

An Essay Concerning Human Understanding

Book IV: Knowledge

John Locke

Copyright © 2010–2015 All rights reserved. Jonathan Bennett

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

First launched: July 2004

Last amended: August 2007

Contents

Chapter i: Knowledge in general	196
Chapter ii: The degrees of our knowledge	199
Chapter iii: The extent of human knowledge	203
Chapter iv: The reality of knowledge	216
Chapter v: Truth in general	221

Chapter i: Knowledge in general

1. Since the mind in all its thoughts and reasonings has no immediate object other than its own ideas, which are all it can contemplate, it is evident that our knowledge has to do only with them.

2. Knowledge, then, seems to me to be nothing but the perception of the connection and agreement, or disagreement and incompatibility, of any of our ideas. That is all it is. Where this perception occurs, there is knowledge; and where it doesn't occur, we come short of *knowledge*—whatever we may *fancy*, *guess*, or *believe*. For when we know that *white isn't black*, what do we perceive other than that these two ideas don't agree? When we know with absolute demonstrative certainty that *the three angles of a triangle are equal to two right ones*, what do we do except perceive that •equality to two right angles necessarily agrees to and is inseparable from •the three angles of a triangle?

3. This agreement or disagreement can be better understood through noting that there are four sorts of it:

Identity, or diversity.

Relation.

Co-existence, or necessary connection.

Real existence.

4. The first sort of agreement or disagreement—namely, identity or diversity—enters into the act of the mind when it first has any views or ideas at all. What it does then is to perceive its ideas; and so far as it perceives them it knows each to be what it is, and thus also to perceive their differences from one another—perceiving of each that it is not some other idea. This is so absolutely necessary that without it there could be no knowledge, no reasoning, no

imagination, no distinct thoughts, at all. In this way the mind clearly and infallibly perceives each idea to agree with itself, and to be what it is; and perceives all different ideas to disagree, i.e. perceives the one not to be the other. It does this easily, without taking trouble over it or inferring it from something else; it does it at first view, through its natural ability to perceive and distinguish. And although students of scholastic philosophy have boiled this down to

What is, is, and

It is impossible for the same thing to be and not to be—*general* rules that can be applied in any case where there is occasion to think about this—it is certain that the first exercise of this faculty concerns *particular* ideas. A man infallibly knows, as soon as ever he has them, that the ideas he calls 'white' and 'round' are the very ideas they are, and not others that he calls 'red' or 'square'. And no •maxim or proposition could make him know this more clearly or surely than he already does without the help of any such •general rule. This, then, is the first agreement or disagreement that the mind perceives in its ideas, and always at first sight. If there is ever any doubt about it, will always turn out to concern the names, not the ideas. . . .

5. The second sort of agreement or disagreement that the mind perceives in its ideas can be called *relative*. It is simply perceiving a relation between two ideas, which can be of any kind at all—of substances, modes, or anything else. For since any two ideas must eternally be known *not* to be the same, there would be no room for *positive* knowledge if we couldn't perceive relations •other than non-identity• between our ideas, and find out whether they agree or disagree in various respects of comparison that the mind brings to bear

on them. [For Locke 'comparing x with y' is just *bringing x and y together in a single thought*, not necessarily likening them to one another. We use 'compare' in that way in the expression 'get together to compare notes'.]

6. The third sort of agreement or disagreement that the mind can perceive in our ideas is *co-existence or non-co-existence in the same subject*. This belongs particularly to substances. When we say that *gold is fixed*, our knowledge of this truth amounts to no more than this: fixedness, or a power to remain in fire unconsumed, is an idea [here = 'quality'] that always accompanies and is joined to that particular sort of yellowness, weight, fusibility, malleableness, and solubility in aqua regia that make our complex idea signified by the word 'gold'.

7. The fourth and last sort is an idea's agreement with *actual real existence*. These four sorts of agreement or disagreement include, I think, all the knowledge we have or can have. All we can ever know or say about any idea is one of these:

- that it is or that it isn't the same as some other,
- that it does or that it doesn't always co-exist with some other idea in the same subject,
- that it has this or that relation with some other idea,
- that 'something corresponding to' it has a real existence outside the mind.

Thus 'Blue is not yellow' is of identity; 'Two triangles on equal bases between two parallels are equal' is of relation; 'Iron is magnetizable' is of co-existence; and 'God exists' is of real existence. Though identity and co-existence are themselves relations, they are such special kinds of agreement or disagreement amongst ideas that they deserve to be brought in separately, not under relation in general. Before examining the various degrees of our knowledge, I must first consider the different meanings that the word 'knowledge' can have.

8. The word 'knowledge' is applied to several ways in which the mind can possess truth. 1. There is *actual knowledge*, which is the mind's view of how any two of its *present* ideas agree or disagree, or of how they are related to one another. 2. A man is said to 'know' a proposition if he once had actual knowledge of it and has kept that in his memory so that whenever he again reflects on that proposition he immediately and confidently assents to it again. I think we might call this *habitual knowledge*. We with our finite understandings can think clearly and distinctly of only one thing at a time; so if we had knowledge 'at a given time' only of what we were actually thinking about 'at that time, thus having actual but not habitual knowledge', we would all be very ignorant; and even the person who 'knew most' would know only one truth.

9. Of habitual knowledge there are also what ordinary folk would call two degrees. In one of them, truths are laid up in the memory in such a way that whenever they occur to the mind it 'again' actually perceives the relation between those ideas. This is the degree of habitual knowledge that we have of all those truths of which we have an *intuitive knowledge*, where a view of the ideas immediately reveals their agreement or disagreement one with another.

The other is knowledge of truths of which the mind was once convinced, and retains the memory of the conviction but doesn't retain the demonstration [= 'rigorous, logical, knock-down proof']. A man who remembers certainly that he once took in the demonstration that *the three angles of a triangle are equal to two right angles* is certain that he knows it, because he can't doubt its truth. It may be thought that in a case like this, where a man adheres to a truth after forgetting the demonstration that first led him to know it, he *believes his memory* rather than really *knowing 'the truth*

in question; and I used to think that this way of receiving a truth lies somewhere between opinion and knowledge—a kind of assurance that surpasses mere *belief*, for that relies on the testimony of someone else, ·but not reaching as far as *knowledge*·. But on a closer look I find that it doesn't fall short of perfect certainty, and is in effect true knowledge.

What is apt to mislead us about this case is that in it

the agreement or disagreement of the ideas isn't perceived by an actual view of all the intermediate ideas that in the first instance enabled the agreement or disagreement of the ideas in the proposition to be perceived.

Rather,

it is perceived through *other* intermediate ideas that show the agreement or disagreement of the ideas contained in the proposition whose certainty we remember.

Take for example the proposition that *the three angles of a triangle are equal to two right angles*. Someone who has clearly perceived the demonstration of this truth *knows* it to be true even when that demonstration is gone out of his mind so that at present it isn't actually in view and he can't possibly recollect it. But he knows it in a different way from how he knew it before. The agreement of the two ideas joined in that proposition is perceived through the intervention of ideas other than those that at first led him to perceive the proposition's truth. He remembers, i.e. he knows (for remembering is just reviving some past knowledge), that he was once certain of the truth of the proposition that the three angles of a triangle are equal to two right ones. Ideas don't change and so the relations between them don't change either; and his grasp of *that* is now the idea that shows him that if the three angles of a triangle *were once* equal to two right ones, they *will always* be so. And so he comes to be

certain that what was once true about this is always true; ideas that once agreed will always agree; and consequently what he *once* knew to be true he will *always* know to be true as long as he can remember that he once knew it.

That is how *particular* demonstrations in mathematics provide *general* knowledge. So if the perception that the same ideas eternally have the same intrinsic natures and the same relations ·to one another· were *not* a sufficient ground for knowledge, there could be no knowledge of general propositions in mathematics; for no mathematical demonstration would be other than particular, and when a man had demonstrated a proposition about one triangle, his knowledge wouldn't reach beyond that particular diagram. If he wanted to know it to be true of another similar triangle, he would have to make a diagram of that and go through the demonstration again. No-one could ever come to know any general propositions in that way. Nobody would deny that Mr. Newton ·now· knows to be true any proposition that he now reads in his book, even though he doesn't ·now· have openly before his mind the admirable chain of intermediate ideas through which he first discovered it to be true. The discovery, perception, and setting out of that wonderful connection of ideas is more than most people are capable of; so we may well think that a memory able to *retain* such a sequence of particulars is beyond the reach of human faculties. But obviously the author himself knows the proposition to be true, remembering that he once saw the connection of those ideas, just as certainly as he knows that a certain man wounded another, remembering that he saw him run him through with a sword. Still, memory isn't always as clear as actual perception, and in all men it decays somewhat as time passes; and this is one factor that makes demonstrative knowledge less perfect than intuitive, as we shall see in the following chapter.

Chapter ii: The degrees of our knowledge

1. All our knowledge consists in the mind's view of its own ideas, this being the brightest light and greatest certainty that we—with our faculties and our ways of knowing—are capable of. So it may be worthwhile to consider a little the degrees of its evidence—that is, consider the factors that make items of knowledge *more* or *less* evident. The differences in how clear—i.e. how evident—our knowledge is seem to me to come from differences in *how* the mind perceives the agreement or disagreement of ideas. Sometimes our mind perceives the agreement or disagreement of two ideas *immediately*—by themselves, without the intervention of any other ideas. I think we may call this *intuitive knowledge*, for in it the mind isn't trying to prove or explore anything, but simply perceives the truth as the eye perceives light, just by being directed towards it. Thus the mind perceives—by bare intuition, without the intervention of any other idea—that white is not black, that a circle is not a triangle, that three are more than two and equal to one plus two. This kind of knowledge is the clearest and most certain that human frailty is capable of. Knowledge of this kind is irresistible: like bright sunshine it forces one to perceive it immediately, as soon as the mind looks that way; and it leaves no room for hesitation, doubt, or further enquiry because the mind is *filled* with the clear light of it. All the certainty and evidentness of all our knowledge depends on this intuition. The certainty it brings is so great that no-one can imagine—and so no-one could ask for—a greater. A man cannot conceive himself capable of a greater certainty than to know that a given idea in his mind is such as he perceives it to be; and that two ideas between which he perceives a difference *are* different and not precisely the same. Anyone who demands greater

certainty than this doesn't know what he is asking for; all he does is to show that he would like to be a sceptic but isn't able to be so. Certainty depends wholly on this *intuition*; in the next degree of knowledge, which I call 'demonstrative', we attain knowledge and certainty only through intuition of all the connections of the intermediate ideas.

