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An Essay Concerning Human Understanding

By John Locke

Book II -- Ideas

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Chapter i: Ideas in general, and their origin

1. Everyone is conscious to himself that he thinks; and when thinking is going on, the mind is engaged with *ideas* that it contains. So it's past doubt that men have in their minds various ideas, such as are those expressed by the words 'whiteness', 'hardness', 'sweetness', 'thinking', 'motion', 'man', 'elephant', 'army', 'drunkenness', and others. Our first question, then, is *How does he acquire these ideas?* It is widely believed that men have ideas stamped upon their minds in their very first being. My opposition to this in Book I will probably be received more favourably when I have shown where the understanding *can* get all its ideas from - an account that I contend will be supported by everyone's own observation and experience.

2. Let us then suppose the mind to have no ideas in it, to be like *white paper* with nothing written on it. How then does it come to be written on? From where does it get that vast store which the busy and boundless imagination of man has painted on it - all the materials of reason and knowledge? To this I answer, in one word, from *experience*. Our understandings derive all the materials of thinking from *observations* that we make of •external objects that can be perceived through the senses, and of •the internal operations of our minds, which we perceive by looking in at ourselves. These two are the fountains of knowledge, from which arise all the ideas we have or can naturally have.

3. First, our senses when applied to particular perceptible objects convey into the mind many distinct perceptions of things, according to the different ways in which the objects affect them. That's how we come by the ideas we have of yellow, white, heat, cold, soft, hard, bitter, sweet, and all so on - the so-called 'sensible qualities'. When I say the senses convey 'these ideas' into the mind, 'I don't mean this strictly and literally, because I don't mean to say that an idea actually *travels across* from the perceived object to the person's mind. Rather I mean that through the senses external objects convey into the mind *something that produces there* those perceptions [= 'ideas']. This great source of most of the ideas we have I call SENSATION.

4. Secondly, the other fountain from which experience provides ideas to the understanding is the perception of the operations of our own mind within us. This yields ideas that couldn't be had from external things - ones such as 'the ideas of' perception, thinking, doubting, believing, reasoning, knowing, willing, and all the different things that our minds do. Being conscious of these actions of the mind and observing them in ourselves, our understandings get from them ideas that are as distinct as the ones we get from bodies affecting our senses. Every man has this source of ideas wholly within himself; and though it is not *sense*, because it has nothing to do with external objects, it is still very like sense, and might properly enough be called 'internal sense'. But along with calling the other 'sensation', I call this REFLECTION, because the ideas it gives us can be had only by a mind reflecting on its own operations within itself. By 'reflection' then, in the rest of this work, I mean the notice that the mind takes of *what* it is doing, and *how*. (I am here using 'operations' in a broad sense, to cover not only the *actions* of the mind on its ideas but also *passive states* that can arise from them, such as is the satisfaction or uneasiness arising from any thought.) So that's my thesis: all our ideas take their beginnings from those two sources - external material things as objects of sensation, and the operations of our own minds as objects of reflection.

5. When we have taken a full survey of •the ideas we get from these sources, and of their various modes, combinations, and relations, we shall find they are •our whole stock of ideas; and

that we have nothing in our minds that didn't come in one of these two ways. [Locke then challenges the reader to 'search into his understanding' and see whether he has any ideas other than those of sensation and reflection.]

6. If you look carefully at the state of a new-born child, you'll find little reason to think that he is well stocked with ideas that are to be the matter of his future knowledge. He gets ideas gradually; and though the ideas of obvious and familiar qualities imprint themselves before the memory begins to keep a record of when or how, ideas of unusual qualities are different. Some of *them* come so late that most people can remember when they first had them. And if we had reason to, we *could* arrange for child to be brought up in such a way as to have very few ideas, even ordinary ones, until he had grown to manhood. In actuality children are born into the world surrounded by bodies that perpetually affect them so as to imprint on their minds a variety of ideas: light and colours are busy everywhere, as long as the eyes are open; sounds and some tangible qualities engage the senses appropriate to them, and force an entrance into the mind. But I think you'll agree that if a child were kept in a place where he never saw any colour but black and white till he was a man, he would have no ideas of scarlet or green - any more than a person has an idea of the taste of oysters or of pineapples if he has never actually tasted either.

7. How many simple ideas a person has depends ·for ideas of sensation· on what variety there is among the external objects that he perceives, and ·for ideas of reflection· on how much he reflects on the workings of his own mind. ·The focussed intensity of the reflection is relevant, because·: although someone who contemplates the operations of his mind can't help having plain and clear ideas of them, he won't have clear and distinct ideas of all the operations of his mind and everything that happens in them *unless he turns his thoughts that way and considers them attentively*; any more than he can have ideas of all the details of a landscape painting, or of the parts and motions of a clock, if he doesn't look at it and focus his attention on all the parts of it. The picture or clock may be so placed that he encounters them every day, but he'll have only a confused idea of all the parts they are made up of, until he applies himself with attention to consider each part separately.

8. That's why most children don't get ideas of the operations of their own minds until quite late, and why some people *never* acquire any very clear or perfect ideas of most of their mental operations. Their mental operations are there all the time, like floating visions; but until the understanding turns inward upon itself, reflects on them, and makes them the objects of its own thoughts, they won't make deep enough impressions to leave in the person's mind clear, distinct, lasting ideas. Children enter the world surrounded by new things that constantly attract their senses, beckoning to a mind that is eager to notice new things and apt to be delighted with the variety of changing objects. So the first years are usually spent in looking outwards ·at the surroundings·; and so people grow up constantly attending to outward sensation, reflecting very little on what happens within them till they come to be of riper years - and some not even then.

9. When does a man first have any ideas? That is the same as asking: when does a man begin to perceive? For having ideas and perception are the same thing. I know that some philosophers hold that the soul [= 'mind'; no religious implications] *always* thinks, and that it has the actual perception of ideas in itself constantly as long as it exists. For them, •actual thinking is as inseparable from •the soul as •actual extension is from •the body, which implies that the question 'When do his ideas begin?' is equivalent to 'When does his soul begin?'. For on their view the soul and its ideas must begin to exist both at the same time. as do body and its extension [= 'its taking up space'].

10. How does •the soul's beginning to exist relate to •the first rudiments of organization - or to the beginnings of life - in the body? Before it, or at the same time, or later? I leave that question to be disputed by those who have thought harder about it than I have. But I *do* have a view about how •the soul's beginning to exist relates to •its first having ideas, or at least to the view that the two must occur together because a soul can't exist except when it has ideas. I confess that I have one of those dull souls that doesn't perceive itself always to contemplate ideas; and I don't think it's any more necessary for the soul always to think than for the body always to move. In my view, *the perception of ideas* is to *the soul* as *motion* is to *the body* - not something that •is essential to it, but something that •it sometimes does. So even if thinking is an activity that is uniquely appropriate to the soul, that doesn't require us to suppose that the soul is always thinking, always in action. Perhaps that is a gift possessed by God, 'who never slumbers nor sleeps' [Psalm 121:3], but it isn't appropriate for any finite being, or at least not to the soul of man. We know by experience that we sometimes think; and from this we validly infer that there is in us something - some substance - that is able to think; but whether that substance perpetually thinks or not is a question we must answer on the basis of what experience informs us. To say that experience is irrelevant because actual thinking is *essential* to the soul and thus conceptually inseparable from it, is to assume the very thing that is in question. Such a claim needs to be supported by arguments, unless the claim is a self-evident proposition - and I don't think anyone will contend that *The soul always thinks* is self-evident. [The section continues with mockery of people who purport to prove something by assuming it among the premises of their argument; and with a reply to a critic who, misunderstanding something in the first edition of the *Essay*, had accused Locke of thinking that when you are asleep your soul doesn't exist.]

11. I grant that the soul in a waking man is never without thought, because that's what it *is* to be awake. But I suspect that in sleeping without dreaming, the whole man is asleep - his mind as well as his body - so that in that state no thought is occurring. If the soul thinks in a sleeping man without being conscious of it, I ask whether during such thinking •the soul has any pleasure or pain, or any ability to be happy or miserable? I am sure •the man does not, any more than •the bed he lies on has pleasure or pain. For to be happy or miserable without being conscious of it seems to me utterly inconsistent and impossible. If you say that •the soul might be in any of those states while the body is sleeping, and •the unsleeping man have no consciousness of them, I reply: In that case Socrates asleep and Socrates awake are not the same person, but two persons. [Locke elaborates this a little, in the remainder of section **11** and on through section **12**, relying on a view of his about personal identity that he'll develop more clearly and at greater length in xxvii.]

13. Thus, I think, every drowsy nod shakes the doctrine of those who teach that the soul is always thinking! Anyway, those who do at some time sleep without dreaming can never be convinced that their thoughts are for four hours busy without their knowing of it; and if they are taken in the very act, waked in the middle of those sleeping thoughts, they can give no account of it.

14. It will perhaps be said that the soul thinks even in the soundest sleep but the memory doesn't retain those thoughts. This is utterly implausible. . . . Who can imagine that most men, for several hours every day of their lives, think of something of which they could remember nothing at all, even if they were asked in the middle of these thoughts? Most men, I think, pass a great part of their sleep without dreaming. I knew a man who was bred a scholar, and had a pretty good memory, who told me that he had never dreamed in his life till he had a fever at the age of twenty-five. Everyone will have acquaintances who pass most of their nights without dreaming.

15. To think often, and never to retain it so much as one moment, is a very useless sort of thinking. The soul in such a state of thinking would be little better than a looking-glass which constantly receives a variety of images but retains none of them; they disappear and vanish without leaving a trace; the looking-glass is never the better for such images, nor the soul for such thoughts. We might also ask *why* it should be that all sleeping thoughts are forgotten, given that many waking ones are remembered. Here is a possible answer to that:

In a waking man the materials of the body are used in thinking, and the memory of thoughts is retained by the impressions that are made on the brain and the traces left there after such thinking; but in the thinking of the soul that isn't perceived in a sleeping man, the soul thinks apart, making no use of the organs of the body and so leaving no impressions on the body and consequently no memory of such thoughts.

