of which they estimate ‘true motions’. If we consult our own conceptions, I think we shall find that the only idea we can form of absolute motion is basically the idea of relative motion defined in that manner, .i.e. in terms of relations to the outermost shell of the world. For, as I have already remarked, *absolute motion* without *external relation* is incomprehensible; and all the above-mentioned properties, causes, and effects ascribed to absolute motion will, I think, be found to fit with this ‘outer-shell’ kind of relative motion. As to what is said ‘by Newton’ about the centrifugal force, namely that it does not at all belong to circular relative motion: I do not see how this follows from the experiment that is brought to prove it. [Berkeley here gives the reference to Newton’s *Principia*.] For the water in the vessel, at the time at which it is said to have the greatest relative circular motion, really has no motion at all; as is plain from the foregoing section. ‘In the following section I defend this further.’

115. A body does not count as *moving* unless (1) its distance from, or relation to, some other body alters, and (2) the force or action bringing about that alteration is applied to it ‘rather than to the other body’. If either of these is lacking, I do not think that it conforms with how people in general think and speak to say that the body ‘is in motion’. I grant indeed that when a body’s distance from some other alters, we may *think* it is moving although no force is acting on it; but if we think this it is because we think of the body in question as having the relevant force applied to it. This shows only that we are capable of wrongly thinking a thing to be in motion when it is not.

116. From what has been said, it follows that the scientific consideration of motion does not imply the existence of an absolute space, distinct from the space that *is* perceived by the senses, *is* related to bodies, and *cannot* exist outside the mind, as is clear from the principles that prove the same thing of all other objects of sense. If we look into it closely we shall perhaps find that we can’t even form an idea of *pure space without bodies*. This, I must confess, seems impossible, as being a most abstract idea. When I cause a motion in some part of my body, if it is free or without resistance I say there is *space*; but if I find resistance, then I say there is *body*; and in proportion as the resistance to motion is lesser or greater, I say the space is more or less pure. So that when I speak of *pure or empty space*, do not think that the word ‘space’ stands for an idea that can be conceived without

body and motion. (We are apt to think every noun stands for a distinct idea that can be separated from all others; and this has led to infinite mistakes.) Thus, when I say that if all the world were annihilated except for my own body, there would still remain 'pure space', all I mean is that I conceive it possible in that eventuality for the limbs of my body to be moved on all sides without the least resistance. If my body were also annihilated, there could be no motion, and consequently no space. Some people may think that eyesight provides them with the idea of pure space; but it is plain from what I have shown elsewhere that the ideas of space and distance are not obtained through sight. See the *New Theory of Vision*.

117. What I am saying here seems to put an end to all those disputes and difficulties that have sprung up amongst the learned concerning the nature of pure space. Its biggest benefit is to free us from that dangerous dilemma, in which some who have thought about this topic see themselves as trapped, namely: having to think either that 'real space is God, or else that 'there is something besides God that is also eternal, uncreated, infinite, indivisible, unchanging - each of which may fairly be thought pernicious and absurd. It is certain that a good many divines, as well as highly reputed philosophers, have thought that space must be divine, because they could not conceive its being limited or its being annihilated. And recently some -such as Spinoza- have undertaken to show that the attributes of God (which cannot be shared) are possessed by space. However unworthy of the divine nature this doctrine may seem, I do not see how we can avoid it if we adhere to the commonly accepted opinions.

118. Up to here I have written about natural science. Now let us enquire into that other great branch of speculative knowledge, namely mathematics. See the start of section 101. Celebrated though it is for its clearness and certainty of demonstration, which is matched hardly anywhere else, mathematics cannot be supposed altogether free from mistakes if in its principles there lurks some secret error that mathematicians share with the rest of mankind. Mathematicians deduce their theorems from premises that are highly certain; but their first principles are confined to the concept of *quantity*; and they don't ascend into any enquiry concerning those higher maxims that influence all the particular sciences -including ones that are not quantitative-. Any errors involved in those -higher- maxims will infect every branch of knowledge, including mathematics. I don't deny that the principles laid down by mathematicians are true, or that their methods of deduction from those principles are clear and beyond dispute. But I hold that there are certain erroneous maxims that spread wider than mathematics, and for that reason are not explicitly mentioned there, though they are tacitly assumed throughout the whole progress of that science; and that the bad effects of those secret, unexamined errors are diffused through all the branches of mathematics. To be plain, I suspect that mathematicians as well as other men are caught in the errors arising from the doctrines of abstract general ideas and of the existence of objects outside the mind.