2. The next degree of knowledge occurs when the mind perceives the agreement or disagreement of any ideas, but *not immediately*. The mind doesn't always see the agreement or disagreement between two ideas, even when it is discoverable; and in such a case it remains in ignorance, achieving at most a probable conjecture. The reason why the mind can't always perceive, straight off, the agreement or disagreement of two ideas is that it can't put the ideas together in such a way as to show their agreement or disagreement. In this case the mind has to discover the agreement or disagreement that it is searching for by bringing in one or more intervening ideas; and this is what we call *reasoning*. For example, the mind wants to know whether *the three angles of a triangle* agree or disagree in size with *two right angles*; and it can't answer this by an immediate view in which the two items are compared, because the three angles of a triangle can't be brought before the mind at one time and compared with any other one or two angles. So the mind has no immediate or intuitive knowledge of this. In this case the mind has to find some other angles to which the three angles of a triangle are equal, and to which two right angles are also equal, in this way coming to know the proposition it was enquiring about.

3. The intervening ideas that serve to show the agreement of any two others are called 'proofs'; and when this procedure

shows *plainly and clearly* the agreement or disagreement, it is called 'demonstration'. Mental agility in finding these intermediate ideas and applying them correctly is, I suppose, what is called 'sagacity'.

4. Although this knowledge by intervening proofs is certain, it isn't quite as clearly and brightly evident as intuitive knowledge, and we don't assent to it quite so readily. In demonstration the mind does come to perceive the agreement or disagreement of the ideas it is thinking about, but for this it has to focus and pay attention. To achieve this knowledge the mind needs more than one passing view of the ideas; a steady application and pursuit are required; and a series of steps must be taken before the mind can in this way arrive at certainty and come to perceive the agreement or inconsistency between the two ideas.

5. Although in demonstrative knowledge all doubt is removed when by the intervention of the intermediate ideas the agreement or disagreement is perceived, *before* the demonstration there was a doubt. In that respect it differs from intuitive knowledge. If a mind has enough faculty of perception to be able to *have* distinct ideas, it can't be in doubt about them, any more than someone with functioning eyes can be in doubt whether this ink and this paper have the same colour. If there is sight in the eyes, the mind will perceive the words printed on this paper as different from the colour of the paper; and similarly if a mind has the faculty of distinct perception, it will perceive *at first glance and without hesitation* the agreement or disagreement of those ideas that produce intuitive knowledge. . . .

6. The perception produced by demonstration is also very clear, but it often falls a long way short of that evident shine and complete confidence that always accompany intuitive knowledge. It can be compared with a face reflected along

a sequence of mirrors: each successive reflection brings a lessening of the perfect clearness and distinctness of the first in the sequence, and if we go far enough we shall find that the reflection is quite dim, and isn't at first sight so knowable, especially to weak eyes. That is how it is with knowledge supported by a long proof.

7. When reason achieves demonstrative knowledge, there is intuitive knowledge every step of the way concerning the agreement or disagreement of each successive pair of intermediate ideas. Without that, we would need a proof of each intermediate step, which would create an infinite regress. Once the mind has had this intuitive certainty, it needs only to *remember it* to make visible and certain the agreement or disagreement of the two ideas in question. For a complete demonstration, the mind must *perceive* the immediate agreement of each pair of ideas in the sequence (starting with one of the ideas in the demonstrated the proposition and ending with the other) and *carry with it* a memory of the entire procedure, with no part being left out. In long deductions this is hard to do, which is why demonstrative knowledge is more imperfect than intuitive knowledge, and why men often welcome a falsehood as something they have demonstrated.

8. I suppose it was the need for this intuitive knowledge at each step in demonstrative reasoning that gave rise to the mistaken axiom that all reasoning is *ex praecognitis et praeconcessis* [= 'from things already known and agreed to']. I shall show how much of a mistake that is when I come to consider *maxims* (vii), and show that people are wrong in supposing them to be the foundations of all our knowledge and reasoning.

9. It has been generally taken for granted that only mathematics is capable of demonstrative certainty, but *I don't*

agree; and here is why. It is not the privilege of the ideas of number, extension, and shape alone to have intuitively perceivable agreements and disagreements; and although demonstration has been thought to have little to do with anything else—so that mathematicians are almost the only ones who even *try* to demonstrate anything—that may be due to our failure to work hard and methodically on demonstrations in topics outside mathematics, rather than to a lack of evidentness in those topics. For whenever we have ideas whose agreement or disagreement the mind can perceive immediately, the mind is capable of intuitive knowledge; and whenever it can intuitively perceive the agreement or disagreement that ideas have with intermediate ideas, the mind is capable of demonstration, which isn't limited to ideas of extension, shape, number, and their modes.

10. The reason why it has been generally looked for only in mathematics is, I suppose, not only the general usefulness of those sciences, but also the fact that when we compare the equality or inequality of the modes of *numbers* every little difference is very clear and perceivable. It isn't so with *extension*, but even here demonstrative geometry is possible, because the mind has found out ways to examine and show demonstratively the exact equality of two angles, or lengths, or figures. Also, both of these—numbers and figures—can be recorded by visible and lasting marks through which the ideas under consideration are perfectly determined; which they seldom are when marked only by names and words.

11. But with other simple ideas, whose modes and differences are made and counted by degrees and not quantity—for example, in contrasts like 'x is much redder than y' rather than like 'x has 2.37 times the volume of y'—we don't have such finely accurate ways of determining their differences or their exact equality. Those other simple ideas

are appearances of sensations produced in us by the size, shape, number, and motion of corpuscles each of which is too small to be perceptible on its own; so their different degrees must also depend on variations in some or of all those causes; and since we can't observe the variations in particles of matter each of which is too tiny to be perceived, we can't have any exact measures of the different degrees of these simple ideas. [The section continues with an invented story about the causes of colour sensations, with special emphasis on whiteness. After making his point with this, Locke comments on one aspect of it:] I don't say that the nature of light consists in very small round globules. . . .for I am not now offering a physical account of light or colours. But I can't conceive—and if *you* can, please show me how—of any way for bodies outside us to affect our senses other than through the immediate contact of the sensible bodies themselves (as in tasting and feeling) or the impact of some insensible particles coming from them (as in seeing, hearing, and smelling).

[In sections **12–13** Locke develops his point that •we can make fine discriminations amongst primary qualities, and •they are the causes of our ideas of secondary qualities, but that •this doesn't help us to discriminate finely among the latter because we don't know in detail what their causes are—what shapes or velocities of particles etc. He concludes:] Where the difference is so great as to produce in the mind clearly distinct ideas, whose differences can be perfectly retained, there these ideas of colours (e.g. blue and red) are as capable of demonstration as ideas of number and extension. What I have here said of whiteness and colours, I think, holds true of all secondary qualities and their modes.

14. Intuition and demonstration are our two degrees of knowledge; whatever falls short of these, however confidently

accepted, is merely faith or opinion, not knowledge. This holds at least for all *general* truths. But there is another perception of the mind, concerning the *particular* existence of finite beings outside us, which does not reach the whole way to either of the foregoing degrees of certainty, yet is called 'knowledge'. It does indeed go beyond mere probability. There can be nothing more certain than that the idea we receive from an external object is in our minds; this is intuitive knowledge. But is there anything more than just that idea in our minds? Can we certainly infer from that idea the existence of something outside us corresponding to it? Some men think this is a real question, because people sometimes have such ideas in their minds at times when no such thing exists, no such object affects their senses. But I think that we are provided with a degree of evidentness that puts us past doubting. For I ask you, are you not irresistibly conscious to yourself of a different perception when you look at the sun by day from what you have when you think about it at night? when you actually taste wormwood or smell a rose, and when you only think about that taste or smell? An idea revived in our minds by our own memory differs from one coming into our minds through our senses, the difference being as obvious as that between any two ideas. If anyone says 'A dream can do the same thing, and all these ideas could be produced in us without any external objects', I invite him to dream that I answer him thus:

•It doesn't matter much whether I remove your doubt, because where everything is a dream, reasoning and arguments are of no use, and truth and knowledge are nothing. Also, •I believe you will allow a very obvious difference between dreaming of being in a fire and being actually in it.

If he has made up his mind to appear so sceptical as to maintain that what I call being actually in the fire is nothing

but a dream, and that we cannot certainly know from that experience that any such thing as fire actually exists outside us, I answer:

We certainly find that pleasure or pain follows upon the application to us of certain objects whose existence we perceive (or dream that we perceive!) through our senses; and this certainty is as great as we need for practical purposes, which are the only purposes we ought to have.

[The last clause renders Locke's words: 'and this certainty is as great as our happiness or misery, beyond which we have no concernment to know or to be.'] So I think we may add to the former two sorts of knowledge this third one, *knowledge of the existence of particular external objects* through the perception and consciousness we have of the actual entrance of ideas from them through our senses. That gives us three degrees of knowledge: intuitive, demonstrative, and sensitive. . . .