. . . . I answer that whatever ideas the mind can *receive and contemplate* without the help of the body it can also - it is reasonable to think - *retain* without the help of the body too. If not, then the soul gets little advantage by thinking. If •it has no memory of its own thoughts; if •it can't lay them up for its own use, and be able to recall them at need; if •it can't reflect on what is past, and make use of its former experiences, reasonings, and contemplations - then •what does it think *for*? Those who make the soul a thinking thing in *this* way don't make it much nobler than do those (whom they condemn) who claim it to be nothing but very finely ground matter. Words written on dust that the first breath of wind wipes out, or impressions made on a heap of atoms or bodily fluids, are every bit as useful and ennobling as the thoughts of a soul that perish in thinking - thoughts that once out of sight are gone for ever and leave no memory of themselves behind them. Nature never makes excellent things for trivial uses or for no use; and it's hardly to be conceived that our infinitely wise creator should bring it about that something as admirable as the power of thinking - the power •of ours• that comes nearest to the excellence of his own incomprehensible being - is so idly and uselessly employed, at least a quarter of the time, that it thinks constantly without remembering any of those thoughts, without doing any good to itself or others or being any way useful to any other part of the creation. If you think about it, I doubt if you'll find that the motion of dull and senseless *matter* is ever, anywhere in the universe, made so little use of and so wholly thrown away.

[In section 16 Locke writes of thoughts that we do sometimes have in our sleep and remember after waking, pointing out that they are mostly 'extravagant and incoherent'. He says that his present opponents, faced with this evidence, will have to say that the soul thinks better when employing the body than when thinking 'apart' from the body. He evidently thinks that this is an intolerable conclusion.]

[In sections 17-22 Locke continues to urge the empirical implausibility of the thesis that the soul always thinks, and the unreasonable dogmatism of those who insist on it as necessarily true whatever experience may say. Much of the content of these sections repeats things said earlier in the chapter. The discussion gradually moves over to Locke's thesis that the soul thinks only when it has ideas to think with, and to his view about how ideas are acquired. And so the chapter circles back to where it was in section 9.]

23. When does a man begin to have any ideas? I think the true answer is: when he first has some sensation. Since there appear not to be any ideas in the mind before the senses have conveyed any in, I think that ideas in the understanding arise at the same time as sensation. Sensation is •an impression or motion made in some part of the body that produces •some perception in the

understanding. It is about these impressions made on our senses by outward objects that the mind seems first to employ itself in such operations as we call perception, remembering, consideration, reasoning, etc.

24. In time the mind comes to reflect on *its own dealing with* the ideas acquired from *sensation*, and thereby stores up a new set of ideas that I call ideas of *reflection*. . . . The first capacity of human intellect is that the mind is fitted to receive the impressions made on it, either through the senses by outward objects, or by its own operations when it reflects on them. This is the first step a man makes towards the discovery of anything, and the basis on which to build all the notions he will ever have naturally in this world. All those sublime thoughts that tower above the clouds and reach as high as heaven itself take off from here. . . .

25. In the getting of ideas the understanding is merely passive. It has no control over whether it will have these beginnings - these materials, so to speak - of knowledge. For many of the objects of our senses shove their particular ideas into our minds, whether we want them or not; and the operations of our minds won't let us be without at least *some* obscure notions of them. No man can be wholly ignorant of what he does when he thinks. The understanding can no more refuse to have these simple ideas when they are offered to it, or alter them once they have been imprinted, or blot them out and make new ones itself, than a mirror can refuse, alter, or obliterate the images or ideas that the objects placed in front of it produce on its surface. . . .

Chapter ii: Simple ideas

1. To get a better grasp of what our knowledge is, how it comes about, and how far it reaches, we must carefully attend to one fact about our ideas, namely that some of them are *simple*, and some *complex*.

The *qualities* that affect our senses are intimately united and blended in the things themselves, but it is obvious that the *ideas* they produce in the mind enter (via the senses) simple and unmixed. A single sense will often take in different ideas from one object at one time - as when a man *sees* motion and colour together, or the hand *feels* softness and warmth in a single piece of wax - and yet the simple ideas that are thus brought together in a single mind are as perfectly distinct as those that come in by different senses. The •coldness and hardness a man feels in a piece of ice are as distinct ideas in the mind as the •smell and whiteness of a lily, or as the •taste of sugar and smell of a rose. And nothing can be plainer to a man than the clear and distinct perception he has of those simple ideas, each of which contains nothing but one uniform appearance or conception in the mind, and is not distinguishable into different ideas.

2. These simple ideas, which are the materials of all our knowledge, are suggested and supplied to the mind only by sensation and reflection. Once the understanding has been stocked with these simple ideas, it is able to repeat, compare, and unite them, to an almost infinite variety, and so can make new complex ideas as it will. But no-one, however quick and clever, can invent one new simple idea that wasn't taken in by one of those two ways. Nor can any force of the understanding destroy those that are there. Man's power over this little world of his own understanding is much like his power over the great world of visible things, where he can only compound and divide the materials that he finds available to him, and can't do anything towards making the least particle of new matter, or destroying one atom of what already exists. . . .

3. God could have made a creature with organs different from ours, and more ways than our five senses to give the understanding input from bodily things. But I don't think any of us could imagine any qualities through which bodies could come to our attention other than sounds, tastes, smells, and visible and tangible qualities. Had mankind been made with only four senses, the qualities that are now the objects of the fifth sense would have been as far from our notice, imagination, and conception as now any belonging to a sixth, seventh, or eighth sense can possibly be. (Actually, I think that perhaps we do have six senses; but I have been following the usual count, which is five; it makes no difference to my present line of thought.) Are there creatures in some other parts of this vast and stupendous universe who have more senses than we do? Perhaps. If you consider the immensity of this structure, and the great variety that is to be found in our little part of it, you may be inclined to think that there are somewhere different intelligent beings whose capacities are as unknown to you as are the senses or understanding of a man to a worm shut up in one drawer of a desk. Such variety and excellence would be suitable to the wisdom and power of our maker.

Chapter iii: Ideas of one sense

1. We shall get a better grasp of the ideas we receive from sensation if we classify them according to their different ways of getting into our minds.

First, some come into our minds by one sense only.

Secondly, others enter the mind by more senses than one.

Thirdly, yet others are had from reflection only.

Fourthly, some are suggested to the mind by all the ways of sensation and reflection.

We shall consider them separately, under these headings.

First, some ideas are admitted through only one sense, which is specially adapted to receive them. Thus •light and colours come in only by the eyes, all kinds of •noises, sounds, and tones only by the ears; the various •tastes and •smells by the nose and palate. If these organs, or the nerves that are the channels along which they communicate with the brain, become disordered so that they don't perform their functions, the associated ideas have no door through which to enter, no other way to bring themselves into view and be perceived by the understanding.

The main ones belonging to touch are •heat and cold, and •solidity. Most of the others have to do with perceptible •texture, like smooth and rough, or with more or less firm •hanging together of the parts, like hard and soft, tough and brittle.

2. I needn't enumerate all the simple ideas belonging to each sense. Indeed, I can't do so because there are many more of them than we have names for. Kinds of smell are at least as numerous as kinds of bodies in the world, and few of them have names. We use 'sweet' and 'stinking' for them, but this amounts to little more than calling them pleasing or displeasing; the smell of a rose differs greatly from that of a violet, though both are sweet. [Similarly - Locke goes on to say - with tastes, and with colours and sounds.] In my account of simple ideas, therefore, I shall pick out only a few - mainly ones that are most important for my over-all enquiry. I shall also discuss some that tend to be overlooked, though they are very frequently ingredients in our complex ideas. I think this is the case with *solidity*, which is my next topic.

Chapter iv: Solidity

1. We receive the idea of solidity by the sense of touch. It arises from our experience of a body's resisting the entrance of any other body into the place it occupies. There is no idea that we receive more constantly from sensation than solidity. Whether moving or at rest, we always feel something under us that supports us and stops us from sinking further downwards; and we have daily experience of how, when holding a body between our two hands, the body absolutely prevents the hands from touching one another. My name for the property whereby one body blocks two others from touching is *solidity*. (Mathematicians use that term in a different sense, but mine is close enough to ordinary usage to be acceptable. If you prefer to call the property *impenetrability*, go ahead; but I prefer *solidity* for two reasons. •It is close to common speech. •The term 'impenetrability' seems to refer not to the property itself but to a consequence of it, and a negative one at that; whereas 'solidity' means something positive and points to the property itself, not a mere consequence of it.) *Solidity* seems to be the idea that is most intimately connected with and essential to *body*. Our senses notice it only in masses of matter that are big enough to cause a sensation in us; but once the mind has acquired this idea from such large bodies, it traces the idea further and considers it (as well as shape) in the minutest particle of matter that can exist. Not only can we not imagine matter without solidity, but we cannot imagine solidity to exist anywhere except in matter.

2. Solidity is the idea [here = 'quality'] of body whereby we conceive body to *fill space*. The idea of filling of space is this: we imagine a space taken up by a solid substance which we conceive it to *possess* in such a way that all other solid substances are excluded from it. . . .