119. Arithmetic has been thought to have for its object abstract ideas of *number*. A considerable part of speculative knowledge is supposed to consist in understanding the properties and mutual relations of numbers. The belief in the pure and intellectual nature of *numbers in abstract* has won for them the esteem of those thinkers who put on a show of having an uncommon fineness and elevation of thought. It has put a price on the most

trifling numerical theorems that in practice are of no use, and serve only to pass the time; and it has infected the minds of some people so much that they have dreamed of mighty mysteries involved in numbers, and tried to explain natural things by means of them. But if we look into our own thoughts, and consider the doctrines I have laid down, we may come to have a low opinion of those high flights and abstractions, and to look on all enquiries about numbers as merely trivial difficulties insofar as they are not practically useful in making our lives better.

120. *Unity* in the abstract I have considered in section 13. From that discussion and from what I said in the Introduction, it plainly follows there is no such idea. But *number* being defined as a *collection of units*, we can conclude that if there is no such thing as *unity* or *unit* in the abstract, there are no ideas of *number* in the abstract denoted by names and numerals. Therefore, if theories in arithmetic are abstracted \checkmark from the names and numerals, and \checkmark also from all use and practical application as well as \checkmark from particular things that are numbered, *they have no subject matter at all*. This shows us how entirely the science of numbers is subordinate to practical application, and how empty and trifling it becomes when considered as a matter of mere theory.

121. There may be some people who, deluded by the empty show of discovering abstracted truths, waste their time on useless arithmetical theorems and problems. So it will be worthwhile to consider that pretence more fully, and expose its emptiness. We can do this clearly by looking first at arithmetic in its infancy, observing what originally set men going on the study of that science, and what scope they gave it. It is natural to think that at first men, for ease of memory and help in calculations, made use of counters, or in writing made use of single strokes, points, or the like, each of which was made to stand for *a unit* - that is, some one thing of whatever kind they were dealing with at that time. Afterwards they discovered the more compact ways of making one symbol stand in place of several strokes or points. For example, the Romans used V instead of five points, X instead of ten points, and so on. And lastly, the notation of the Arabians or Indians - the system using 1, 2, 3, etc. - came into use, in which, by the repetition of a few characters or figures, and varying the meaning of each figure according to its place in the whole expression, all numbers can be conveniently expressed. This seems to have been done in imitation of language, so that the notation in numerals runs exactly parallel to the naming of numbers in words: the nine simple numerals correspond to the first nine names of numbers, and the position of a simple numeral in a longer one corresponds to the place of the corresponding word in a longer word-using name for a number. Thus, for example, '7' corresponds to 'seven'; and the significance of '7' in '734' - namely, as standing for seven hundreds - corresponds to the significance of 'seven' in 'seven hundred and thirty-four'. And agreeably to those conditions of the simple and local value of figures, were contrived methods of finding from the given figures or marks of the parts, what figures, and how placed, are proper to denote the whole, or vice versa. [The preceding sentence is exactly as Berkeley wrote it.] Having found the *numerals* one seeks, keeping to the same rule or parallelism throughout, one can easily read them into *words*; and so the number becomes perfectly known. For we say that the number of such-and-suches is known when we know the names or numerals (in their proper order) that belong to the such-and-suches according to the standard system, For when we know these signs, we can through the

operations of arithmetic know the signs of any part of the particular sums signified by them; and by thus computing in signs (because of the connection established between them and the distinct numbers of things each of which is taken for a unit), we can correctly add up, divide, and proportion the things themselves that we intend to number.

122. In arithmetic therefore we have to do not with the *things* but with the *signs*, though these concern us not for their own sake but because they direct us how to act in relation to things, and how to manage them correctly. Just as I have remarked concerning language in general (section 19 (intro.)), so here too abstract ideas are thought to be signified by numerals or number-words at times when they don't suggest ideas of particular things to our minds. I shall not go further into this subject now, but shall only remark that what I have said makes it clear that those things that are taken to be abstract truths and theorems concerning numbers are not really about anything except Ψ particular countable things - or Ψ names and numerals, which were first attended to only because they are signs that can represent aptly whatever particular things men needed to calculate about. To study them for their own sake, therefore, would be just as wise and pointful as to neglect the true use or original intention and purpose of language, and to spend one's time on irrelevant criticisms of words, or on purely verbal reasonings and controversies.