15. Since our knowledge is based on and directed towards our ideas only, doesn't it follow that it must conform to our ideas, so that where the ideas are clear and distinct, or obscure and confused, our knowledge will be so too? No—that is only half true. Knowledge consists in *the perception of the agreement or disagreement* of two ideas, so its clearness or obscurity consists in the clearness or obscurity of *that perception*, not of *the ideas themselves*. Thus, a man whose ideas of *the angles of a triangle* and of *equality to two right angles* are as clear as any mathematician's, may have only an obscure perception of their agreement, and so have only a very obscure knowledge that they do agree—i.e. that the angles of a triangle are equal to two right angles. But ideas that are confused—whether because of obscurity or for some other reason—can't produce clear or distinct knowledge; because if two ideas are confused, the mind can't perceive

clearly whether they agree. In short: someone who doesn't accompany his words with definite ideas can't use them to

make propositions of whose truth he can be certain.

Chapter iii: The extent of human knowledge

1. Knowledge lies in the perception of the agreement or disagreement of our ideas. From this five things follow. First, our knowledge can't extend further than our ideas do.

2. Secondly, our knowledge can't extend further than our perceptions of the agreement or disagreement of ideas. Such perceptions come by intuition, or the immediate inter-relating of any two ideas, by reason, examining the agreement or disagreement of two ideas by the intervention of some others, or by sensation, perceiving the existence of particular things.

3. Thirdly, we can't have intuitive knowledge involving all our ideas and answering all our questions about them, because we can't perceive all their relations to one another by juxtaposition, that is, by *immediately* relating one to another. Thus having ideas of an obtuse-angled and an acute-angled triangle, both drawn from equal bases and between parallels, I have intuitive knowledge that one of these ideas is not the other, but I can't know in that way whether they are equal or not, because their agreement or disagreement in equality can never be perceived by immediately relating them to one another. Their shapes differ in a manner that prevents us from immediately and exactly comparing their areas; and so we need some intervening qualities to measure them by, and that is demonstration, or knowledge by reasoning.

4. Fourthly, our knowledge by reasoning can't reach to the whole extent of our ideas either, because between two different ideas that we want to examine we can't always find intermediaries that will let us link one with the other, with intuitive knowledge at every link; and when we can't do that, we fall short of knowledge and demonstration.

5. Fifthly, because sensitive knowledge reaches no further than the existence of things actually present to our senses, it is even narrower in extent than either of the other two.

6. All this makes it evident that the extent of our knowledge falls short not only of the reality of things but even of the extent of our own ideas. knowledge is limited to our ideas, and can't be broader or better than they are; and this sets very narrow limits to what we can know—narrow in relation to the whole of what is the case, and even in relation to knowledge that we can reasonably suppose to be possessed by some created understandings, ones that aren't tied down to the dull and narrow information that we get from a few crude modes of perception, such as our senses are. Still, we would be well off if our knowledge did at least extend out to those limits, leaving us with few doubts and questions concerning the ideas that we have; but in fact, as I observed at the start of this section, it comes a long way short of that. Concerning the ideas that we do have there are plenty of

questions that we can't answer and (I believe) that we never shall be able to answer.

No doubt human knowledge, given our present circumstances and constitutions, can be taken further than it has been up to now, if men would work as hard on •improving the means of discovering truth as they now do on •supporting or disguising falsehoods, and on •maintaining systems, interests, and parties to which they have committed themselves. But I don't think it is an insult to human excellence to be sure, as I am, that our knowledge would never reach to all we might want to know concerning the ideas that we have, or be able to surmount all the difficulties and answer all the questions that might arise concerning any of them. We have the ideas of a square, a circle, and equality; and yet perhaps we shall never be able to find a circle equal to a square and certainly know that it is so. We have the ideas of matter and thinking, but possibly we shall never be able to know whether any mere material being thinks; for it is impossible for us, by contemplating our own ideas with no help from revelation, to discover •what kind of thing a human being is. That is, to discover •whether •God has given to a suitably laid out system of matter a power to perceive and think, or rather •has attached to such a system a thinking immaterial substance. It isn't much harder for us to conceive that God can, if he pleases, •add to matter a power of thinking, than to conceive that he should •add to it another substance with a power of thinking; for we don't know what thinking consists in, or to what sorts of substances the almighty has been pleased to give the power to think—a power that no created being can have except through the generous will of the creator. •The choice here is between two accounts of what a human being is. **1** It is a material thing that thinks. **2** It is a material thing linked with a second thing that thinks; but we must take **2** as

also saying that *how* the second substance thinks—what perceptions it has—depends on physical changes in the material thing to which it is linked, as when your visual perceptions are extinguished when you close your eyes. I see no contradiction in supposing that •God, the •first eternal thinking being or omnipotent spirit should, if he pleased, give some degrees of sense, perception, and thought to certain systems of created senseless matter, put together as he thinks fit. (Though, as I think I prove in x.14 etc., it is a contradiction to suppose that matter—which is obviously *in its own nature* devoid of sense and thought—should *be* that •eternal first-thinking being.) How could anyone *know* that this is false?—

1 Some perceptions—e.g. pleasure and pain—could occur in some bodies themselves when they are appropriately affected;

while knowing that this is true?—

2 Some perceptions—e.g. pleasure and pain—could occur in an immaterial substance upon [= 'when triggered by'] the motion of parts of a body.

As far as we can conceive, all bodies can do is to bump into and affect other bodies; and motion, according to the utmost reach of our ideas, can produce nothing but motion. So when we suppose it **2** to produce pleasure or pain, or the idea of a colour or sound, we have to stop employing our reason, go beyond our ideas, and attribute it wholly to the good pleasure of our Maker. •It is beyond question that when I turn my head my visual ideas alter, and so •we must allow that God has brought it about that motion produces effects •that we can't conceive of its being able to produce. Well, then, what reason have we to conclude that he could not •as on supposition **1** •order those effects to be produced in a subject •that we can't conceive to be capable of having them, as well as—•supposition **2**—in a subject that we can't

conceive of as being affectable in any way by the motion of matter?

I don't say this so as to lessen the belief in the soul's immateriality; I am speaking here not of probability but of knowledge; and I am motivated by two beliefs. I think that it is suitable to the modesty of philosophy not to pronounce dogmatically on topics where we lack the evidentness that could produce knowledge. I also think it is useful for us to learn how far our knowledge *does* reach; for our present state, not being one of divinely inspired vision, requires us often to settle for something less than knowledge, and to be content with faith and probability. And it's not surprising that we aren't equipped to arrive at demonstrative certainty in answering the present question about the soul's immateriality.

All the great ends of morality and religion are well enough secured without philosophical proofs of the soul's immateriality, because it is obvious that at the start of the world God made us to exist here—and to continue for many years—as thinking beings equipped with senses, and can and will restore us to that same state of sentience or feeling in another world, making us capable there of feeling the rewards and punishments he has planned for men according to their doings in this life. If that is certain, it isn't so enormously important to settle the question about the immateriality of the soul, one way or the other, as some zealots on each side of the question have tried to make the world believe. On one side, the zealots give too much play to their own thoughts, which are completely immersed in matter, and can't allow for the existence of anything that isn't material. On the other are those who, because they can't find thought within the natural powers of matter, however hard they look for it, are bold enough to conclude that not even God the omnipotent can give perception and thought to a substance

that has the quality of solidity. If you consider how hard it is in our thoughts to reconcile sensation to extended matter, and how hard to reconcile existence to anything that has no extension at all, you will admit that you are very far from knowing for sure what your soul is! This issue seems to me to lie beyond the reach of our knowledge; and anyone who will allow himself to think *freely*, and to look into the dark and intricate part of each hypothesis, will hardly find his reason directing him firmly for or against the soul's materiality. Whether he thinks of the soul as an unextended substance, or as thinking extended matter, he will encounter difficulties that will drive him to the contrary side. This is an unattractive way that some men have of managing their thoughts: finding one hypothesis inconceivable, they throw themselves violently into the arms of the contrary hypothesis, even though it is (to an unbiased understanding) just as unintelligible. This serves not only to show how weak and scanty our knowledge is, but also the insignificant triumph of arguments of that sort. . . . What good does it do someone to avoid the seeming absurdities and to him insurmountable obstacles he meets with in one opinion by taking refuge in the contrary opinion, which is built on something every bit as inexplicable and as far from his comprehension? It is past controversy that *we have in us something that thinks*; our very doubts about *what* it is confirm the certainty of its existing, though we must accept our ignorance of what kind of being it is. It's pointless to set oneself up as a sceptic about this, just as it's unreasonable in most other cases to deny outright the existence of something because we can't comprehend its nature. In fact, *every* substance has in it something that manifestly baffles our understandings, namely, what corresponds to the obscure or supposed idea of substance in general. . . . knowledge, as I said at the start of this section, isn't only limited to the paucity and

imperfections of our ideas, but even comes short of that. Let us now enquire how far it *does* reach. ¶ 7. The affirmations or negations we make concerning our ideas can be grouped into four kinds: •identity, •co-existence, •relation, and •real existence. I shall examine how far our knowledge extends in respect of each of these, •dealing with the first in section 8, the second in 9–17, the third in 18–20, the fourth in 21.

8. First, as to •identity and diversity: in this kind of agreement or disagreement of our ideas, our intuitive knowledge extends as far as our ideas themselves. There can be no idea in the mind that it doesn't instantly, by an intuitive knowledge, perceive to be what it is and to be different from any other.

9. Secondly, as to the agreement or disagreement of our ideas in •co-existence: we don't have much knowledge of this kind, though what we *do* have is the greatest and most important part of our knowledge of substances. ideas of the sorts of substances are merely certain collections of simple ideas united in one subject and so co-existing together—for example, our idea of *flame* is a body that is hot, luminous, and moving upward; of *gold* a body that has such and such a weight, and is yellow, malleable, and fusible. When we want to know anything *more* about these or any other sorts of substances, we are simply asking: what *other* qualities or powers do these substances have (or lack)? Which is just to ask what other simple ideas do (or don't) *co-exist with* the ones that make up that complex idea.