3. This resistance whereby a body keeps other bodies out of its space is so great that no force, however great, can overcome it. All the bodies in the world, pressing a drop of water on all sides, can never overcome its resistance until it is moved out of their way. This distinguishes our idea of solidity both from (a) pure space, which is not capable of resistance or motion, and from (b) the ordinary idea of hardness. I shall deal with (a) now, and with (b) in the next section. My target in (a) is Descartes, who held that whatever is extended is material, so that vacuum - understood as something extended and immaterial - is conceptually impossible. I shall discuss this at length in xiii, merely sketching my case against it here. We can conceive two bodies at a distance as being able to meet and touch one another, without touching or displacing any other solid thing. This, I think, gives us a clear idea of space without solidity. Can we not have the idea of one single body moving without any other immediately taking its place? Clearly we can, for •the idea of motion in one body doesn't include •the idea of motion in another - any more than •the idea of squareness in one body includes •the idea of squareness in another! I'm not asking whether in the actual state of the world it is *physically possible* for one body to move while no others do; answering this either way would be taking a side on the debate over whether there is a vacuum. All I am asking is whether we can have *the idea of* one body moving while no others do; and I think everyone will answer that we can. If so, then the place the body leaves gives us the *idea of* pure space without solidity, into which any other body can enter without being resisted and without displacing anything. If it is the case that *when the piston in a pump is pulled up, other matter has to take its place*, that comes from the world's being full, not from the mere *ideas* of space and solidity. . . . The very fact that people argue about whether there actually is a vacuum shows that they have ideas of space without a body.

4. In contrast to solidity, . . . *hardness* consists in a firm cohesion of the parts of a mass of matter that is large enough to be perceptible, so that the whole thing doesn't easily change its shape. Indeed, we call things 'hard' or 'soft' only in relation to the constitutions of our own bodies: we usually call a thing 'hard' if it will cause us pain sooner than change its shape by the pressure of any part of our bodies; and 'soft' if an easy and unpainful touch by our bodies can make it change its shape.

The difference between hard and soft has nothing to do with solidity: the *hardest* stone isn't the least bit more *solid* than water. The flat sides of two pieces of marble will more easily approach each other when there is only water between them than when there is a diamond between them; but that is not because the parts of the diamond are more solid than those of water. Rather, it is because the parts of the water, being more easily separable from each other, can easily slide out of the way as the pieces of marble approach. If they could be kept from moving aside in that way, they would - just as much as the diamond - for ever stop these two pieces of marble. . . . If you think nothing but hard bodies can keep your hands from approaching one another, try that out with the air enclosed in a football. [Locke then describes an experiment confirming what he has been saying.]

5. This idea of solidity marks off the extension of body from the extension of space. •The extension of body is just the cohesion [= 'holding together'] or continuity of

solid separable, movable parts;

and •the extension of space is the continuity

of unsolid, inseparable, and immovable parts.

It's also because bodies are solid that they can bang into one another, resist one another, and change their shapes. Many of us think we have clear and distinct ideas, and that we can think of •pure space, without anything in it that resists or is pushed around by body. Our idea of the distance between the opposite parts of a concave surface is just as clear *without* as *with* the idea of solid parts between. And we also think we have an idea of •something that *fills* space, and can bump other bodies around or be bumped by them. If there are others who don't have these two ideas distinct ·from one another· but think they are just one idea, I don't know how to talk with them, because they and I have the same idea under different names or different ideas under the same name. . . .

6. If anyone asks me what solidity is, I send him to his senses to be informed. Let him put a flint or a football between his hands and then try to make the palms meet, and he'll know. If he isn't satisfied with this explanation of what •solidity is, I promise to tell him what it is when he tells me what •thinking is, or explains to me what •extension or •motion is - a seemingly easier task. The simple ideas we have are such as experience teaches to us. If we try to go further than that, and to make them clearer in our minds ·by giving verbal definitions·, we shall have no more success than we would if we tried to *tell* a blind man what light and colours are, *talking* him into having ideas of them. I shall explain why this is so later on.

Chapter v: Simple ideas of different senses

The ideas we get by more than one sense are of space, or extension, shape, rest, and motion; for these are perceivable by sight and touch. And we can receive and convey into our minds the ideas of bodies' extension, shape, motion, and rest both by seeing and feeling. I shall have more to say about these later.

Chapter vi: Simple ideas of reflection

1. After receiving ideas from outside, the mind looks in upon itself and observes its own dealings with the ideas it already has, and that gives it further ideas that are as fit to have a role in its thinking as any of those it received from outward things.
2. The main things the mind *does*, encountered so often that everyone who wants to can find them in himself, are
 - perception or thinking, and
 - volition or willing.

The power of *thinking* is called the *understanding*, and the power of *volition* is called the *will*; and these two powers or abilities in the mind are called 'faculties'. I shall later discuss some of the modes [= 'special kinds'] of these simple ideas of reflection, such as remembrance, discerning, reasoning, judging, knowledge, faith.

Chapter vii: Simple ideas of both sensation and reflection

1. Some other simple ideas convey themselves into the mind by all the ways of sensation and reflection - namely
 - pleasure or delight, and its opposite:
 - pain or uneasiness
 - power
 - existence
 - unity.
2. Nearly every other idea, whether of sensation or reflection, is accompanied by either delight or uneasiness. And almost any state of our senses caused from outside ourselves, and any thought of our mind within, can produce pleasure or pain in us. By the terms 'pleasure' and 'pain' I signify whatever delights or displeases us, whether it arises from the thoughts of our minds or anything operating on our bodies. For whether we call it 'satisfaction', 'delight', 'pleasure', 'happiness', etc. on the one side; or 'uneasiness', 'trouble', 'pain', 'torment', 'anguish', 'misery', etc. on the other; they are merely different degrees of the same thing, and belong to the ideas of pleasure and pain, delight or uneasiness, these being the names I shall most commonly use for those two sorts of ideas..
3. The infinite wise author of our being has given us •the power to move or not move certain parts of our bodies, and through those movements to move other neighbouring bodies. And he has also given to our mind •a power often to choose which of its ideas it will think of, and which line of enquiry to pursue with consideration and attention. That is why he - ·God· - has seen fit to accompany various thoughts and various sensations with a perception of delight. If delight were wholly separated from all our outward sensations and inward thoughts, we would have no reason to prefer one thought or action to another, prefer negligence to attention, or prefer movement to rest. And so we would neither stir our bodies nor employ our minds, but let our thoughts drift along without direction or design. . . . A man in that state, however equipped with understanding and will, would be a very idle, inactive creature, and pass his time in a lazy, lethargic dream. . . .
4. Pain is as effective as pleasure in making us active, because we will work as hard to avoid pain as to get pleasure. It is interesting to note that pain is often produced by the same objects and ideas as produce pleasure in us. . . . Heat is very agreeable to us in one degree, but becomes

extraordinarily painful when the temperature goes up a little. And the most pleasant of all perceptible things, light itself, causes a very painful sensation if its intensity is too great for our eyes. This shows the wisdom of our maker: when any object acts so intensely on our sense organs that it threatens to damage their delicate structures, pain warns us to withdraw before the organ is so damaged as to become useless. There is evidence that this is what pain is *for*. Although great light is insufferable to our eyes, yet the highest degree of darkness does them no harm and isn't accompanied by pain. In contrast with that: we are given pain by excess of cold as well as of heat, because the two extremes are equally destructive to the bodily condition that is necessary for the preservation of life and the proper functioning of the body. It is the condition of having a moderate degree of warmth - or, if you will, a motion of the imperceptible parts of our bodies that is not too fast and not too slow.

[Section 5 suggests another reason, a theological one, why 'God has scattered up and down various levels of pleasure and pain in all the things that surround and affect us'. Section 6 gives a theological reason for discussing this.]

7. *Existence* and *unity* are two other ideas that are suggested to the understanding by every object outside us and every idea within. When ideas are in our minds, we consider them as being actually there, i.e. as *existing*; and whatever we can consider as one thing, whether a real being or an idea, suggests to the understanding the idea of *unity*, i.e. *oneness*.

8. *Power* is another simple idea that we receive from sensation and reflection. For we get the idea of power in two ways: •by observing in ourselves that we can at pleasure move various parts of our bodies that were at rest, and •by our constantly observing through our senses the effects that natural bodies can have on one another.

9. Another idea that is suggested by our senses but is more constantly offered to us by what happens in our minds, is the idea of *succession*. If we look into ourselves and reflect on what we observe there, we'll find our ideas following one another with no interruptions throughout our waking hours.

10. I think that these are all - or anyway the most important - of the mind's simple ideas, out of which all its other knowledge is made. They are all received through sensation and reflection.

Don't think that sensation and reflection are too narrow to supply all the materials of the capacious mind of man, which takes its flight beyond the stars, roaming beyond the world of matter out into incomprehensible empty space. It won't seem so strange to think that these few simple ideas suffice for the quickest thought, or largest mental capacity, if we consider how many words we can make by putting together various selections from twenty-four letters, or if we consider how the mathematicians can get an inexhaustible and truly infinite stock of material out of just one of the simple ideas I have mentioned, namely *number*. [In fact Locke hasn't mentioned it yet. It will be the topic of xvi.]

Chapter viii: Some further points about our simple ideas

1. If something in nature can so affect the mind as to cause some perception in it, that perception will present itself to the mind as a *positive* idea, even if it is caused by a *negative* feature of the object.

2. Thus the ideas of heat and cold, light and darkness, white and black, motion and rest, are equally clear and positive ideas in the mind; though perhaps some of the causes producing them

are mere privations [= ‘absences’, ‘negativenesses’] in the things from which our senses derive those ideas. Looking into those causes is an enquiry that belongs not •to the idea as it is in the understanding but •to the nature of the things existing outside us. These are two very different things, and we should be careful to distinguish them. It is one thing to perceive and know the idea of white or black, and quite another to examine what kind surface texture is needed to make an object appear white or black.

[In section 3 Locke develops this point a little further. In section 4 he offers a suggestion about *why* a negative cause sometimes ‘produces a positive idea’.]