123. From *numbers* we move on to discuss *extension*, which (considered as relative) is the object of geometry. The infinite divisibility of finite extension, though it is not explicitly asserted either as an axiom or as a theorem in the elements of geometry, is assumed throughout it, and is thought to have so inseparable and essential a connection with the principles and proofs in geometry that mathematicians never call it into question. This notion is the source of all those deceitful geometrical paradoxes that so directly contradict the plain common sense of mankind, and are found hard to swallow by anyone whose mind is not yet perverted by learning. It is also the principal source of all the fine-grained and exaggerated subtlety that makes the study of mathematics so difficult and tedious. So if I can make it appear that *nothing whose extent is finite contains innumerable parts, or is infinitely divisible*, that will immediately Ψ free the science of geometry from a great number of difficulties and contradictions that have always been thought a reproach to human reason, and also Ψ make the learning of geometry a much less lengthy and difficult business than it has been until now. My discussion of infinite divisibility will run to the end of section 132.

124. Every particular finite extension [= 'finitely extended thing'] that could possibly be the object of our thought is an idea existing only in the mind, and consequently each part of it must be perceived. If I cannot perceive innumerable parts in any finite extension that I consider, it is certain that they are not contained in it: and it is evident that indeed I *cannot* distinguish innumerable parts in any particular line, surface, or solid that I either perceive by sense or picture to myself in my mind; and so I conclude that it does not contain innumerable parts. Nothing can be more obvious to me than that the extended things I have in view are nothing but my own ideas, and it is equally obvious that I cannot break any one of my ideas down into an infinite number of other ideas - which is to say that none of them is infinitely divisible. If 'finite extension' means something distinct from a finite idea, I declare that I do not know what it means, and so cannot affirm or deny anything regarding it. But if the terms 'extension', 'parts', and the like are given any meaning that

we can conceive, that is, are taken to stand for ideas, then to say ‘a finite quantity or extension consists of infinitely many parts’ is so obvious a contradiction that everyone sees at a glance that it is so. And it could never gain the assent of any reasonable creature who is not brought to it by gentle and slow degrees, like bringing a converted pagan to believe that in the Communion service the bread and wine are turned into the body and blood of Jesus Christ. Ancient and rooted prejudices do often turn into principles; and once a proposition has acquired the force and credit of a principle, it is given the privilege of being excused from all examination, as is anything that is deducible from it. There is no absurdity so gross that the mind of man can’t be prepared in this way to swallow it!

125. Someone whose understanding is prejudiced by the doctrine of abstract general ideas may be persuaded that *extension in the abstract* is infinitely divisible, whether or not the ideas of sense are. And someone who thinks the objects of sense exist outside the mind may be brought by *that* to think that a line an inch long may contain innumerable parts really existing, though they are too small to be discerned. These errors - ‘abstract ideas, and existence outside the mind’ - are ingrained in geometers’ minds as in other men’s, and have a similar influence on their reasonings; and it would not be hard to show how they serve as the basis for the arguments that are employed in geometry to support the infinite divisibility of extension. At present I shall only make some general remarks about why the mathematicians cling to this doctrine so fondly.

126. I have pointed out that the theorems and demonstrations of geometry are about *universal* ideas (section 15 intro). And I explained in what sense this ought to be understood, namely that the *particular* lines and figures included in the diagram are supposed to stand for innumerable others of different sizes. In other words, when the geometer thinks about them he *abstracts* from their size; this doesn’t imply that he forms an abstract idea, only that he doesn’t care what the particular size is, regarding that as irrelevant to the demonstration. Thus, an inch-long line in the diagram must be spoken of as though it contained ten thousand parts, since it is regarded not in its particular nature but as something universal, and it is universal only in its signification, through which it represents innumerable lines longer than it is, in which ten thousand parts or more may be distinguished, even though it is itself a mere inch in length. In this manner the properties of the *lines signified* are (by a very usual figure of speech) transferred to the *sign*, and from that are mistakenly thought to belong to the sign - ‘the inch-long line’ - considered in its own nature.

127. Because there is no number of parts so great that there could not be a line containing more, the inch-line is said to contain parts more than any assignable number; which is not true of *the inch itself* but is true for *the things it signifies*. But men lose sight of that distinction, and slide into a belief that the small particular line drawn on paper has in itself innumerable parts. There is no such thing as the ten-thousandth part of an inch; but there is a ten-thousandth part of a mile or of the diameter of the earth, which may be signified by that inch. When therefore I delineate a triangle on paper, and take one inch-long side (for example) to be the radius ‘of a circle’, I consider this as divided into ten thousand or a hundred thousand parts, or more. For though the ten-thousandth part of that line, considered in itself, is nothing at all, and consequently may be neglected without any error or inconvenience, yet these drawn lines are only marks standing for greater lengths of

which a ten-thousandth part may be very considerable; and that is why, to prevent significant errors in practice, the radius must be taken to have ten thousand parts or more.