10. Although this is a weighty and considerable *proportion* of our totality of systematic knowledge, the actual *amount* of it that we have is small, almost to vanishing point. That is because very few of the simple ideas of which our complex ideas of substances are composed have in their own nature a

visible necessary connection or inconsistency with any other simple ideas whose co-existence with them we would like to know about.

11. The ideas that our complex ideas of substances are composed of, and that are the focus of most of our knowledge concerning substances, are those of their secondary qualities. I have shown that these all depend on the primary qualities of the substances' minute and imperceptible parts; or if not on them, on something yet more remote from our comprehension. So we can't possibly know which of them have a necessary union or inconsistency with which others: not knowing the root they spring from—not knowing what size, shape and texture of parts give rise to the qualities that make our complex idea of gold—we can't know what other qualities result from (or are incompatible with) that same root and so consequently must always co-exist with that complex idea we have of it (or else are inconsistent with it).

12. Besides our ignorance of the primary qualities of the imperceptible parts of bodies, on which all their secondary qualities depend, there is another and more incurable kind of ignorance that keeps us even further from having certain knowledge about the co-existence of different ideas [here = 'qualities']in the same subject. It comes from there being no discoverable connection between any secondary quality and the primary qualities on which it depends.

13. We can conceive that the size, shape, and motion of one body might cause a change in the size, shape, and motion of another. The parts of one body separate when another body pushes into it, and a motionless body starts moving when another body bumps into it—there seems to be some *connection* here •between intruding and separating, and between bumping and moving•. And if we knew these primary qualities of bodies, we might have reason to hope

we could learn a great deal more of their operations on one another. But our minds can't discover any connection between these primary qualities of bodies and the sensations they produce in us; and so we can never establish certain and undoubted rules of the consequence or co-existence of any secondary qualities, even if we did discover the size, shape, and motion of the invisible parts that immediately produce them. We are so far from knowing what shape, size, or motion of parts produce a yellow colour, a sweet taste, or a sharp sound, that we can't conceive how *any* size, shape, or motion of any particles could possibly produce in us the idea of *any* colour, taste, or sound; there is no conceivable *connection* between the one and the other.

14. So it is useless to try to learn through our ideas (which is the only true way of getting certain and universal knowledge) what other ideas are to be found constantly joined—coexisting—with our complex idea of any substance. We need knowledge of two things before we can certainly know the necessary co-existence of any secondary qualities: **1** substances' real constitutions of minute parts on which their secondary qualities depend, and **2** necessary connections between those and the secondary qualities. We don't have knowledge of **1**, and even if we did, we couldn't have knowledge of **2**. . . . Our knowledge in all these enquiries reaches very little further than our experience. Indeed, a few *primary* qualities have a necessary dependence and visible connection with one another—•shape necessarily presupposes •extension, •moving or being moved through collision presupposes •solidity—and we can by intuition or demonstration discover the co-existence of *these* and a few others. But there aren't many of them; and for the rest we have to rely on our senses to tell us what qualities substances contain. . . . For example, we see the yellow

colour of a piece of gold, and on testing it find its weight, malleableness, fusibility, and fixedness; but because no one of these ideas has any •evident dependence or •necessary connection with the others, we can't know for sure that whatever has any four of these qualities will have the fifth also. This may be highly *probable*; but the highest probability doesn't amount to certainty, and without that there can be no true knowledge. This co-existence can be known only so far as it is perceived; and if it isn't perceived *in general* by the necessary connection of the ideas, our only way of perceiving it is in *particular* subjects through the observation of our senses.

15. As to •incompatibility, or •impossibility of co-existence, we know that any subject may have at one time only one primary quality of each sort: each particular extension, shape, number of parts, and motion excludes all other extensions, shapes, etc. The same certainly holds for the sensible ideas [here = 'qualities'] that are special to each sense: if a subject has one such quality it can't at the same time have another of the same sort; so no one subject can have two smells or two colours at the same time. You may object that an opal has two colours at the same time. Yes, indeed, an opal *can* present different colours at the same time to differently placed eyes; but I would point out that the differently placed eyes are receiving particles of light from *different parts of the opal*. So it isn't the same part of the object, and so not the very same thing, which at the same time appears both yellow and blue. For a single particle of a body can't modify or reflect the rays of light in two ways at the same time, any more than it can have two different shapes and textures at the same time.

16. Then there are the powers of substances to change the sensible qualities of other bodies. Much of our research

into substances is directed towards those powers, and our results constitute a considerable branch of our knowledge. But I suspect that our knowledge about such powers reaches little further than our experience. Because the active and passive powers of bodies, and their ways of operating, are based on a texture and motion of parts that we can't discover, we can seldom perceive their dependence on or inconsistency with any of the ideas that make our complex idea of the given sort of substance, the one that is to us its *essence*. I have argued for this in terms of the *corpuscularian hypothesis*—the theory that all the workings of the material world are to be understood in terms of collisions between tiny portions of matter, tiny corpuscles—because that's the theory that is thought to go furthest in intelligibly explaining those qualities of bodies; and I fear that the human understanding hasn't the power to replace it by one that could give us a fuller and clearer discovery of the necessary connection and co-existence of the powers that are found to be united in various sorts of bodies. . . . I doubt whether the faculties that we have will ever be able to advance much our general knowledge (as distinct from particular experience) of these matters. Experience is what we must depend on in this part—that is, in connection with co-existence of qualities. . . .

17. If we are at a loss regarding the powers and operations of •bodies, it is easy to infer that we are much more in the dark concerning •spirits. The only ideas that we naturally have of these are ones that we draw from ideas of •ourselves by reflecting on the operations of our own souls within us, as far as they can come within our observation. On the strength of my hints in II.xxiii.13 and elsewhere you might like to consider how far down the scale the spirits that inhabit *our* bodies come, amongst the various and possibly innumerable

kinds of nobler beings, and how far short they come of the endowments and perfections of angels and infinite sorts of Spirits above us.

18. As to the third sort of our knowledge—that is, the third of the four listed in i.7 above—namely the agreement or disagreement of ideas in respect of any other relation: this is the largest field of our knowledge, but it is hard to determine how much further it can extend. The advances made in this part of knowledge depend on our skill in finding intermediate ideas that show the relations between ideas whose co-existence is not being considered; and it is hard to know when we are at an end of such discoveries, that is, when reason has all the helps it is capable of for finding proofs or examining the agreement or disagreement of ideas that are remote from one another. Those who are ignorant of algebra can't imagine the wonders of this sort that it can achieve; and it isn't easy to determine what further improvements and helps, bringing progress to other branches of knowledge, the sagacious mind of man may yet discover. I believe that the ideas of *quantity* are not the only ones that admit of demonstration and knowledge; and that other realms of enquiry—perhaps more useful ones—would also afford us certainty, if only vices, passions, and domineering interest didn't oppose or menace such endeavours.

Here are two ideas that are clear in us: •the idea of a supreme being, infinite in power, goodness, and wisdom, who made us and on whom we depend, and •the idea of ourselves, as understanding rational creatures. If we thought hard about these and explored them, I think they would provide foundations for our duty and rules of action, in such a way as to make morality one of the sciences capable of demonstration [= 'rigorous proof']. Within such a morality the measures of right and wrong could, I am sure,

be derived from self-evident propositions by valid inferences as incontestable as those in mathematics, in a way that would satisfy anyone who was willing to bring to moral studies the same attentiveness and lack of bias that he brings to mathematics. The relations between other modes can certainly be perceived, as well as relations concerning number and extension, and I don't see why they shouldn't also be capable of demonstration, if we devised good methods for examining their agreements and disagreements. 'Where there is no property, there is no injustice' is a proposition as certain as any demonstration in Euclid; for the idea of property being *a right to something*, and the idea of injustice is *the invasion or violation of that right*, it is evident that on the strength of these two ideas and the names annexed to them I can as certainly know this proposition to be true as that a triangle has three angles equal to two right ones. Again, 'No government allows absolute liberty': the idea of government is the establishment of society on certain rules or laws that require conformity to them, and the idea of absolute liberty is for anyone to do whatever he pleases; so I am as capable of being certain of the truth of this proposition as of any in the mathematics.

19. What has given the advantage in this respect to the ideas of quantity over those of morality, and made them thought to be more capable of certainty and demonstration, is the following pair of differences.

First, ideas of quantity can be represented by perceptible marks that have a greater and nearer correspondence with them than any words or sounds whatsoever. Diagrams drawn on paper are *copies* of the ideas in the mind, and not liable to the uncertainty that words carry in their meanings. When an angle, circle, or square is drawn in lines, it lies open to the view, and can't be mistaken. It remains unchangeable,

and can be considered and examined at leisure, the proof looked over again, and every part of it scrutinised more than once without any danger of change in the ideas. This can't happen with moral ideas. We have no perceptible marks that *resemble* them, but only words to express them by. And though the words, once they have been written, stay the same, the ideas they stand for may change in the same man, and they are usually different in different persons.

Secondly, moral ideas are commonly more complex than those of the figures ordinarily considered in mathematics, and from this two inconveniences follow. •The first is that their names are of more uncertain meaning, because the precise collection of simple ideas they stand for isn't so easily agreed on; so that the sign that is always used for them in communication (and often in thinking too) fails to carry steadily with it the same idea. This leads to the sort of disorder, confusion, and error that would ensue if a man purporting to prove something about a heptagon left out one of its angles in making his diagram, or gave the figure one angle more than its name ordinarily imports and than he intended it to have when he first thought of his proof. This often happens, and is hardly avoidable, with very complex moral ideas, where people will use a single word with varying meanings, including at one time a simple idea (an angle, so to speak) which they omit later on. •Secondly, the complexity of moral ideas creates another inconvenience, namely that the mind can't easily retain those precise combinations of simple ideas as exactly and perfectly as is needed for the examination of the relations and correspondences, agreements or disagreements, of several of them with one another—especially when this has to be judged by long deductions and the intervention of other complex ideas to show the agreement or disagreement of two remote ones.