5. I won’t try to settle here whether this suggestion is right. As for my point about the idea itself, as distinct from its cause, I appeal to everyone’s own experience: the shadow of a man consists of nothing but the absence of light, but doesn’t it cause in an observer as clear and positive an idea as does the man whose shadow it is, even though he is bathed in sunshine? And the picture of a shadow is a positive thing. We do have negative names that stand directly not for positive ideas but for their absence. For example ‘insipid’, ‘silence’, ‘nothing’, and their like denote positive ideas (taste, sound, being) together with a signification of their absence.

6. So a person can be truly said to see darkness. . . . The causes I have here assigned for certain positive ideas are privative [= ‘negative’] according to the common opinion, and so I have called them; but really it is hard to be sure whether there really are any ideas from a privative cause, until we have settled *whether rest is any more a privation than motion is*.

7. To reveal the nature of our ideas better, and to talk about them intelligibly, it will be convenient to distinguish them •as they are ideas or perceptions in our minds, and •as they are states of matter in the bodies that cause such perceptions in us. That may save us from the belief (which is perhaps the common opinion) that the ideas are exactly the images and resemblances of something inherent in the object. That belief is quite wrong. Most ideas of sensation are (in the mind) no more *like* a thing existing outside us than the names that stand for them are *like* the ideas themselves.

8. Whatever the mind perceives in itself - whatever is the immediate object of perception, thought, or understanding - I call an *idea*; and the power to produce an idea in our mind I call a *quality* of the thing that has that power. Thus a snow-ball having the power to produce in us the ideas of white, cold, and round, the powers to produce those ideas in us, as they are in the snow-ball, I call *qualities*; and as they are sensations or perceptions in our understandings, I call them *ideas*. If I sometimes speak of ‘ideas’ as in the things themselves, please understand me to mean to be talking about the *qualities* in the objects that produce them in us.

9. Qualities thus considered in bodies are of two kinds. First, there are those that are utterly inseparable from the body, whatever state it is in. Qualities of this kind are the ones that a body doesn’t lose, however much it alters, whatever force is used on it, however finely it is divided. Take a grain of wheat, divide it into two parts, each part has still solidity, extension, shape, and mobility; divide it again, and it still retains those qualities; go on dividing it until the parts become imperceptible, each part must still retain all those qualities. . . . I call them original or *primary qualities* of body, which I think we may observe to produce simple ideas in us, viz. solidity, extension, shape, motion or rest, and number.

10. Secondly, there are qualities that are, in the objects themselves, really nothing but *powers to produce various sensations in us by their primary qualities*, i.e. by the size, shape, texture, and

motion of their imperceptible parts. Examples of these are colours, sounds, tastes, and so on. I call these *secondary qualities*. To these we can add a third sort, an example of which is the power of fire to change the colour or consistency of wax and clay. This would ordinarily be said to be *only a power in* rather than *a quality of* the object; but it is just as much a real quality as the powers that I have called 'secondary qualities'. (I call them 'qualities' so as to comply with the common way of speaking, and add 'secondary' to mark them off from the rest.) The primary qualities of fire - that is, the size, texture, and motion of its minute parts - give it a power to affect *wax and clay* etc.; and those same primary qualities give it a power to produce in *me* a sensation of warmth or burning; if the latter is a quality in the fire, why not the former also?

11. The next question is: How do bodies produce ideas in us? Obviously they do it by impact; we can't conceive bodies to operate in any way but that.

12. External objects are not united [= 'directly connected'] to our mind when they produce ideas in it, and yet we do somehow perceive qualities in the objects. Clearly there has to be some motion that goes from the object to our sense-organs, and from there is continued by our nerves or our animal spirits to the brains or the seat of sensation, there to produce in our mind the particular ideas we have of them. [Locke held the then-common view that human physiology involves 'animal spirits'. These constitute the body's hydraulic system (Bernard Williams's phrase) - an *extremely* finely divided fluid that transmits pressures through tiny cracks and tunnels.] Since the extension, shape, number, and motion of visible bodies can be seen from a distance, it is evident that some bodies that are too small to be seen individually must travel from those bodies across to the eyes, and thereby convey to the brain some motion that produces in us these ideas that we have of them.

13. We may conceive that the ideas of secondary qualities are also produced by the operation of insensible particles on our senses. Plainly there are plenty of bodies that are so small that we can't, by any of our senses, discover the size, shape, or motion of any one of them taken singly. The particles of the air and water are examples of this, and there are others still smaller - perhaps as much smaller than particles of air and water as the latter are smaller than peas or hail-stones. Let us suppose in the meantime that the different motions and shapes, sizes and number of such particles, affecting our various sense-organs, produce in us the different sensations that we have of the colours and smells of bodies. . . . It is no more impossible to conceive that God should attach such ideas to motions that in no way *resemble* them than it is that he should attach the idea [= 'feeling'] of pain to the motion of a piece of steel dividing our flesh, which in no way resembles the pain.

14. What I have said about colours and smells applies equally to tastes and sounds, and other such sensible qualities. Whatever reality we mistakenly attribute to them, they are really nothing in the objects themselves but powers to produce various sensations in us. These powers depend, as I have said, on those primary qualities, namely size, shape, texture, and motion of parts.

15. From this we can easily infer that the ideas of the primary qualities of bodies resemble them, and their patterns really do exist in the bodies themselves; but the ideas produced in us by secondary qualities don't resemble them at all. There is nothing *like* our ideas of secondary qualities existing in the bodies themselves. All they are in the bodies is *a power to produce those sensations in us*. What is sweet, blue, or warm in idea is nothing but the particular size, shape, and motion of the imperceptible parts in the bodies that we call 'sweet', 'blue', or 'warm'.

16. Flame is called 'hot' and 'light'; snow 'white' and 'cold'; and manna 'white' and 'sweet' - all from the ideas they produce in us. [We know that Locke sometimes calls qualities 'ideas', but that seems not

to be enough to explain the oddity of the next sentence down to its first comma. The passage as given here is almost verbatim Locke; all of the oddity is there in what he wrote.] Those qualities are commonly thought to be the same in those bodies as those ideas are in us, the one perfectly resembling the other; and most people would think it weird to deny this. But think about this: a fire at one distance produces in us the sensation of •warmth, and when we come closer it produces in us the very different sensation of •pain; what reason can you give for saying that the idea of *warmth* that was produced in you by the fire *is actually in* the fire, without also saying that the idea of *pain* that the same fire produced in you in the same way *is in* the fire? Why are whiteness and coldness in snow, and pain not, when it produces each idea in us, and can do so only through the size, shape, number, and motion of its solid parts?

17. The particular size, number, shape, and motion of the parts of fire or snow are really in them, whether or not anyone's senses perceive them. So they may be called *real* qualities, because they *really* exist in those bodies; but light, heat, whiteness or coldness are no more really in them than sickness or pain is in manna. Take away the sensation of them -

let the eyes not see light or colours, or the ears hear sounds; let the palate not taste, or the nose smell -

and all colours, tastes, odours, and sounds vanish and cease, and are reduced to their causes, i.e. size, shape, and motion of parts.

18. A big enough piece of manna can produce in us the idea of a round or square shape, and, by being moved, the idea of motion. This idea of motion represents motion as it really is in the moving manna; a circle or square is the same •in idea as •in existence - the same •in the mind as •in the manna - and this motion and shape really are in the manna, whether or not we notice them. Everybody agrees with this. On the other hand, manna by virtue of the size, shape, texture, and motion of its parts has a power to produce in us the sensations of sickness and sometimes of acute pains. And everyone agrees also that •these ideas of sickness and pain are *not* in the manna, are only effects of its operations on us, and are *nowhere* when we don't feel them. Yet it is hard to get people to agree that •sweetness and whiteness aren't really in manna either, and are also merely the effects of the operations of manna by the motion, size, and shape of its particles on the eyes and palate. . . . It would be hard for them to explain why the •ideas produced by the eyes and palate should be thought to be really in the manna, while •those produced by the stomach and guts are not; or why •the pain and sickness caused by the manna should be thought to be nowhere when they aren't felt, while •the sweetness and whiteness of it should be thought to exist in the manna even when they aren't seen or tasted.

19. Consider the red and white colours in porphyry. Prevent light from reaching the stone, and its colours vanish, it no longer produces any such ideas in us; when light returns, it produces these appearances in us again. Can anyone think that any real alterations are made in the porphyry by the presence or absence of light; and that those ideas of whiteness and redness are really in porphyry in the light, when it obviously has no colour in the dark? The porphyry has at *every* time a configuration of particles that is apt to produce in us the idea of redness when rays of light rebound from some parts of that hard stone, and to produce the idea of whiteness when the rays rebound from some other parts; but at *no* time are whiteness or redness in the stone.

20. Pound an almond, and the clear white colour will be altered into a dirty one, and the sweet taste into an oily one. What real alteration can the beating of the pestle make in any body other than an alteration of the texture of it?

21. We are now in a position to explain how it can happen that the same water, at the same time, produces the idea of cold by one hand and of heat by the other; whereas the same water couldn't possibly be at once hot and cold if those ideas were really in it. If we imagine warmth in our hands to be nothing but a certain sort and degree of motion in the minute particles of our nerves or animal spirits, we can understand how it is possible for the same water at the same time to produce the sensations of heat in one hand and of cold in the other (which shape never does; something never feels square to one hand and spherical to the other). If the sensation of heat and cold is nothing but the increase or lessening of the motion of the minute parts of our bodies, caused by the corpuscles of some other body, we can easily understand that if motion is greater in one hand than in the other, and the two hands come into contact with a body that is intermediate between them in temperature, the particles in one hand will be slowed down while those of the other will speed up, thus causing different sensations.