128. What I have said makes plain why, if a theorem is to become universal in its use, we have to speak of the lines drawn on the page as though they had parts that really they do not. When we speak in this way, if we think hard about what we are doing we shall discover that we cannot conceive an inch itself as consisting of (or being divisible into) a thousand parts, but only some other line that is far longer than an inch and is represented by it. And we shall discover that when we say that a line is infinitely divisible, we must mean a line that is infinitely long. The procedure I have described here seems to be the chief reason why the infinite divisibility of finite extension has been thought necessary for geometry.

129. The various absurdities and contradictions that flowed from this false principle might have been expected to count as so many arguments against it. But this did not happen, because it is maintained - I know not by what logic - that propositions relating to infinity are not to be challenged on grounds of what follows from them. As though contradictory propositions could be reconciled with one another within an infinite mind! Or as though something absurd and inconsistent could have a necessary connection with truth, or flow from it! But whoever considers the weakness of this pretence will think that it was contrived on purpose to humour the laziness of the mind, which would rather slump into an indolent scepticism than take the trouble to carry through a severe examination of the principles it has always embraced as true.

130. Recently the speculations about infinities have run so high and led to such strange notions that large worries and disputes have grown up among contemporary geometers. Some notable mathematicians, not content with holding that finite lines can be divided into an infinite number of parts, also maintain that each of those infinitesimals is itself subdivisible into an infinity of other parts, or infinitesimals of a second order, and so on ad infinitum. I repeat: these people assert that there are infinitesimals of infinitesimals of infinitesimals, without ever coming to an end! According to them, therefore, an inch does not merely contain an infinite number of parts, but an infinity of an infinity of an infinity . . . ad infinitum of parts. Others hold that all orders of infinitesimals below the first are nothing at all, because they reasonably think it absurd to imagine that there is any positive quantity or part of extension which though multiplied infinitely can never equal the smallest given extension. And yet on the other hand it seems no less absurd to think that the square-root, cube-root etc. of a genuine positive number should itself be nothing at all; which they who hold infinitesimals of the first order, denying all of the subsequent orders, are obliged to maintain.

131. Doesn't this, then, give us reason to conclude that both parties are in the wrong, and that there are really no such things as infinitely small parts, or an infinite number of parts contained in any finite quantity? You may say that this will destroy the very foundations of geometry, and imply that those great men who have raised that science to such an astonishing height have all along been building a castle in the air. To this I reply that whatever is useful in geometry and promotes the benefit of human life still remains firm and unshaken on my principles. That science, considered as practical, will be helped rather

than harmed by what I have said; though to show this clearly fully might require a separate book. For the rest, even if my doctrines imply that some of the more intricate and subtle parts of theoretical mathematics may be peeled off without prejudice to the truth, I don't see what damage this will bring to mankind. On the contrary, it is highly desirable that men of great abilities and tenacious minds should turn their thoughts away from those distractions and employ them in studying things that lie nearer to the concerns of life, or have a more direct influence on how we live.

132. It may be said that several undoubtedly true theorems have been discovered by methods in which infinitesimals were used, which couldn't have happened if the existence of infinitesimals included a contradiction in it. I answer that when you look into this thoroughly you will not find in any instance that you *need* to use or conceive infinitesimal parts of finite lines, or even quantities smaller than the smallest you can perceive. Indeed, you will find that this is never done, because it is impossible. This brings to an end my discussion of infinite divisibility.

133. What I have said makes it clear that very numerous and important errors have arisen from the false principles that I have criticized in the earlier parts of this work. And the opposites of those erroneous tenets seem to be very fruitful principles that have innumerable consequences that are highly advantageous to true philosophy as well as to religion. I have shown in detail that *matter*, or the absolute existence of corporeal objects, has always been the chief source of the strength and confidence of the most openly declared and pernicious enemies of all knowledge, human and divine. And, surely, if by distinguishing the real existence of unthinking things from their being perceived, and allowing them a substance of their own out of the minds of spirits, no one thing is explained in nature, but on the contrary many inexplicable difficulties arise; if the supposition of matter is shaky at best, because there is not so much as one single reason to support it; if its consequences cannot survive the light of examination and free enquiry, but screen themselves under the dark and general pretence that infinites cannot be understood; if furthermore the removal of this matter doesn't bring the slightest bad consequence, if it is not even missed in the world, but everything is conceived just as well - indeed better - without it; if, lastly, both sceptics and atheists are forever silenced by the doctrine that there are only spirits and ideas, and this philosophy is perfectly agreeable both to reason and religion; we might expect that it - my philosophy - would be admitted and firmly embraced, even if it were offered only as an hypothesis, and the existence of matter were allowed as possible, which I have clearly shown that it is not.