It is evident that mathematicians are greatly helped to avoid this by their use of diagrams which keeps the shapes they are studying fixed; without that help, their memory would often have great difficulty to retaining their arguments so exactly while their mind went over the parts of them step by step. Help is also needed in arithmetic. When someone does a long calculation—whether in addition, multiplication, or division—every part is only a progression of his mind, taking a view of its own ideas and considering their agreement or disagreement; and the bottom line of the calculation is just the result of the whole, made up of those clearly perceived particular relations. But if one didn't record the various parts of the calculation by marks whose precise meanings are known, marks that last and remain in view when the memory would have let them go, it would be almost impossible to carry so many different ideas in the mind without confusing or dropping out some parts of the calculation, thereby making all our reasonings about it useless. These marks give the mind no help in perceiving the agreement of any two or more numbers, their equalities or proportions. The mind has *that* only through intuition of its own ideas of the numbers themselves. But the numerical marks are helps to the memory, to record and retain the various ideas that enter into the proof, enabling the man to know how far his intuitive knowledge has taken him, so that he may without confusion go on to what is yet unknown, and eventually have in one view before him the result of all his perceptions and reasonings.

20. One of the disadvantages in moral ideas—one that has led people to think that moral truths can't be rigorously proved—can to a large extent be remedied by *definitions*, setting down the collection of simple ideas that each term is to stand for and then using the term steadily and con-

stantly for that precise collection. And we can't predict what methods algebra or something of that kind may some day suggest, to remove the other disadvantages. I am confident that if men would search for moral truths by the same methods as they search for mathematical truths, and with the same freedom from bias, they would find that moral truths •have a stronger connection one with another, •are more apt to follow necessarily from our clear and distinct ideas, and •come nearer to being perfectly demonstrable than is commonly thought. [Locke then expresses pessimism about the chances that this will happen much, because there is a shortage of intellectual honesty. He equates truth with beauty and falsehood with ugliness, defending this through a heavy-handed joke; then continues:] While the parties of men cram their beliefs down the throats of everyone they can get into their power, without allowing them to examine their truth or falsehood, and won't let truth have a fair run for its money in the world or allow men the freedom to search for it, what improvements of this kind can be expected? What hope have we for greater light to shine in the moral sciences? In most places in the world, the part of mankind that lives in subjection ·of the kind I have been describing· would live in Egyptian darkness ·of the mind· along with the ·as-it-were·-Egyptian bondage ·of their bodies·, if it weren't for the candle of the Lord that *he* has set up in men's minds, a light that the breath or power of man cannot wholly extinguish.

21. As to the fourth sort of knowledge that we have, namely knowledge of the real actual existence of things: we have •an intuitive knowledge of our own existence, and •a demonstrative knowledge of the existence of a God, but of the existence of anything else we have only •sensitive knowledge, which is limited to objects that are present to our senses.

22. Our knowledge being so narrow (as I have shown), we may get more light on the present state of our minds if we look a little into the *dark side*, and survey our ignorance. This is infinitely larger than our knowledge, so it is all too easy for us to stray into areas where our ignorance prevails. It might help to quieten disputes and increase useful knowledge if we learned how far we have clear and distinct ideas, and on that basis confine our thoughts to things that are within the reach of our understandings. That would be better than launching out into that abyss of darkness where we have no eyes to see or faculties to grasp anything, out of a presumption that nothing is beyond our comprehension. To be convinced that such a presumption is foolish, we needn't go far. If you know *anything*, you know first and foremost that you don't have to look hard for instances of your ignorance. The lowliest and most obvious things that come our way have *dark sides* that the keenest sight can't penetrate. The sharpest and broadest intellects of thinking men find themselves puzzled and at a loss concerning *every particle of matter*! We'll be less surprised by this when we consider the causes of our ignorance. On the basis of what I have said, I think there are three causes:

First, lack of ideas.

Secondly, lack of a discoverable connection between the ideas we have.

Thirdly, failure to trace and examine our ideas.

23. First, there are many things that we are ignorant of because of a lack of ideas. My discussion of this will run to the end of section 27, with the present section on ideas that we *can't* have, followed by four on ideas that we *could but don't* have. All our simple ideas are confined (as I have shown) to those we receive from bodies through sensation, and from the operations of our own minds through reflection.

These few narrow inlets are disproportionate to the whole vast extent of what there is, as you will easily be brought to agree unless you are so foolish as to think that *your* span—what *you* can experience and understand—is the measure of all things. It isn't for us to know what other simple ideas creatures in other parts of the universe may have, through senses and faculties that are more numerous or more perfect than ours, or just different. To think there are none such because we have no conception of them is like a blind man's arguing that there is no such thing as sight and colours because he has no ideas of them. Ignorance and darkness doesn't block or limit the knowledge that *others* have, any more than the blindness of a mole is an argument against the sharp-sightedness of an eagle. If you think about the infinite power, wisdom, and goodness of the creator of all things, you will find reason to think that he didn't expend it all on such an inconsiderable, lowly, and impotent a creature as you will find man to be—man, who in all probability is one of the lowest of all thinking beings. We simply don't know what faculties other species of creatures have that enable them to penetrate into the nature and innermost constitutions of things, or what ideas they may get from things that are far different from ours. But we do know, having found out for sure, that we need more views of things than those we actually have if we are to make more complete discoveries of their natures. And we may be convinced that the ideas we can acquire through our faculties are very disproportionate to things themselves, when we consider that a positive, clear, distinct idea of *substance* itself, which is the foundation of all the rest, is concealed from us. Because our lack of such ideas isn't just a *cause* of our ignorance but a *part* of it, we can't describe the missing ideas. But we can confidently say this much: the intellectual and sensible worlds—that is, the realm of

thought and the realm of bodies—are perfectly alike in one thing, namely that the part that we see of each of them is tiny compared with what we don't see, and the whole of what our thoughts or our senses tell us about each of them is, compared with the rest, a point—almost nothing!

24. Another great cause of ignorance is the lack of ideas that we *are* capable of having. As •the lack of ideas that our faculties can't give us shuts us off from the views of things that it is reasonable to think are had by other, more perfect beings, so •the lack of ideas that I am now discussing keeps us in ignorance of things we think of as knowable by us. Size, shape, and motion we do have ideas of; but we don't know what is the particular size, shape, and motion of most of the bodies in the universe, which makes us ignorant of the various powers, mechanisms, and ways of operation through which the effects that we see daily are produced. These are hidden from us in some things by their being too remote, and in others by their being too small. When we consider the vast distance of the known and visible parts of the world, and the reasons we have to think that what lies within our ken is only a small part of the universe, we shall then discover a huge abyss of ignorance. A first glimpse of the great masses of matter that constitute the stupendous frame of the physical universe launches us into speculations in which our thoughts get lost:

What, in detail, are those great bodies made of?

How far do they extend?

How do they move?

What starts them moving? What keeps them moving?

What effects do they have on one another?

If we narrow our speculations, confining our thoughts to this little province—I mean this system of our sun and the planets that visibly move around it—what sorts of plants,

animals, and thinking corporeal beings, infinitely different from those on our little spot of earth, may there probably be on other planets? But while we are confined to this earth we can know nothing about these, even of their outward shapes and parts, because there is no natural means, either by sensation or reflection, for certain ideas of them to enter our minds. They are out of the reach of those inlets of all our knowledge.

25. If by far the greatest part of the various kinds of bodies in the universe escape our notice by being too far away, there are others that are equally concealed from us by their smallness. These imperceptible corpuscles are the active parts of matter, and are the great instruments of nature on which depend not only all of bodies' secondary qualities but also most of their natural operations. So our lack of precise distinct ideas of their primary qualities keeps us incurably ignorant of what we want to know about them. If we could discover the shape, size, texture, and motion of the minute constituent parts of any two bodies, we would know some of their operations on one another without putting them to the test, as we now know the properties of a square or a triangle. If we knew the mechanical structure of the particles of rhubarb, hemlock, opium, and a man, as a watch-maker knows the structure of a watch, we would be able to tell before-hand that rhubarb will purge, hemlock kill, and opium make a man sleep; as well as a watch-maker can tell that a little piece of paper laid on the balance will keep the watch from going. . . . The dissolving of silver in aqua fortis and gold in aqua regia, and not vice versa, would might then be no more difficult to know than it is for a locksmith to understand why this lock can be opened by *this* key and not by *that* one. But while we lack senses acute enough to discover the minute particles of bodies and to give us ideas

of their fine structure, we must be content to be ignorant of their properties and ways of operation, being assured only of what we can learn from a few experiments. And what we can learn for sure in that way is limited indeed. We conduct some experiments and get results, but we can't be certain that they will have the same results on future occasions. This blocks us from having certain knowledge of universal truths about natural bodies; and about these our reason carries us very little beyond particular matters of fact.

26. This inclines me to think that however far we get, through hard work, with practical and experimental science about physical things, we shan't be able to get any knowledge of them that is *scientific* [= 'rigorously organized, and united by high-level theories'.] That is because we lack perfect and adequate ideas of the very bodies that are nearest to us and most under our control. We have only very imperfect and incomplete ideas of the bodies that we have sorted into classes under names, and think ourselves best acquainted with. Perhaps we have •*distinct* ideas of the various sorts of bodies that we can examine through our senses, but I suspect that we don't have •*adequate* ideas of any of them. See II.xxix and xxxi. And though •the former of these serve us for everyday use and discourse, while we lack •the latter we can't have scientific knowledge, and we'll never be able to discover general, instructive, unquestionable truths concerning bodies. We mustn't lay claim to certainty and demonstration in these matters. By the colour, shape, taste, smell, and other sensible qualities we have as clear and distinct ideas of sage and hemlock as we have of a circle and a triangle. But having no ideas of the particular primary qualities of the minute parts of either of these plants, nor of other bodies that we would apply them to, we can't tell what effects they will produce; and when we see those effects, we

can't even guess—let alone *know*—how they are produced. Thus having no ideas of the particular mechanical structures of the minute parts of bodies that we can see and touch, we are ignorant of their constitutions, powers, and operations. Of more remote bodies we are even more ignorant, not even knowing their outward shapes or their large-scale structural features.