22. In what I have been saying I have gone a little further than I intended into physical enquiries. [That is, into questions about the biology/psychology of ideas, questions about what *actually happens in the world* when ideas of a certain kind occur.] But I had to throw a little light on the nature of sensation, and to provide a firm grasp of how qualities in bodies differ from the ideas they produce in the mind; for without this I couldn't write intelligibly about ideas. I hope I shall be pardoned this little detour into natural science. . . .

23. So the qualities that are in bodies are of three sorts.

First, the size, shape, number, position, and motion or rest of their solid parts; those are in them, whether or not we perceive them; and when they are big enough for us to perceive them they give us our idea of what kind of thing it is - as clearly happens with artifacts. For example, we recognize a clock or a coach from how its visible parts are assembled, without need for guesswork about its submicroscopic features. I call these *primary qualities*.

Secondly, the power that a body has, by reason of its imperceptible primary qualities, to operate in a special way on one of our senses, thereby producing in us the different ideas of various colours, sounds, smells, tastes, etc. These are usually called *sensible qualities*. I call them secondary qualities.

Thirdly, the power that a body has, by virtue of the particular set-up of its primary qualities, to change the size, shape, texture or motion of another body so as to make the latter operate on our senses differently from how it did before. Thus the sun has a power to make wax white, and fire to make lead fluid. These are usually called *powers*.

The first of these, I repeat, may be properly called real, original, or primary qualities, because they are in the things themselves, whether or not they are perceived. It is upon different modifications of them that the secondary qualities depend. [A 'modification' of a quality is a special case of it, a quality that involves it and more. Squareness is a modification of shapedness, which is a modification of extendedness.]

The other two are only powers to act differently on other things, which powers result from the different modifications of those primary qualities.

24. But though the two latter sorts of qualities are merely powers, nothing else, one of the two sorts are generally thought of as something else. The second sort, namely the powers to produce ideas in us by our senses, are looked on as real qualities in the things thus affecting us. The third sort are regarded as mere powers: when we consider the sun in relation to wax that it melts or blanches, we look on the wax's whiteness and softness not as qualities in the sun but as effects produced by powers in the sun. This correct understanding of the third sort of qualities is also

right for the second sort. If rightly considered, the qualities of light and warmth that are perceptions in me when I am warmed or lit up by the sun are no more *in the sun* than are the changes made in the wax when it is blanched or melted. . . .

[Section 25 is a fairly long and somewhat complex explanation of why people are apt to think correctly about powers and incorrectly about secondary qualities. Section 26 winds up the chapter without adding anything except the suggestion that the second sort of qualities ‘may be called secondary qualities, immediately perceivable’, and the third sort ‘secondary qualities, mediately perceivable’.]

Chapter ix: Perception

1. Just as perception is the mind’s first way of engaging with ideas, the idea of it is the first and simplest idea we have from reflection. Some call it *thinking*, but that is a misnomer, because in correct English ‘thinking’ stands only for operations on ideas in which the mind is *active*, coming to bear on something with some degree of voluntary attention. In bare naked perception, on the other hand, the mind is mostly passive, perceiving only what it can’t avoid perceiving.
2. What is *perception*? you’ll know the answer to that better by reflecting on what *you* do when you see, hear, feel, etc. or think, than by listening to anything I say. Whoever reflects on what happens in his own mind can’t miss it; and if he doesn’t reflect, all the words in the world can’t make him have any notion of it.
3. This much is certain: whatever alterations occur in the body, if they don’t reach the mind there is no perception. Whatever impressions are made on the outward parts, if they aren’t taken notice of within there is no perception. Fire may burn our bodies with no other effect than it makes on a piece of wood, unless the motion is continued to the brain, and there the sense of heat, or idea of pain, is produced in the mind. In that consists actual perception.
4. Your own experience will tell you that quite often your mind, while intently focussed on some things and on the ideas they involve, takes no notice of the effects that other things are having on the organ of hearing, although these effects are just like ones that ordinarily produce the idea of sound. There may be a sufficient impact on the organ, but because it isn’t observed by the mind no perception ensues. The motion that ordinarily produces the idea of sound is made in the ear, yet no sound is heard. In this case the lack of sensation doesn’t come from any defect in your organ of hearing, or from your ears’ being less affected than at other times when you do hear. Rather, it is that the physical effects aren’t *taken notice of in the understanding*, and so they don’t imprint any idea on the mind, and so they cause no sensation. Whenever there is sense or perception, some idea is actually produced and present in the understanding.
5. So I am sure that children, by the exercise of their senses on objects that affect them in the womb, receive a few ideas before they are born If I may risk a guess on a matter that isn’t very open to investigation, I think the ideas of hunger and warmth are among them - probably among the first that children have, and hardly ever part with.
6. But though we can reasonably suppose that children receive some ideas before they are born, these simple ideas are nothing like the innate principles that I have rejected. The former come from states that the child’s body is in, or events that its body undergoes, while it is in the womb; which means that they depend on something exterior to the mind. In their way of being produced they differ from other sense-based ideas *only* in that they occur earlier. As against this, innate

principles are supposed to be of an entirely different sort - not coming into the mind through any particular events in the body, but original characters stamped onto it from the outset.

7. As there are some ideas - like the feelings of hunger and warmth - that we can reasonably suppose to be introduced into the minds of children in the womb, reflecting the necessities of their life in that situation, so the first ideas that are imprinted on them after they are born are the sensible qualities that first impinge on them. *Light* is a powerful example. Newly born children always turn their eyes in the direction from which the light comes, which is some evidence of how greedy the mind is to get as many ideas as it can, so long as they aren't accompanied by pain. But children's circumstances vary, and so the order in which they acquire ideas varies too; and this isn't something we have much need to enquire into.

8. Speaking of adults now: the ideas we receive by *sensation* are often altered by *judgment* without our noticing it. When we see a round uniformly coloured globe - say of gold or alabaster or polished coal - it is certain that the idea it imprints on our mind is of a flat circle variously shadowed, with various degrees of light and brightness coming to our eyes. But we know how convex bodies customarily appear to us, how the reflections of light are altered by the shapes of bodies; and so our judgment acquires a habit of immediately *altering the appearances into their causes*. Faced with something that is really a variety of shadow or colour, it infers what the shape is; takes that variety to be a mark of that shape; and forms for itself the perception of *a convex figure and a uniform colour*, although the idea we receive is only a plane variously coloured, as is evident in painting.

A propos of that, I shall here insert a problem that was put to me by the learned and worthy Mr. Molineux. . . .:

Suppose a man born blind, now adult, who has learned how to distinguish by touch between a cube and a sphere of the same metal and about the same size, so that he can tell when he handles them which is the cube and which the sphere. Now suppose the cube and sphere to be placed on a table, and the blind man be made to see. Can he by his sight, before touching them, tell which is the globe, which the cube?

To this Mr Molineux answers No. For though the man has obtained the experience of how a globe affects his sense of touch and how a cube does, he still has no experience telling him that something that affects his touch *thus* must affect his sight *so*. I agree. . . I leave this with you, to prompt you to consider how much you owe to experience, learning, and acquired notions, where you have thought you hadn't the least help from them! I especially want to include this question here because Mr Molyneux tells me that when the first edition of my book appeared he proposed this question to various very able men, and found hardly any that gave what he thinks is the right answer until he convinced them of it by giving reasons.

9. This mistake doesn't happen much, I think, with ideas other than those received by sight. Here is why it happens with them. Sight, which is the most comprehensive of all our senses, conveys to our minds the ideas of light and colours, which we get only from that sense; and it conveys also the very different ideas of space, shape, and motion, the variations in which bring with them changes in the appearances of light and colours; and so we become accustomed to judging one by the other. When this is done with things of which we have frequent experience, it is performed so constantly and so quickly that we take an idea formed by our judgment to be a perception of our sensation; so that the latter serves only to trigger the former, and is hardly noticed in itself. Similarly, a man who reads or hears with attention and understanding takes little notice of the letters or sounds, attending only to the ideas that they rouse up in him.

[In section 10 Locke comments on our generally not noticing that we are making such a substitution. He explains it partly as resulting from •the speed with which the substitution is performed (‘As the mind is thought to take up no space, so its actions seem to require no time’) and from •its habitualness. He compares it with our unawareness of blinking.]

11. The faculty of perception seems to me to be what distinguishes the animal kingdom from the inferior parts of nature, that is, from plants. A good many plants are capable of motion: when other bodies are applied to them they briskly alter their shapes and motions, which leads to their being called ‘sensitive plants’ because their movements somewhat resemble those that an animal makes because of some sensation that it has. But in plants it is (I suppose) all bare mechanism, produced in the same kind of way as . . . water produces the shortening of a rope - which is done without any sensation in the subject or any having or receiving of ideas.

12. I believe that perception occurs to some extent in animals of every sort, though it may be that in some animals the inlets that nature provides for receiving sensations are so few, and the perception they are received with is so dark and dull, that it falls far short of the sharpness and variety of sensation in other animals. Still, it is sufficient for, and wisely adapted to, the state and condition of animals of that sort. So the wisdom and goodness of the Maker plainly appear in all the parts of this stupendous structure, and at all the different levels of creatures in it.

13. Judging by an oyster’s structure, I think we can reasonably conclude that it doesn’t have as many senses - or ones as keen - as men and many other animals have; and because of its immobility it wouldn’t be better off if it did. What good would sight and hearing do to a creature that couldn’t move itself towards benefit or away from harm even if it could see them at a distance? And wouldn’t keenness of sensation be an inconvenience to an animal that must lie still, where chance has once placed it, and be washed over by whatever water - cold or warm, clean or foul - that happens to come its way?