134. It is true that my principles reject as useless various disputes and speculations that are widely thought to be important parts of learning. But however great a prejudice against my notions this may give to those who have already been deeply engaged in such speculations and made large advances in studies of that nature, I hope that *others* will not hold it against my principles and tenets that they shorten the labour of study, and make human sciences more clear, wide-ranging, and manageable than they were before.

135. Having completed what I planned to say about the knowledge of *ideas*, my next topic is *spirits*. We have more knowledge of these than we are commonly thought to have. We do not know the nature of spirits, people think, because we have no ideas of spirits. But I have shown in section 27 that it is plainly impossible for there to be an idea of a spirit; so

surely it ought not to be regarded as a defect in our understanding that it does not have any such idea. To the arguments of section 27 I shall add one more. I have shown that a spirit is the only substance or support in which ideas can exist; and it is obviously absurd to suppose that this *support* of ideas should itself *be* an idea, or be like an idea.

136. It may be said - and some *have* said - that we lack a sense that would enable us to know substances, and that if we had such a sense we would know our own soul as we do a triangle. Our inability to perceive substances, on this view, is like the blind person's inability to see things. To this I answer that if we did have a new sense, all it could present us with would be some new sensations or ideas of sense, just as happens when someone is cured of blindness. But nobody, I think, will say that what he means by 'soul' and 'substance' is only some particular sort of idea or sensation! So when you think it through you can see that regarding our faculties as defective because they give us no idea of spirit or active thinking substance is as unreasonable as criticizing them because they don't enable us to comprehend a round square.

137. The opinion that spirits are to be known in the way that ideas and sensations are known has given rise to many absurd doctrines and much scepticism about the nature of the soul. It has probably led some people to doubt whether they had a soul, as distinct from their body, since they couldn't find that they had an idea of it. In fact, the mere meanings of the words are enough to refute the proposition that an idea (meaning: something inactive, whose existence consists in being perceived) could be the image or likeness of a spirit (meaning: an active thing that exists independently of being perceived).

138. 'Although an idea cannot resemble a spirit in its thinking, acting or existing independently,' you may say, 'it may resemble it in other ways. An idea or image of a thing need not be like it in every respect.' I answer that if the idea does not resemble the thing in the ways I have mentioned, it cannot possibly represent it in any other respect. If you leave out the power of willing, thinking and perceiving ideas, nothing remains in respect of which an idea could resemble a spirit. *All* we mean by the word 'spirit' is 'that which thinks, wills, and perceives'; this is the whole meaning of that term. So if none of *those* powers can be represented in an idea, there can be no idea at all of a spirit.

139. You may object that if no idea is signified by the terms 'soul', 'spirit' and 'substance', they must be meaningless. I answer that those words do mean or signify a real thing, which is neither an idea nor like an idea, but is a thing that perceives ideas, and wills, and reasons about them. I am myself a thing of that kind: what I refer to by the word 'I' is the same as what is meant by 'soul' or 'spiritual substance'. You may object:

Why quarrel over a word? The immediate significations of other general words are by common consent called 'ideas', so there is no reason not to give that same label to what is signified by the general term 'spirit' or 'soul'.

To that I reply that the unthinking objects of the mind all have in common that they are entirely passive and exist only in being perceived; whereas a soul or spirit is an active being whose existence consists not in being perceived but in perceiving ideas and in thinking. These are two utterly, profoundly different categories of thing. So we need to maintain the distinction between 'spirit' and 'idea', so as to avoid ambiguity and running together things that are utterly opposite and unlike one another. See Section 27.

140. In a broad sense, indeed, we can be said to have an idea or rather a *notion* of spirit - that is, we understand the meaning of the word 'spirit', otherwise we couldn't use it in affirming or denying things of spirits. Furthermore, we suppose that our own ideas resemble ideas in the minds of others; for example, my ideas of blueness or heat resemble the ideas of blueness and heat that other people have. In that sense our own soul is the image or idea of the souls of others because it resembles them. And so we conceive ideas in the minds of other spirits by means of our own ideas, and we know other spirits by means of our own soul.