27. This shows us at a glance how disproportionate our knowledge is to the whole extent of *material* things. Now think about the infinitely many *spirits* that may and probably do exist; they are still further from our knowledge, and we can't even form distinct ideas of their various *kinds*. From this we learn that the cause of ignorance now under discussion—namely, lack of ideas—conceals from us in an impenetrable obscurity almost the whole world of thinking things, which is certainly greater and more beautiful than the world of material things. We have a few superficial ideas of spirit that we get from ourselves through reflection, and then use as a basis for putting together the best idea we can manage of •God•, the father of all spirits, the eternal independent author of them and us and all things; but apart from those few ideas we have no certain information even as to the *existence* of other spirits, except by revelation. Angels of all sorts are naturally beyond our discovery; and all those thinking beings of which there are likely to be more kinds than there are of bodily substances are things of which our natural faculties give us no certain account at all. From considering the words and actions of other people, every man has a reason to be satisfied that there are minds and thinking beings in other men as well as himself. And any thinking person must know, from his knowledge of his own mind, that there is a God (•see x•). But who can come to know, through his own search and ability, that there are

different levels of spiritual beings between us and the great God? Much less do we have distinct ideas of the various natures, conditions, states, powers, and constitutions in respect of which they are like and unlike one another, and like and unlike us. Concerning their different species and properties, therefore, we remain in absolute ignorance.

28. Of the three causes of ignorance listed at the end of section 22, we now come to the second, to which I shall devote two sections. Another cause of ignorance, no less important than the first, is the lack of a discoverable connection between ideas that we do have. Whenever that is lacking, we are utterly incapable of universal and certain knowledge, and are, as with ignorance from lack of ideas, left only to observation and experiment; and we don't have to be told how narrow and confined *that* is, and how far from general knowledge. I shall give a few instances of this cause of our ignorance, and then drop it. It is evident that the size, shape, and motion of various bodies in our environment produce various sensations in us, as of colours, sounds, tastes, smells, pleasure and pain, etc. These mechanical qualities of bodies have no affinity with the ideas they produce in us; there is no *connection*—that is, none we could know about just by thinking about it—between any impact of any sort of body on our sense organs and any perception of a colour or smell that we find in our minds. So all we can distinctly know about such operations is what we can learn from our experience, and we can reason about them only as effects produced by the decree of an infinitely wise agent—a decree which utterly surpasses our comprehension. That is, we can't reason about them in terms of necessary connections that we could grasp by thinking them through; for us they have to be matters of *brute empirically discovered fact*, set up by God for good reasons, no doubt, but not reasons that

we know or understand. So much for the bodily causes of our ideas of secondary qualities. On the other side, the operation of our minds on our bodies is equally far from being something we could know about just by thinking. *The nature of our ideas* can't explain how a thought could produce a motion, any more than it could explain how a body could produce a thought. If experience didn't convince us that thought *does* produce motion, we could never learn this just by thinking about thought and motion. These and their like do have a constant and regular connection in the ordinary course of things, but that connection can't be found in the ideas themselves, which appear to have no necessary dependence one on another; so we have to attribute their connection to the free choice of God, who has created them and made them operate as they do, in a way that our weak understandings can't conceive.

29. With some of our ideas there are certain relations and connections that are so visibly included in *the nature of the ideas themselves* that we can't conceive of any power that could separate the ideas from those relations and connections. It is only with these ideas that we are capable of certain and universal knowledge. Thus the idea of a *triangle* necessarily carries with it *equality of its angles to two right ones*. We cannot conceive of this relation—this connection of these two ideas—to be changeable, or to depend on any arbitrary power that chose to make it thus but could have made it otherwise. But the coherence and continuity of the parts of matter, the production of sensation of colours and sounds etc. by impulse and motion, indeed the basic rules governing the passing on of motion through impact—in none of this can we discover a natural connection with any ideas that we have; so we have to ascribe them to the arbitrary will and good pleasure of God, the wise architect. (Presumably

I needn't mention the resurrection of the dead, the future state of the earth, and such other things, which everyone agrees depend wholly on the decisions of a ·divine· free agent.) When our observations show a certain regularity in events, we can infer that the events unroll according to a law that has been set for them, but it's a law that we don't know. So: though causes work steadily, and effects constantly flow from them, we can't find *in our ideas* what connects them and makes some depend on others; so our only knowledge of them has to come from *experience*. From all this it is easy to see what a darkness we are involved in, how little we can know about the things that exist. So we don't insult our knowledge when we modestly think that we are so far from being •able to comprehend the whole nature of the universe that we aren't •capable of a philosophical [= 'scientific'] knowledge of the bodies in our environment and in ourselves. . . . In these matters we can go no further than particular experience informs us regarding matters of fact, and by analogy guess what effects similar bodies are likely to turn out to produce. But as to a perfect science of natural bodies (not to mention spiritual beings) we are, I think, so far from being capable of any such thing that it's a waste of time to pursue it.

30. ·Now we come to the third of the causes of ignorance listed at the end of section 22·. Where we have adequate ideas, and where there is a certain and discoverable connection between them, we are nevertheless often ignorant because we don't trace ideas that we have or could have, and because we don't search out the intermediate ideas that could show us what relation of agreement or disagreement they have one with another. That is how many people are ignorant of mathematical truths—not through any imperfection in their faculties, or uncertainty in the subject-matter, but because they haven't diligently acquired, examined, and suitably compared the relevant ideas. The principal cause of

this, I think, has been the poor use of words. Men can't truly seek or certainly discover the agreement or disagreement of ideas while their thoughts flutter about, or are bogged down in sounds that have doubtful and uncertain meanings. Mathematicians, by abstracting their thoughts from *names* and accustoming themselves to set before their minds *the ideas themselves* that they want to consider, have avoided much of that perplexity, muddle, and confusion that has so much hindered men's progress in other branches of knowledge. For as long as they persist in using words with undetermined and uncertain meanings, they can't sort their own opinions into true and false, certain and ·merely· probable, consistent and inconsistent. [The section continues with rhetorical exclamations against common intellectual failures generated by imperfect uses of language.]

31. Under the heading 'the extent of human knowledge' I have been discussing how far our knowledge extends across the various sorts of existing things. There is a different kind of 'extent' that it can also have, concerning how universal it is. Insofar as it is to be universal, it must follow the nature of our ideas ·rather than things existing outside us·. If we perceive the agreement or disagreement of ideas that are *abstract*, our knowledge is *universal*. For what is known of such general ideas will be true of every particular thing in whom that essence—i.e. that abstract idea—is to be found; and what is once known of such ideas will be perpetually and for ever true. For general knowledge, therefore, we must search only in our minds—we can get it only by examining our own ideas. Truths pertaining to •essences of things—that is, to abstract ideas—are eternal, and are to be discovered only by contemplating those essences; just as the •existence of things is to be known only from experience. I shall have more to say about this in the chapters where I shall speak of general and real knowledge—·vi and iv respectively·.

Chapter iv: The reality of knowledge

1. I imagine that by now you'll be apt to think that I have been building a castle in the air, and will want to offer me a challenge that runs to the end of this section. What is the *point* of all this fuss? Knowledge, you say, is only the perception of the agreement or disagreement of our own ideas. But who knows what those ideas may be? Is there anything so extravagant as the imaginations of men's brains? Where is the head that has no chimeras in it? Or if there is a sober and a wise man, what difference will there be, by your rules, between his knowledge and that of the most extravagant fancy in the world? They both have their ideas, and perceive their agreements and disagreements with one another. If these two men differ, the advantage will be on the side of the man with a hot imagination: he has more ideas, and livelier ones, than the other, and so by your rules he will be the more knowing of the two! If it is true that all knowledge lies only in the perception of the agreement or disagreement of our own ideas, the visions of a fanatic and the reasonings of a sober man will be equally certain. It doesn't matter how *things* are; as long as a man observes the agreements in his own imaginings, and talks accordingly, it is all truth, all certainty. Such castles in the air will be strongholds of truth, as secure as the demonstrations of Euclid. That *a harpy is not a centaur* is by these standards as certain an item of knowledge, and as much a truth, as that *a square is not a circle*. But what use is all this fine knowledge of men's own *imaginings* to someone enquiring into the reality of *things*? It doesn't matter what men's fancies are; only the knowledge of things should be prized. What gives value to our reasonings, and makes one man's knowledge preferable to another's, is its concerning things

as they really are, not dreams and fancies.

2. To this I answer that if our knowledge of our ideas were to terminate in them, and to reach no further when something further is intended, our most serious thoughts would indeed be of little more use than the dreams of a crazy brain. But I hope to make it evident that this route to certainty, through the knowledge of our own ideas, goes a little further than bare imagination; and I believe it will appear that all the certainty that we have of general truths lies in nothing else.

3. Obviously the mind knows things not immediately but only through the intervention of its ideas of them. So our knowledge is real only to the extent that our ideas conform to the reality of things. But what shall be the criterion for this? How shall the mind, which perceives nothing but its own ideas, know that they agree with things themselves? This seems like a hard thing to discover; but I think there are two sorts of ideas that we can be sure *do* agree with things.