14. Still, I can’t help thinking that oysters have some small dull perception that distinguishes their state from perfect insensibility. [Locke goes on to liken this conjectured state of an oyster to the state of an extremely old man who has lost most of his memories, and is blind, deaf, and without a sense of smell.]

15. Because perception is the first step towards knowledge, and is the inlet through which all its materials come into the mind, the following is the case. •The fewer senses any man (or other creature) has, •the fewer and duller the impressions are that his senses make; and •the duller the faculties are that he brings to bear on them, •the more remote he is from having the sort of knowledge that is to be found in some men. But there are so many different levels of this (even amongst men) that we can’t know for sure where a given species of animals stands in this respect, much less where an individual animal stands. . . .

Chapter x: Retention

1. The next faculty of the mind by which it moves closer towards knowledge is one that I call ‘retention’ - the mind’s ability to *keep* simple ideas it has received from sensation or reflection. This is done in two ways. In the first, the idea is *kept actually in view* for some time - this is called ‘contemplation’.

2. The second kind of retention is the power to *revive again* in our minds ideas that have come to us and then disappeared. This is *memory*, which is the store-house (so to speak) of our ideas.

Because the narrow mind of man couldn't keep many ideas in view and under consideration at once, it needed a repository in which to store ideas that it might want to use later on. But our ideas are nothing but actual perceptions in the mind, and cease to be anything when they aren't perceived; so that this 'storing of ideas in the repository of the memory' really means only that the mind has a power in many cases to revive perceptions that it has once had, with attached to them the additional perception *that it has had them before*. It is in this sense that our ideas are said to be 'in our memories', when they are actually nowhere. . . .

3. Attention and repetition help in fixing ideas in the memory; but the ones that at first make the deepest and most lasting impression are the most likely to be remembered. And they are those that are accompanied by pleasure or pain. The great business of the senses is to alert us to what hurts the body or brings advantage to it; so nature has wisely brought it about that pain accompanies the reception of certain ideas. That does the work of thinking and reasoning in children, and acts faster than thinking in adults; and so it leads both young and old to avoid painful objects, doing this with the speed that is necessary for their preservation - and settling in the memory a caution for the future.

[In section 4 Locke discusses ideas that the mind doesn't retain in memory - because •the idea was too brief or weak or uninteresting, or •the memory itself is weak, or •the person wasn't paying attention, or •'through the condition of the body, or some other fault'. The section concludes:] In all these cases ideas in the mind quickly fade, and often vanish from the understanding altogether, leaving no more signs of themselves than the shadows of clouds do in flying over fields of corn; and the mind is as empty of them as if they had never been there.

5. Thus many of the ideas that were produced very early in the minds of children . . . if in the future course of their lives they aren't repeated they are quite lost, with not a glimpse of them remaining. This can be observed in those who had the bad luck to lose their sight when very young, in whom the ideas of colours having been only slightly taken notice of, and have quite worn out because they haven't been repeated. . . . There seems to be a constant decay of all our ideas, even of those that are most deeply embedded in the most retentive minds, so that if they aren't sometimes renewed by repeated exercise of the senses, or reflection on the kinds of objects that at first produced them, the print wears out, and at last there remains nothing to be seen. . . . The pictures drawn in our minds are laid down in fading colours, and if they aren't sometimes refreshed they vanish and disappear. I shan't here go into the question of how far the structure of our bodies and the constitution of our animal spirits are concerned in this, and whether the state of the brain makes the difference between good memories and bad, so that in some people the memory retains the characters drawn on it like •marble, in others like •sandstone, and in others little better than •sand. It may seem probable that the constitution of the body sometimes influences how well the memory functions; since we often find that a disease can strip the mind of all its ideas, and the flames of a fever can within a few days burn down to dust and confusion the images which had seemed to be as lasting as if engraved in marble.

6. But concerning the ideas themselves as distinct from questions about the efficacy of memory, it is easy to see that the ideas that fix themselves best in the memory and remain clearest and longest in it are the ones that are oftenest refreshed by a frequent return of the objects or events that produce them. These include the ideas that are conveyed into the mind by more ways than one. And so it is that •ideas that are of the original qualities of bodies, namely solidity, extension, shape, motion, and rest, and •ideas of qualities that almost constantly affect our bodies, such as

heat and cold, and •ideas that are applicable to beings of all kind, such as existence, duration, and number, which come along with almost every object that affects our senses and every thought that occupies our minds - ideas like *these* are seldom quite lost except by a mind that loses all its ideas.

7. In this secondary perception, so to call it, this viewing again of ideas that are lodged in the memory, the mind is often quite active, for the appearance of those dormant pictures sometimes depends on the will. The mind often sets to work searching for some hidden idea, and turns the eye of the soul (so to speak) upon it [= upon the soul and the ideas it contains?]. But sometimes ideas start up of their own accord in our minds, and present themselves to the understanding; and very often they are aroused and tumbled out of their dark cells into daylight by turbulent and tempestuous passions, because our various states bring to our memory ideas that would otherwise have lain quiet and unnoticed.

A further point should be noted concerning ideas that are lodged in the memory and later revived by the mind. It is that not only are they *not new* ideas, but they are *not taken to be new* by the mind. On the contrary, it takes notice of them *as of* a former impression, and renews its acquaintance with them as with ideas it had known before. . . .

8. In a thinking creature, memory is second in importance only to perception. It matters so much that when it is lacking all our other faculties are largely useless. In our thoughts, reasonings, and knowledge we couldn't move beyond present objects if we didn't have the help of our memories. This help may be defective, in either of two ways.

First, the memory can't find the idea at all, and to that extent produces perfect ignorance. For since we can know a thing only so far as we have the idea of it, when that is gone we are in perfect ignorance about the thing in question.

Secondly, the memory moves slowly, and doesn't retrieve the stored idea quickly enough to serve the present purpose. When this happens a lot, that is stupidity; and someone who through this defect in his memory doesn't have easy access to the ideas that really are preserved in his mind - doesn't have them ready at hand when he needs them - is hardly better off than he would be without them 'in his 'store', for they give him no service. . . . It is the business of the memory to provide the mind with those dormant ideas that it needs at a given moment. Having them ready at hand on all occasions is what we call 'invention', 'fancy', and mental agility.

[In section 9 Locke writes about how men differ from one another in the strength of their memories, citing Pascal, who in his prime 'forgot nothing of what he had done, read, or thought at any time since he reached the years of reason'. He also speculates that probably all men differ in this respect from angels. He continues:] Mr. Pascal's memory still had the narrow limits within which human minds are confined here on earth, having a great variety of ideas only in succession and not all at once. Different grades of angels may have broader views, some of them being able to retain together, and constantly set before them as in one picture, all their past knowledge at once. This would be a great advantage to the knowledge of a thinking man; so it may be one of the ways in which the knowledge of unembodied Spirits greatly surpasses ours.

10. Various non-human animals seem to have to a great degree this capacity for laying up and retaining the ideas that are brought into the mind. To take one example out of several: when birds learn tunes, the attempts one can observe in them to get the notes right convinces me that they have perception and retain ideas in their memories, and use them as patterns. It seems to me impossible that they should try to conform their voices to notes (as they plainly do) of which they had no ideas. Admittedly, a sound might affect a bird's behaviour in a purely mechanical manner,

without involving anything mental, e.g. any perception. For example, a sound might mechanically cause a certain motion of the animal spirits in the brains of those birds while the tune is actually playing; and that motion might be continued on to the muscles of the wings, so that the bird is mechanically driven away by certain noises, because this tends to its preservation. But that mechanistic, non-mental approach couldn't explain why a sound should mechanically cause a motion of the bird's vocal organs that would reproduce the notes of a sound it had heard earlier; for such imitation couldn't be conducive to the bird's preservation. [Locke adds another bit of supposed evidence that in learning a tune a bird relies on its memory.]

Chapter xi: Discerning, and other operations of the mind

1. Another faculty we may take notice of in our minds is that of *discerning* and distinguishing ideas from one another. It isn't enough to have a confused perception of some thing in general - that is, taking in nothing beyond the bare fact of its being *a thing*. If the mind didn't have different perceptions of different objects and their qualities, it would be capable of very little knowledge, even if the bodies affecting us were as busy as they actually are, and the mind were continually employed in thinking. This capacity for distinguishing one thing from another is the source of the obvious and certain truth of various propositions, including some very general ones, that have been taken for innate truths. Innatists have been led to their view for want of any other explanation of why those propositions are universally accepted. I am undercutting them by providing another explanation, an alternative to the hypothesis of innate imprinting. The acceptance of those propositions depends on the mind's ability to *discern* or *distinguish* - its ability to perceive two ideas to be the same, or to be different. But more on this later.

2. I won't go into the question of how far failures in accurately discriminating ideas from one another comes from •defects in the organs of sense, or •lack of sharpness, nimbleness or focus in the understanding, or •the way some people are apt to blunder hastily to conclusions. I merely note that this is one of the operations that the mind can observe in itself when it looks inward. It is so important to other knowledge that to the extent that *this* faculty is dull, or isn't rightly used for distinguishing one thing from another, to that extent our notions are confused and our reason and judgment are disturbed or misled. Whereas •having our ideas in the memory ready at hand is having *mental agility*, •having them unconfused, and being able to tell one thing from another even when the difference is small, is much of what makes up *exactness of judgment and clearness of reason*. From this we can perhaps give some reason for the well known fact that people with a great deal of wit and prompt memories don't always have the clearest judgment or deepest reason. •Wit lies mostly in nimbly putting one idea together with another idea that it resembles or in some other way *goes with*, thereby making up pleasant pictures and agreeable visions in the imagination; whereas •judgment lies quite on the other side, carefully separating from one another ideas that differ from one another, however slightly, so as not to be misled by a similarity into mistaking one thing for another. [Locke develops this contrast, saying that the appreciation of wit does not require, and indeed is inimical to, examination 'by the severe rules of truth and good reason'.]