141. Those who assert that the soul is naturally immortal must not be thought to mean that nothing could possibly annihilate the soul, even the infinite power of the Creator who first brought it into existence. Their view is merely that the soul is not at risk of being broken or pulled apart in accordance with the ordinary laws of nature or motion. Some people think the soul of man to be only a thin living flame, or a gaseous system of 'animal spirits'; and on that view it is as easily destructible as the body, because nothing is more easily dissipated than flame or gas, which could not possibly survive the ruin of the body that houses it. This view that the soul is naturally perishable has been eagerly embraced and cherished by the worst people, who see it as the strongest antidote to virtue and religion. But I have shown clearly that bodies, no matter what their structure or materials, including flames and 'animal spirits', are merely passive ideas *in* the mind. The mind itself is more unlike them than light is unlike darkness. I have shown that the soul is indivisible, incorporeal, unextended, and it is therefore incapable of being destroyed by natural processes. It cannot fall apart because it has no parts. What we call 'the course of nature' is a series of motions, changes, decays and disintegrations that we see natural bodies undergoing constantly; none of this can possibly affect an active, simple, uncompounded substance: such a being therefore is indissoluble by the force of nature, which is to say that the human soul is naturally immortal.

142. What I have said presumably makes it clear that our souls cannot be known in the way that senseless, inactive objects are known; that is, we cannot know them by having ideas of them. We can say of both spirits and ideas that they 'exist', 'are known' and so on, but these words do not mean that spirits have anything in common with ideas. They are not alike in any respect; and we have no more chance of ∇ increasing our powers so that we can know a spirit as we do a triangle than we have of ∇ becoming able to see a sound! I emphasize this because I think it may help towards clearing up several important questions and preventing some dangerous errors about the nature of the soul. Although it is not strictly right to say that we have an *idea* of an active being or of an action, we can be said to have a *notion* of them. I have some knowledge or notion of my mind and of how it acts with regard to ideas, in that I know or understand what is meant by those words. When I know something, I have some notion of it. The terms 'idea' and 'notion' *could* be treated as interchangeable with one another, if that is what people want; but we speak more clearly and properly when we distinguish very different things by giving them different names.

143. I should add that the doctrine of abstract ideas has had a large share in making intricate and obscure those sciences that focus on spiritual things. Men have imagined they

could form abstract notions of the *powers* and *acts* of the mind, and could consider them apart from the mind or spirit itself, and also apart from their respective objects and effects. In this way a great many dark and indeterminate words, presumed to stand for abstract notions, have been introduced into metaphysics and morality, and from these have grown infinite distractions and disputes amongst the learned.

144. But nothing seems to have contributed more to pulling men into controversies and mistakes regarding the nature and operations of the mind than their custom of speaking of those things in terms borrowed from perceptible ideas. For example, the *will* is termed the *motion of the soul*; which encourages people to believe the mind of man is like a ball in motion, pushed and determined by the objects of sense as necessarily as the ball is by the stroke of a racket. From this arise endless worries and errors of dangerous consequence in morality. I am sure that all of this could be cleared up, and the truth be made to appear plain, uniform, and consistent, if philosophers could only be prevailed upon to look into themselves and think hard about what they mean by what they say.

145. From what I have said, it is clear that the only way we can know that there are other spirits is through what they do - that is, the ideas they arouse in us. Some of the changes and recombinations that I perceive among my ideas inform me there are certain particular agents like myself, which accompany those ideas and concur in [= agree to, go along with] their production in my mind. Whereas I know about my own ideas immediately, my knowledge of other spirits is not immediate; it depends on the intervention of ideas that I take to be effects or signs of agents (spirits) other than myself.

146. Those 'other agents', however, are not all human. Though we are sometimes convinced that human agents are involved in producing some events, everyone can see that the things we call 'the works of nature' - that is, the great majority of the ideas or sensations that we perceive - are not produced by human wills and do not depend on them in any way. So there must be some other spirit that causes them, since it is contradictory that they should exist by themselves. (See section 29.) What is the nature of that 'other spirit'? Here is how we can find out. We can attend carefully to how regular, orderly and inter-connected natural things are; to the surprising magnificence, beauty and perfection of the larger parts of the creation, and the delicately intricate way in which its smaller parts are arranged; to how harmoniously all the parts fit together; and, above all - this being something that we don't view with the astonishment it deserves - to the laws of pain and pleasure, and the instincts (that is, the natural inclinations, appetites, and emotions) of animals. If while considering all this we also attend to the nature of the attributes *one*, *eternal*, *infinitely wise*, *good* and *perfect*, we shall see clearly that they are attributes of that spirit I have mentioned - the one who makes everything happen and gives everything its reality.