4. The first are simple ideas. Since the mind (as I have shown) can't make these by itself, they must necessarily result from things operating on the mind in a natural way, and producing in it those perceptions that the wisdom and will of our maker ordains them to be adapted to. From this it follows that simple ideas aren't fictions of our imaginations, but the natural and regular productions of things outside us, really operating on us; and so they carry with them all the conformity that is intended, and all that our state requires. They represent things to us under those appearances that they are fitted to produce in us; and that lets us distinguish the sorts of particular substances, to discern the states they are in, and so to handle them in ways appropriate to

our needs. Thus the idea of whiteness in the mind exactly corresponds to the power in a body to produce it there, and that gives it all the real conformity it can have, and all it ought to have, with things outside us. This conformity between our simple ideas and the existence of things is sufficient for real knowledge.

5. Secondly, all our complex ideas except those of substances are archetypes of the mind's own making, not intended to be the copies of anything or to have originated from anything; so they can't lack any conformity that is needed for real knowledge. Something that isn't designed to represent anything but itself can't ever represent wrongly, or lead us into error about something by being unlike it; and all our complex ideas are like that, except those of substances. [The remainder of the section continues with this theme, repeating things already said in II.xxxii.13–14.]

6. I expect it will be easily granted that our knowledge of mathematical truths is not only *certain* but *real*—not the mere empty vision of meaningless chimeras of the brain. And yet if we think about it we shall find that it is only about our own ideas. The mathematician considers the properties of a rectangle or circle only as they are in idea [= 'as ideas', or = 'as they are represented by ideas'] in his own mind. For he may never in his life have found a precise circle or rectangle. Yet the knowledge he has of the properties of a circle or of any other mathematical figure are nevertheless true and certain, *even of real existing things*; because the •real things that such propositions refer to are •things that really agree to the archetypes in his mind. Is it true of *his idea of a triangle* that its three angles are equal to two right ones? ·If so, then· it is true also of *a triangle*, wherever it really exists. An existing figure that doesn't exactly conform to that idea of a triangle in his mind is irrelevant to that proposition. And

so he is certain that all his knowledge about such ideas is real knowledge: because he is referring to things only so far as they agree with those ideas of his, he is sure that what he knows concerning •those figures when they have a merely 'ideal' existence in his mind will also hold true of •things that have real existence in the world of matter. . . .

7. It follows from this that moral knowledge is as capable of real certainty as mathematics. For certainty is just the perception of the agreement or disagreement of our ideas; and demonstrating something is just perceiving such agreement through the intervention of other intermediate ideas; so our moral ideas, which resemble mathematical ones in being archetypes themselves and therefore being adequate and complete, resemble them also in having agreements and disagreements that yield real knowledge.

8. To attain knowledge and certainty we have to have •determined ideas [= 'ideas that are distinct and settled']; and, to make our knowledge real we need to have •ideas that match their archetypes. Don't be surprised that I place the certainty of our knowledge in the consideration of our ideas, with so little care and regard (apparently) for the real existence of things. The thoughts and disputes of those who claim to make it their business to enquire after truth and certainty are mainly directed at general propositions and notions in which existence is not at all concerned. The discourses of the mathematicians about the squaring of a circle, conic sections, or any other part of mathematics, don't concern the existence of any of those figures; their demonstrations, which depend on their ideas, are the same whether or not there is any square or circle existing in the world. In the same manner the truth and certainty of moral discourses abstracts from the lives of men, and from the existence in the world of the virtues they discuss. . . . If it is true in

speculation, i.e. in idea, that murder deserves death, it will also be true in reality of any actual action that conforms to the idea of murder. . . .

9. You may object: ‘If moral knowledge is placed in the contemplation of our own moral ideas, and if those ideas (like all modes) are of our own making, what strange notions will there be of justice and temperance? What confusion of virtues and vices if everyone can make what ideas of them he pleases?’ I reply that there will be no confusion or disorder in the things themselves, or in the reasonings about them, if different people have different ideas of justice, temperance, or the like; any more than in mathematics the proofs would be spoiled, or the properties and relations of the figures changed, if someone made a ‘triangle’ with four corners, or a ‘trapezium’ with four right angles. What such a man would be doing—to put it in plain English—is *changing the names* of the figures, calling by one name a figure that mathematicians ordinarily call by another. Let a man make the idea of a figure with three angles of which one is a right angle, and call it anything he pleases—the properties of that idea and the proofs about it will be the same as if he had called it ‘right-angled triangle’. I admit that changing the name, because it is an impropriety of speech, will at first disturb someone who doesn’t know what idea the name stands for; but as soon as the figure is drawn the consequences and demonstration are plain and clear. The same holds for moral knowledge. [Locke gives an example. He also remarks that misusing words in moral discourses is apt to cause ‘more disorder’ than it would in mathematics, because in the former we don’t have diagrams to help us out. He continues:] But despite all this, labelling any of those moral ideas in a manner contrary to the usual meanings of the words of the language in question doesn’t prevent us

from having certain and demonstrative knowledge of their various agreements and disagreements. . . .

10. Where God or some other law-maker has defined a moral name, he has thereby created the essence of the species to which that name applies, and in such a case it is *not safe* to apply or use the word in any other way. In other cases it is *merely an improper use of language* to give a word a meaning other than that of the common usage of the country. And when this happens, it doesn’t disturb the certainty of the knowledge that we can still have by contemplating and inter-relating ideas, even misnamed ones.

11. After two kinds of idea that we may be sure agree with things, we come to: complex ideas of a third sort which, because they relate to archetypes outside us, may differ from their archetypes, in which case our knowledge about them falls short of being real. Such are our ideas of *substances*: they consist of collections of simple ideas supposedly taken from the works of nature, but they may vary from reality by containing more or different ideas than are to be found united in the things themselves. That is how they can and often do fail to conform exactly to things themselves.

12. For reality of knowledge concerning modes, all we need (I repeat) is to put together ideas that aren’t inconsistent with one another, even if they have never before existed in that combination. The ideas of *sacrilege* and *perjury* etc. were as real and true ideas before any such acts occurred as they are now. But our ideas of substances are supposed to copy archetypes outside us, so they must be taken from something that exists or has existed. They mustn’t consist of ideas put together at the pleasure of our thoughts without being based on any real pattern, even if we can see no inconsistency in such a combination. Here is why. We don’t know what real constitution of substances it is on which our

simple ideas depend, and which is the real cause for some of them to be united and others excluded; so there are very few collections of qualities that we can be sure are, or are not, inconsistent in nature, any further than experience and empirical observation reach. So the reality of our knowledge about substances is based on our having complex ideas of them that are *true*, i.e. made up of such simple ones as have been discovered to co-exist in nature. Such ideas, even when they aren't very exact copies, are still the basis for such real knowledge of substances as we have. I have shown that we don't have much of it; still, as far as it goes it is real knowledge. Whatever ideas we have, the agreement we find them to have with others will still be knowledge. If the ideas are abstract it is general knowledge. . . . Whatever simple ideas have been found to co-exist in any substance we can confidently join together again, and so make abstract ideas of substances. For whatever once had a union in nature may be united again.

13. We would think of things with greater freedom and less confusion than perhaps we do, if we didn't let *words* confine our thoughts and abstract ideas, as though there couldn't be any sorts of things other than the ones that have already been named. Here is an example of such confinement, and of release from it. It might be thought a bold paradox, if not a very dangerous falsehood, if I should say that some *changelings* who have lived forty years together without any appearance of reason are something between a *man* and a *beast*. [In Locke's time 'changeling' was a label for anyone whose congenital deficits include a level of intelligence too low for speech to be learned.] In saying this I am opposing a prejudice that is based purely on the false supposition that 'man' and 'beast' stand for distinct species that have been set out by real essences in such a way that no other species can come between them.

The idea of *the shape, motion, and life of a man without reason* is as much a distinct idea, and makes as much a distinct sort of things from man and beast, as the idea of *the shape of an ass with reason* would be different from either that of man or beast, and be a species of an animal distinct from both. To see this, we need to abstract from those names and from the supposition of specific essences made by nature wherein all things with the same name exactly and equally partake, and stop thinking that there is a certain number of these essences in which all things have been formed, as though poured into moulds.

14. You will now want to ask: 'If changelings may be supposed to be something between man and beast, what are they?' I answer, *changelings*; which is as good a word to signify something different from the meaning of 'man' or 'beast' as those two names are to have meanings different one from the other. [Locke goes on to say that this ought to be the end of the matter, but that his chosen example gets people's hackles up for religious reasons, so he will discuss it some more. The way we classify the changeling, he says in section **15**, will be thought by some to have implications for the changeling's chances of eternal life; but this is wrong. If it is based on the idea that the changeling is entitled to immortality because it/he has a rational soul, as shown by its/his human shape, Locke has a sharp reply.] To conclude that there is a rational soul in a changeling because he has the outside of a rational creature, though his actions throughout his life carry far fewer marks of reason than can be found in many a beast, is no more reasonable that to conclude that a human corpse, which gives no more appearance or action of life than does a statue, nevertheless has a living soul in it because of its shape.

16. 'But the changeling is born of rational parents, and must therefore have a rational soul.' What logic are you following here? It isn't one that is generally accepted, for if people accepted it they wouldn't be so bold, as everywhere they are, as to destroy ill-formed and mis-shaped productions. 'Yes, but the ones they destroy are monsters.' Let them be so; then what will your drivelling, unintelligent, ineducable changeling be? Shall a defect in the body make a monster; while a defect in the mind does not (even though the mind is the more noble, and in common parlance the more essential, part)? Shall the lack of a nose or a neck make a monster and put the creature out of the rank of *men*, when the lack of reason and understanding does not? [The section continues with renewed criticisms of the view that bodily shape indicates whether a creature has a rational soul. Locke raises slippery-slope difficulties, which he sums up in this general comment:] I would gladly know what are those precise bodily features which according to this hypothesis are, and those which are not, capable of having a rational soul joined to them. What sort of outside is the certain sign that there is, or that there isn't, such an inhabitant within? For until that is established we talk at random of 'man'. [The section concludes with a reminder of Locke's main interest

in all this, namely to show the troubles that come from 'the common notion of species and essences'.]