3. The chief aid to our distinguishing well amongst our ideas is their being clear and determinate. When they are so, we won't be led into confusion or mistake when, as sometimes happens, the senses convey ideas from the same object differently on different occasions, and so seem to err. Sugar may taste sweet to a man when he is healthy, and bitter when he is in a fever; but the idea

of *bitter* in his mind is as clear, and as distinct from the idea of *sweet*, as if he had tasted only gall. [The section continues with some other examples.]

4. *Comparing* ideas with one with another, in respect of extent, degrees, time, place, or any other details, is another operation that the mind performs with its ideas. On it are based all the many ideas that fall under the heading *relation*. I shall return to them later [xxv]. [For Locke, a ‘comparison’ of one thing with another needn’t be a *likening* of them; often it is some other kind of *considering them together*.]

5. It isn’t easy to determine how far non-human animals have this capacity for comparing. I imagine they don’t have it any great degree; for though they probably have various ideas that are distinct enough, yet it seems to me to be the prerogative of human understanding, when it has distinguished any pair of ideas well enough to perceive them to be perfectly different and therefore to be *two*, to cast about and consider how and in what respects they can be compared - that is, how they can be related to one another. I think, therefore, that non-human animals compare their ideas only in coping with their physical environment. We are probably safe in conjecturing that they don’t at all have the *other* power of comparing - the one that men have, and that belongs to general ideas and is useful only in abstract reasonings.

6. The next operation we can observe the mind performing with its ideas is *composition*, in which the mind puts together several simple ideas it has received from sensation and reflection, combining them into a complex one. Under the heading ‘composition’ we may also include *enlarging*, in which we put together several ideas of the same kind. Thus by adding several units together, we make the idea of a dozen; and putting together the repeated ideas of yards, we make that of a mile.

7. In composition also, I suppose, lower animals come far short of man. They do take in and retain *together* various combinations of simple ideas. The shape, smell, and voice of a man may make up his dog’s complex idea of him, or rather are so many distinct marks by which it recognizes him; but I don’t think that the dog puts these ideas together to make a complex idea. Even where we think a non-human animal has a complex idea, perhaps it is only one simple idea that directs the animal in the knowledge of various things that it doesn’t distinguish visually as much as we imagine it does. I have been credibly informed that a bitch will nurse, play with, and be fond of young foxes, *as much as* of her puppies and *in place of* them, if only you can get them just once to suckle from her long enough for her milk to go through them. [The section adds evidence that lower animals can’t count.]

8. When children have through repeated sensations got some ideas fixed in their memories, they gradually begin to learn the use of signs. And when they acquire the skill to apply their organs of speech to producing articulate sounds, they begin to use words to signify their ideas to others. They *borrow* some of these verbal signs from others; but they also *make* some of their own, as we can observe from the new and unusual names children often give to things when they first use language.

9. So words are used to stand as outward marks of our internal ideas, which are taken from particular things; but if every particular idea that we take in had its own special name, there would be no end to names. To prevent this, the mind makes *particular* ideas received from *particular* things become *general*; which it does by considering them as they are in the mind - mental appearances - separate from all other existences, and from the circumstances of real existence, such as time, place, and so on. This procedure is called *abstraction*. In it, an idea taken from a

particular thing becomes a general representative of all of the same kind, and its name becomes a general name that is applicable to any existing thing that fits that abstract idea. Such precise naked appearances in the mind, without considering •how or •from where or •in company with what others it acquired them, the understanding stores away for use as *standards*: it will classify real things into •sorts on the basis of their agreement with these patterns or standards. The abstract ideas have names commonly attached to them, so that they also serve as patterns for applying •words, labels, to the things that they enable us to sort. Thus you observe the same colour today in chalk or snow that you yesterday saw in milk; your mind considers that appearance alone, makes it a representative of all of that kind and gives it the name ‘whiteness’; and by that sound you signify the same quality, wherever it is imagined or met with. This is how *universals*, whether ideas or words, are made.

10. It is *doubtful* that non-human animals compound their ideas *much*; I am *sure* that they have no power of abstracting *at all*, and that the having of general ideas is what sharply distinguishes humans from other animals, and is an excellence of which the others are in no way capable. Obviously, we see no traces in their behaviour of their using general signs to stand for universal ideas; which gives us reason to suppose that they can’t abstract, or make general ideas.

11. Their having no use or knowledge of general words can’t be explained as resulting from their lack of appropriate vocal organs; for we find that many of the lower animals *can* make such sounds, and pronounce words distinctly enough, but they never mean anything general by them. And conversely, men who through some physical defect can’t utter words still manage to express their universal ideas by signs that they use instead of general words; and we see that non-human animals can’t do that. I think we may take *this* to be what essentially differentiates men from other animals, a difference that wholly separates them by what eventually comes to be a vast distance. It has often been thought that the crucial difference is that men alone can *reason*, but that isn’t right. For if lower animals have any ideas at all and aren’t bare machines (as some think they are), we can’t deny that they have some reason. It seems to me as obvious that some of them sometimes reason as that they have sense; but when they reason it is only with particular ideas, just as they received them from their senses and not subjected to abstraction. . . .

[Sections **12-13** discuss the relations between the mental capacities discussed in this chapter and different kinds of mental deficiency in humans. The following passage in **13** will be referred to in xxxiii.4:] A man who is very level-headed and has a good mind most of the time may *in one kind of context* be as frantic as any in the mad-house. This can happen because - either through •some sudden very strong impression, or through •his long fixing his mind on thoughts of one kind - incoherent ideas have been cemented together in his mind so powerfully as to remain united there. [The section concludes:] The difference between *idiots* and *madmen* seems to be this: madmen put wrong ideas together and so make wrong propositions, but argue and reason correctly from them; but idiots make few if any propositions, and reason hardly at all.

14. The faculties and operations of the mind that I have described in this chapter are exercised on •all the mind’s ideas, of whatever kind, but my examples have mainly involved •simple ideas. I have gone from my account of simple ideas in chapters ii-viii directly to my account in chapters ix-xi of these faculties of the mind, before coming to what I have to say about •complex ideas. I have three reasons for taking the topics in that order.

First, Some of these faculties are at first employed principally on simple ideas; so in following my order we can follow nature in its ordinary method, and thereby track and reveal the faculties in their rise, progress, and gradual improvements.

Secondly, simple ideas are usually much more clear, precise, and distinct than complex ones; so by observing how the faculties of the mind operate on *them* we can •better grasp how the mind abstracts, names, compares and employs its other operations - •better, that is, than if we also brought in complex ideas, with which we are much more liable to make mistakes.

Thirdly, these very operations of the mind relating to ideas received from sensations are themselves, when reflected on, another set of ideas - •some of them simple ideas - derived from that other source of our knowledge which I call •reflection; which makes it appropriate to deal with them immediately after the simple ideas of •sensation. As for compounding, comparing, abstracting, etc., I have said very little about them, because I shall have occasion to treat them at more length in other places [in III].

15. I have given a short and (I think) true account of the first beginnings of human knowledge: where the mind gets its first objects [here = ‘ideas’] from, and how it goes about storing those ideas out of which all the knowledge it is capable of is to be made. I must appeal to experience and observation to decide whether my account is right. The best way to reach truth is to examine things as they really are, and not to steer by fancies that we have worked up for ourselves or have been taught by others to imagine.

16. •Reverting now to my thesis that ideas enter the mind only through sensation and reflection: This is the only way I can find for ideas to be brought into the understanding. If other men are sure that *they* have innate ideas, the rest of us can’t deny them the privilege that they have over us, •namely, of knowing what goes on in their own minds. I can only speak of what I find in myself, which fits the account I have given. If we examine the whole course of men in their various ages, countries, and educations, what we shall find seems to depend on the foundations that I have laid.

17. I don’t claim to *teach*, only to *enquire*. So let me say it again: external and internal sensation [= ‘sensation and reflection’] are the only routes *I can find* for knowledge to enter the understanding. These alone, as far as I can discover, are the windows through which light is let into this dark room. The understanding strikes me as being like a closet that is wholly sealed against light, with only some little openings left to let in external visible resemblances or ideas of things outside. If the pictures coming into such a dark room stayed there, and lay in order so that they could be found again when needed, it would very much resemble the understanding of a man, as far as objects of sight and the ideas of them are concerned.

Those are my guesses concerning the means by which the understanding comes to •have and •retain simple ideas and their modes, along with •some other operations on them. I now proceed to examine some of these simple ideas and their modes in more detail.

Chapter xii: Complex ideas

1. So far we have considered only •ideas that the mind receives passively, namely •the simple ones that come to it from sensation and reflection. The mind can’t make any such simple idea for itself, and can’t have any idea that doesn’t wholly consist of them. But while the mind is wholly *passive* in the reception of all its simple ideas, it *acts* in various ways to construct other ideas out of its simple ones, which are the materials and foundations of all the rest. The acts in which the mind exerts its power over its simple ideas are chiefly these three: (1) Combining several simple ideas into one compound one; that is how all complex ideas are made. (2) Bringing together two ideas, whether simple or complex, setting them side by side so as to see them both at once,

without uniting them into one; this is how the mind gets all its ideas of relations. (3) Separating them from all other ideas that accompany them in their real existence; this is called abstraction, and it is how all the mind's general ideas are made.

This shows that the power a man has, and his exercise of it, are pretty much the same in the intellectual world as in the material one. In neither realm has he any power to make or destroy any raw materials; all he can do is either to •unite them together, or •set them side by side, or •wholly separate them. (For example, he cannot make or destroy rocks, but he can assemble them to make a wall, or dismantle a wall that has been made from them.) I shall begin with *uniting*, and shall come to the other two in due course.