147. Clearly, then, we know God as certainly and immediately as we know any mind or spirit other than ourselves. Indeed, God's existence is far more evidently perceived than the existence of other men, because nature has infinitely more and bigger effects than those that are attributed to human agents. Indeed, the things that are done by humans are at the same time effects of nature - that is, they are also done by God. Every sign of a man's existence - that is, every effect produced by a man - points even more strongly to the existence of that Spirit who is the Author of nature. Here is why. When you have an

effect on me, all that you actually will to do is to move your own limbs ·or larynx·; that the movements you make with *your* body should lead to any change in the ideas in *my* mind depends wholly on the will of the Creator. It is He alone who keeps other spirits ‘in step’ with one another in such a way that they can perceive one another’s existence. Yet this pure, clear light that illuminates us all, making us visible to one another, is in itself invisible.

148. The unthinking herd all seem to hold that they cannot see God. ‘If only we could see him in way we see a man,’ they say, ‘we would believe that he exists and, as believers, obey his commands.’ But, unfortunately ·for them·, we need only open our eyes to have a fuller and clearer view of the sovereign Lord of all things than we have of any one of our fellow-creatures! I am not supposing that we have a direct and immediate view of God (as some think we do), or that when we see bodies we do so not directly but rather by seeing something that represents them in the essence of God (·as Malebranche thinks we do·) - a doctrine that I confess to finding incomprehensible. Let me explain what I mean. A human spirit or person is not perceived by sense, because it is not an idea; so when we see the colour, size, shape, and motions of a man, all we perceive are certain sensations or ideas caused in our own minds; and these, being exhibited to us in various distinct collections, serve to indicate to us the existence of finite created spirits like ourselves. Clearly, then, we do not see a man, if by ‘man’ is meant something that lives, moves, perceives, and thinks as we do. What we perceive is a certain collection of ideas that leads us to think there is a distinct principle of thought and motion like ourselves, accompanying it and represented by it. That is also how we see God. The only difference is that whereas some one finite and narrow assemblage of ideas points to a particular human mind, we perceive clear indications of the divinity wherever we look, at any time and in any place. That is because everything we see, hear, feel, or in any way perceive by sense is a sign or effect of the power of God; as is our perception of the motions that are produced by men.

149. Clearly, then, nothing can be more evident to anyone who is capable of the least reflection than the existence of God, or a Spirit Ÿwho is intimately present to our minds, producing in them all the variety of ideas or sensations that we continually undergo, Ÿon whom we have an absolute and entire dependence, in short, Ÿin whom we live and move and have our being. Very few people have reasoned their way to this great truth, which lies so near and obvious to the mind. That is a sad example of the stupidity and inattention of men who, though they are surrounded with such clear manifestations of the Deity, are so little affected by them that it is as though they were blinded with excess of light.

150. ‘But’, you will say, ‘doesn’t *nature* have a share in the production of natural things? Must they all be ascribed to the immediate operation of God and nothing else?’ I answer that if by ‘nature’ you mean only the visible series of effects or sensations imprinted on our minds according to certain fixed and general laws, then clearly nature (in this sense) cannot produce anything at all. But if by ‘nature’ you mean some being distinct from God, from the laws of nature, *and* from the things perceived by sense, I have to say that the word is to me an empty sound with no intelligible meaning. Nature in this meaning of the word is a vain chimera, introduced by heathens who did not grasp the omnipresence and infinite perfection of God. It is harder to explain its being accepted among Christians who profess belief in the holy scriptures; for the latter constantly ascribe to the immediate hand

of God the effects that heathen philosophers customarily attribute to nature. [Berkeley here gives three biblical quotations.] But although this is the constant language of scripture, yet Christians are weirdly reluctant to believe that God concerns himself so nearly in our affairs. They would prefer to suppose him to be at a great distance from us, and substitute *matter*, that is, a blind unthinking deputy in his place, though according to St. Paul God is 'not far from every one of us'.

151. No doubt these objections will be raised:

The slow and gradual methods that are kept to in the production of natural things don't seem to be caused by the immediate hand of an almighty agent. Furthermore, monsters, untimely births, fruits blasted in the blossom, rains falling in desert places, miseries incident to human life, are all evidence that the whole frame of nature is not immediately actuated and superintended by a spirit of infinite wisdom and goodness.