17. I have mentioned this here because I think we need to be extremely careful not to be imposed on by words, or by 'species' in our ordinary notions of them. For I am inclined to think that *there* lies one great obstacle to clear and distinct knowledge, especially about substances, and from there have arisen many of the difficulties about truth and certainty. If we regularly separated our thoughts and reasonings from *words* we might remedy much of this inconvenience within our own thoughts; but our discourse with others would still be disturbed if we retained the opinion that species and their essences were anything but our abstract ideas (such as they are) with names annexed to them.

18. Wherever we perceive the agreement or disagreement of any of our ideas, there is certain knowledge. Wherever we are sure those ideas agree with the reality of things, there is certain real knowledge. I think I have shown *what certainty, real certainty, consists in*, by showing the marks of agreement between our ideas and the reality of things. Whether or not it has mattered to *anyone else*, showing what real certainty consists in was one of the things that *I* thought there was a great need for, a need that I wanted to meet.

Chapter v: Truth in general

1. *What is truth?* was an enquiry many ages ago [by Pontius Pilate—John 18:38]; and truth is what all mankind search for, or say they do; so it must be worth our while to examine carefully what it consists in, and to learn enough about its nature to see how the mind distinguishes truth from falsehood.

2. ‘Truth’ then seems to me, in the proper sense of the word, to signify nothing but *the joining or separating of signs according to whether the things signified agree or disagree one with another*. The joining or separating of signs that I am talking about here is what by another name we call ‘proposition’. So that truth properly belongs only to propositions. There are two sorts of these, namely mental and verbal, corresponding to the two sorts of signs that we commonly use, namely ideas and words.

3. To form a clear notion of truth, we have to consider *truth of thought* and *truth of words* separately from one another. But it’s hard to do this because in treating of mental propositions we inevitably use words, so that when we give an example of a mental proposition it immediately stops being barely mental and becomes verbal. A mental proposition is nothing but a bare consideration of the ideas as they are in our minds, stripped of names; so it loses the nature of a purely mental proposition as soon as it is put into words.

4. What makes it even harder to deal with mental and verbal propositions separately is that most (if not all) men use words instead of ideas—even in their private thinking and reasonings, at least when they are thinking about something that involves complex ideas. This is a pointer to the imperfection and uncertainty of our complex ideas,

and it can, if we carefully make good use of it, serve as a mark to show us what things we have clear and perfect established ideas of, and what not. For if we carefully observe how our mind goes about thinking and reasoning, I think we shall find that when we make propositions *within our own thoughts* about white or black, sweet or bitter, a triangle or a circle, we often frame in our minds the ideas themselves, without reflecting on their names. But when we want to make propositions about more complex ideas—for example man, vitriol, fortitude, glory—we usually put the name in place of the idea. That is because •the ideas these names stand for are mostly imperfect, confused, and undetermined, leading us to reflect instead on •the names, because they are more clear, certain, and distinct, and come more readily to mind than the pure ideas do. And so we employ these words instead of the ideas themselves, even when we want to meditate and reason *within ourselves*, silently making *mental* propositions. As I have already noted, what leads us to do this when thinking about •substances is the imperfection of our ideas: we make the name stand for the real essence, of which we have no idea at all. In the case of •modes, it—i.e. substituting names for ideas—is brought about by the great *number* of simple ideas that make them up. Where many simple ideas are compounded into one complex one, the name comes to mind much more easily than the complex idea itself does. The idea •requires time and attention to be recollected and exactly represented to the mind, even for •people have taken trouble to do this on previous occasions; and it •can’t be done at all by those who, though they have at their command most of the common words of their language, •may never once in all their lives have troubled themselves to

consider what precise ideas most of those words stand for. . . . Those who talk on and on about 'religion' and 'conscience', 'church' and 'faith', 'power' and 'right', 'obstructions' and 'humours', 'melancholy' and 'choler', might have little left in their thoughts and meditations if we could persuade them to think only of •the things themselves, and set aside •the words with which they so often confused others—and often enough confused themselves too!

5. But to return to the consideration of truth: we must, I say, observe two sorts of propositions that we can make. First, *mental* propositions, in which the ideas in our understandings are put together (or separated) by the mind that perceives or judges concerning their agreement (or disagreement)—all without the use of words. Secondly, *verbal* propositions: these are •made up of• words, the signs of our ideas, which are put together (or separated) in affirmative (or negative) sentences. By affirming or denying in this way, these audible signs are as it were put together or separated from one another. So that *proposition* consists in joining or separating signs, and *truth* consists in putting them together or separating them according as the things they stand for agree or disagree.

6. Your experience will satisfy you that your mind, by perceiving or supposing the agreement or disagreement of any of its ideas, does silently put them into a kind of affirmative or negative proposition. I have tried to describe this process using the terms 'putting together' and 'separating'; but this action of the mind, which is so familiar to every thinking and reasoning man, is easier to •conceive by reflecting on what happens in us when we affirm or deny than it is to •explain in words. When a man has in his head the idea of two lines, specifically the side and diagonal of a square of which the diagonal is an inch long, he may have the idea also

of the division of that diagonal line into a certain number of equal parts—into five, ten, a hundred, a thousand, or any other number—and may have the idea of that one-inch line's being divisible (or of its not being divisible) into equal parts such that a certain number of them will be equal to the line making the side of the square. Now whenever he perceives, believes, or supposes •such a kind of divisibility to agree or disagree with •his idea of that line, he (so to speak) joins or separates •the idea of that line and •the idea of that kind of divisibility; and in so doing he makes a mental proposition, which is true or false depending on whether or not such a kind of divisibility really does agree with that line. When ideas are put together or separated in the mind according as they or the things they stand for do agree or not, that is *mental truth*, as I call it. But *truth of words* is something more, namely affirming or denying words one of another, according as the ideas they stand for agree or disagree. This again is of two kinds: either •purely verbal and trifling, which I shall speak of in chapter viii; or •real and instructive, which is the object of the real knowledge that I have already discussed.

7. Here again the doubt that arose about knowledge will be apt to re-arise about truth. The following objection will be raised (•it runs to the end of the section•): If truth is nothing but the joining and separating of words in propositions, according as the ideas they stand for agree or disagree in men's minds, the knowledge of truth is not so valuable as it is taken to be, and not worth the time and trouble men employ in the search of it; for by this account it amounts merely to the conformity of words to the chimeras of men's brains. Everyone knows what odd notions many men's heads are filled with, and what strange ideas all men's brains are capable of! But if we stop at that, all we know

by this rule is the truth of the visionary world of our own imaginations—truth that may as well concern •harpies and centaurs as men and horses. For •those and their like may be ideas in our heads, and agree or disagree there, and so have propositions made about them that are as true as ones involving ideas of real beings. And it will be every bit as true to say *All centaurs are animals* as that *All men are animals*, and the certainty of one proposition will be as great as that of the other. For in both propositions the words are put together according to the agreement of the ideas in our minds; and the agreement of the idea of *animal* with that of *centaur* is as clear and visible to the mind as its agreement with the idea of *man*; and so these two propositions are equally true, equally certain. But what use is *that* sort of truth to us?

8. What I have said in chapter iv to divide *knowledge* into real and imaginary might suffice here, in answer to this doubt, to divide *truth* into real truth and chimerical or (if you please) merely nominal truth; for the two distinctions rest on the same foundation. But it may be appropriate here again to bear in mind that though our words signify nothing but our •ideas, they are designed by us to signify •things; so the truth they contain, when put into propositions, will be only verbal when they stand for ideas in the mind that don't agree with the reality of things. And therefore *truth* as well as *knowledge* may be divided into verbal and real; where merely verbal truth is what we have that when terms are joined according to the agreement or disagreement of the ideas they stand for, without regard for whether our ideas •represent things that• really do or could have an existence in nature. We have real truth when these signs are joined according as our ideas agree, and •things corresponding to• our ideas *can* exist in nature—which with substances we can't know except by knowing that such *have* existed.

9. Truth is marking down in words the agreement or disagreement of ideas *as* it is. Falsehood is the marking down in words the agreement or disagreement of ideas *otherwise than* it is. And so far as these ideas, thus marked by sounds, agree to their archetypes, to that extent the truth is real. The knowledge of this truth consists in •knowing what ideas the words stand for and •perceiving the agreement or disagreement of those ideas according as it is marked by those words.

10. Because words are looked on as the great channels of truth and knowledge, and because in conveying and receiving truth (and often in reasoning about it) we use words and propositions, I shall look further into the certainty of real truths contained in propositions—asking what it consists in and where it can be found—and I'll try to show what sort of universal propositions we can be certain of the real truth or falsehood of. I shall begin with general propositions, these being the ones that most employ our thoughts. The mind mainly pursues general truths, because they are the ones that enlarge our knowledge the most, and through their comprehensiveness satisfy us of many particulars at once, enlarge our view, and shorten our way to knowledge. •They will be my topic in chapter vi•.

11. Besides truth taken in the strict sense I have discussed, there are •two• other sorts of 'truths'. *Moral truth* is speaking of things according to the persuasion of our own minds, though the proposition we utter doesn't agree with the reality of things. *Metaphysical truth* is nothing but the real existence of things, in conformity with the ideas to which we have annexed their names. This may seem to consist in the *very being of* things •rather than in *truth about* them•; but on closer inspection it turns out to include a silent *proposition* in which the mind joins that particular thing to a certain

idea—the idea the mind had previously assigned to the thing along with a name for it. These two further points about

truth have either been discussed earlier or are not much to our present purpose, which is why I merely mention them in passing.