But much of the answer to this is plain from section 62: those methods of nature are absolutely necessary if things are to go according to the most simple and general rules, and in a steady and consistent manner; and that is evidence for both the wisdom and goodness of God. This mighty machine of nature is so skillfully contrived that while its motions and various phenomena strike on our senses, the hand that drives the whole thing is itself not perceivable by men of flesh and blood. 'Verily,' says the prophet 'thou art a God that hidest thyself' (*Isaiah* xlv.15). But though God conceals himself from the eyes of sensual and lazy people who won't take the slightest trouble to *think*, to an unbiassed and attentive mind nothing can be more plainly legible than the close presence of an all-wise Spirit who designs, regulates, and sustains the whole system of being. It is clear from what I have pointed out elsewhere that operating according to general and stated laws is necessary for our guidance in the affairs of life, and for letting us into the secret of nature; so much so that without such laws all breadth of thought, all human sagacity and design, would be useless - indeed there could not *be* any such faculties or powers in the mind. See section 31. That single consideration is far more than enough to counterbalance whatever particular inconveniences may arise from the order of nature.

152. Bear in mind also that the very blemishes and defects of nature are of some use, because they make an agreeable sort of variety, and augment the beauty of the rest of the creation, as shadows in a picture serve to set off the brighter and more sunlit parts. You would also do well to think critically about the tendency to charge the author of nature with imprudence because of the waste of seeds and embryos and the accidental destruction of plants and animals before they come to full maturity. Doesn't this come from a prejudice that was acquired through familiarity with powerless mortals who have to scrimp and save? We may indeed think it wise for a *man* to manage thriftily things that he can't acquire without work and trouble. But we mustn't imagine that the inexplicably fine system of an animal or vegetable costs the great Creator any more work or trouble in its production than a pebble does; for nothing is more evident than the fact that an omnipotent spirit can casually produce anything by a mere fiat or act of his will. This makes it clear that the splendid profusion of natural things should not be interpreted as weakness or wastefulness in the agent who produces them, but rather be looked on as evidence of how richly powerful he is.

153. As for the mixture of pain or uneasiness that the world contains, as a result of the general laws of nature and the actions of finite imperfect spirits: this, in the state we are in at present, is indispensably necessary to our well-being. But our field of vision is too narrow: we take, for instance, the idea of some one particular pain into our thoughts, and count it as evil; whereas if we take a broader view so as to take in the various ends, connections, and dependencies of things, on what occasions and in what proportions we are affected with pain and pleasure, the nature of human freedom, and the design with which we are put into the world - *then* we shall be forced to admit that particular things that appear to be *evil* when considered by themselves have the nature of *good* when considered as linked with the whole system of beings.

154. From what I have said it will be obvious to any thinking person that the only reason by anyone has sided with atheism or with the Manichean heresy - according to which reality is the product of opposing forces of good and evil - is that there has been too little attention and too little breadth of view. Thoughtless little souls may indeed mock the works of Providence, whose beauty and order they can't *or won't* take in. But those who are capable of breadth and balance in their thought, and are also thoughtful in temperament, can never sufficiently admire the divine traces of wisdom and goodness that shine throughout the economy of nature. Still, what truth is there that shines so strongly on the mind that we cannot escape seeing it by turning our thought away from it, wilfully shutting our eyes? So is it any wonder that the general run of men, who are always intent on business or pleasure, and are not accustomed to focussing or opening the eye of their mind, should not have all the conviction and certainty of the existence of God that might be expected in reasonable creatures?

155. We should wonder that there are men so stupid as to neglect such an evident and momentous truth, rather than wondering that they do not believe it, given that they neglect it. And yet it is to be feared that too many intelligent, leisured people who live in Christian countries have sunk into a sort of *atheism*, simply through a slack and dreadful negligence. For it is downright impossible that a soul pierced and enlightened with a thorough sense of the omnipresence, holiness, and justice of that Almighty Spirit, should persist in remorselessly violating his laws. We ought therefore earnestly to meditate and dwell on those important points, so as to become convinced beyond all doubt that *the eyes of the Lord are in every place beholding the evil and the good; that he is with us and keeps us in all places to which we go, and gives us bread to eat, and clothes to wear*; that he is present and conscious to our innermost thoughts; and that we have a most absolute and immediate dependence on him. A clear view of these great truths cannot but fill our heart with awed caution and holy fear, which is the strongest incentive to virtue and the best guard against vice.

156. For, after all, the first place in our studies should be given to the consideration of God and of our duty. The main purpose of my labours has been to promote such a consideration; so I shall regard them as altogether useless and ineffectual if what I have said does not inspire my readers with a pious sense of the presence of God, and - having shown the falseness or emptiness of those barren speculations that make the chief employment of learned men - make them more disposed to reverence and to embrace the salutary truths of the gospel, the knowledge and practice of which is the highest perfection of human nature.