As simple ideas are observed to exist in various combinations united together, so the mind has a power to consider several of them united together as one idea; not only in combinations that exist in external objects, but also in ones the mind makes up. Ideas thus made up of several simple ones I call *complex*. Examples are the ideas of beauty, gratitude, a man, an army, the universe. These are all complex ideas made up of simple ones, but the mind can if it wishes treat each of them by itself as one unified thing, signified by one name.

2. By being able to repeat and join together its ideas, the mind has great power to vary and multiply the objects of its thoughts, infinitely beyond what sensation or reflection provides it with. . . . The basic raw materials of all its compositions are simple ideas received from those two sources - the mind has no other way of getting any - but once it has acquired these simple ideas it can by its own power put together the ideas it has, making new complex ones that it never received united in that way.

3. Complex ideas, however compounded and decompounded, are infinitely numerous and endlessly various. Still, I think they can all be brought under three headings: (1) Modes. (2) Substances. (2) Relations.

4. First, *modes* are complex ideas that don't contain within them the supposition of •existing by themselves, but are considered as •dependences on or states of substances. Examples are the ideas signified by the words 'triangle', 'gratitude', 'murder', etc. (These words stand for dependences on substances because: if there is a triangle that is because *something* is triangular, if gratitude occurs that is because *someone* is grateful, if there is a murder that is because *someone* murders someone.) Forgive me if I am here using the word 'mode' in somewhat a different sense from its ordinary one. When presenting a view that involves notions different from any that people commonly have, one must either invent new words or use old ones with somewhat new meanings; and in the present case the latter is perhaps the more tolerable of the two procedures.

5. Two sorts of modes deserve to be considered separately. •Some are only variations or different combinations of the same simple idea, not mixed in with any other. For example, the ideas of *dozen* and *score* are nothing but the ideas of so many distinct units added together. I call these *simple modes*, because they are contained within the bounds of one simple idea. It should be remembered that a *simple mode* is, like all modes, a *complex idea*. •Others are made up of simple ideas of different kinds, put together to make one complex one. Examples are *beauty* (a certain composition of colour and figure, causing delight to the beholder), and *theft* (the concealed change of the possession of something without its owner's consent, which obviously combines several ideas of different kinds). I call these *mixed modes*.

6. Secondly, the ideas of *substances* are combinations of simple ideas that are taken to represent distinct particular things existing by themselves. In such combinations the supposed or confused idea of *substance*, such as it is, is always the first and chief. Thus if to the idea of *substance* we join the simple idea of a certain dull whitish colour, and ideas of certain degrees of weight, hardness, ductility, and fusibility, we have the idea of *lead*; and a combination of the ideas of a certain shape with mobility, thought, and reasoning, joined to *substance*, makes the ordinary idea of a *man*. Ideas of substances also fall into two sorts: •ideas of single substances as they exist separately, for example the idea of a man or of a sheep; and •ideas of several of those put together, such as the idea of an army of men, or of a flock of sheep. An idea of the latter collective kind - an idea, that is, of several substances put together - is as much one single idea as is the idea of a man.

7. Thirdly, the last sort of complex idea is the one we call *relation*, which consists in considering and comparing one idea with another. I shall discuss these different kinds in their order, taking simple modes in chapters xii-xxi, complex or 'mixed' modes in xxii, substances in xxiii-xxiv, and relations in xxv-xxviii.

[In section 8 Locke makes some wind-up remarks about the intellectual riches that we can get by operating, in the ways he has described, on the simple ideas we get from our outer and inner senses. He remarks that he'll illustrate this in his treatments of 'the ideas we have of space, time, and infinity and a few others that *seem* the most remote from' simple sense-based ideas.]

Chapter xiii: Simple modes, starting with the simple modes of space

1. I have often mentioned simple ideas, the materials of all our knowledge, focussing on how they come into the mind. Now I shall discuss some of them with a different focus: this time it will be on how they relate to ideas that are more compounded, looking into the different modifications of the same idea - modifications that the mind either finds in real things or makes up on its own initiative. [A 'modification' of a quality is a special case of it, so squareness is a modification of rectangularity (see viii.23); and by a natural extension of that usage, the idea of squareness can be called a modification of the idea of rectangularity.]

Those modifications of a single simple idea (which I call *simple modes*) are as perfectly different and distinct ideas in the mind as those that are utterly unlike or even contrary to one another. For •the idea of *two* is as distinct from that of *one* as *blueness* is from *heat* or as either of those is from any *number*; yet •it is made up only of repetitions of the simple idea of a unit. Repetitions of this kind joined together make the distinct simple modes of a dozen, a gross, a million.

[Section 2 merely repeats the point Locke has made in v, that 'we get the idea of space both by our sight and touch'.]

3. Space considered in terms purely of length between any two things, without considering anything else between them, is called *distance*; if considered in terms of length, breadth, and thickness I think it may be called *capacity*. The term *extension* is usually applied to it whatever manner it is considered in, whether in terms of one or two or three dimensions.

4. Each different distance is a different modification of space; and each idea of any distance is a simple mode of this idea. . . . We have the power of repeating any idea we have of some distance, and adding it to the first idea as often as we like, without being ever able to come to any stop. That lets us enlarge it as much as we like, which gives us the idea of *immensity* [= 'infinite size'].

5. There is another modification of this idea, which is nothing but the relation that the parts of a boundary have to one another. In perceptible bodies whose surfaces come within our reach, this relation is revealed by the sense of *touch*; and the *eye* learns about it from bodies and from expanses of colours whose boundaries are within its view. •Observing how the boundaries terminate either in straight lines that meet at discernible angles or in crooked lines in which no angles can be perceived, •and considering these as they relate to one another in all parts of the boundaries of any body or space, it [the mind] has the idea that we call *shape*, which offers infinite variety to the mind. For besides the vast number of different shapes that really exist in coherent masses of matter, the mind has the power to make perfectly inexhaustible additions to its stock of ideas, by varying the idea of space and thereby making new compositions. It can multiply shapes ad infinitum, by repeating its own ideas and joining them as it pleases.

[Section 6 continues with the theme of our freedom to make ideas of any shapes we like, whether encountered in reality or not; and adds that we can also form ideas of lengths or distances that are as long or as short as we please.]

7. Another idea that belongs in here is the one we call *place*. Whereas in simple *space* we consider the relation of distance between any two bodies or points, in our idea of *place* we consider the relation of distance between •some thing and •any two or more points that are considered as staying at the same distance from one another and thus as staying at rest. When we find a thing at the same distance now as it was yesterday from two or more points that haven't changed their relative distance in the interim, we say it has 'kept the same place'; whereas if it has perceptibly altered its distance from either of those points we say that it has 'changed its place' . . .

8. The idea of a thing's *place* is relative, in a manner I now explain. If we find the chess-men on the same squares of the board that they were when we left them, we say they are all in the same place, or unmoved, even if the board has been carried from one room into another. That is because we relate them only to the parts of the chess-board, which stay at the same distance from one another. The board, we also say, is in the same place as before if it remains in the same part of the cabin, even if the ship has been sailing on; and the ship is said to be in the same place if it keeps the same distance from the parts of the neighbouring land, even though the earth has rotated. So chess-men, board, and ship have each changed place in respect of more distant bodies that have kept the same distance from one another. . . .

9. This modification of distance that we call *place* was made by us for our own use, and we fit it to our convenience. When men speak of the 'place' of a thing, they do it by reference to those adjacent things *that best serve their present purpose*, ignoring other things that might be better determinants of place for another purpose. When we are playing chess, it wouldn't suit our purpose to locate the pieces in relation to anything except the squares on the board; but quite different standards apply when the chess-men are stored in a bag and someone asks 'Where is the black king?' and the right answer is 'In the captain's cabin'. Another example: when someone asks in what place certain verses are, he doesn't want an answer that names a town or a library or a shelf; he wants an answer such as: 'They are at about the middle of the ninth book of Virgil's *Aeneid*', which remains true however often the book has been moved. . . .

10. Because our idea of place is merely that of a thing's relative position, we can have no idea of *the place of the universe*, though we can of any part of it. We have no idea of any fixed, distinct, particular beings, in reference to which we can imagine the universe to be related by distance. On

the contrary, beyond it there is only one uniform space or expansion in which the mind finds no variety, no marks. To say that the world *is somewhere* means merely that it *does exist*. . . . Someone who could find out and form a clear idea of *the place of the universe* would be able to tell us - 'as in fact obviously nobody can' - whether the universe moves or stands still in the undifferentiated emptiness of infinite space! . . .

11. Some philosophers - 'led into this by Descartes' - maintain that *body* and *extension* are the same thing. One might think they have changed the meaning of one of the words; but I doubt that, because they have so severely condemned others for relying on uncertain meanings and on the deceitful obscurity of doubtful or meaningless words. Well, then, if they mean by 'body' and 'extension' the same as other people do, namely:

body: something that is solid and extended, whose parts are separable and movable in different ways; and

extension: the space that lies between the extremities of those solid cohering parts, and which is possessed by them [these are Locke's exact words],

then they are confounding two very different ideas with one another. Isn't it clear to us all that the idea of *space* is as distinct from that of *solidity* as it is from the idea of *scarlet colour*? Solidity can't exist without extension; but neither can scarlet colour exist without extension; this doesn't prevent the ideas from being distinct from one another. Many ideas require, as necessary to their existence or conception, *other* ideas, ones that are entirely distinct from them. Motion can't be or be conceived without space, but motion is not space. Equally distinct from one another, I think, are the ideas of space and solidity 'and, therefore, the ideas of space and of body. That follows because: solidity is so inseparable an idea from body that the latter depends on the former for its filling of space, its contact, impact, and communication of motion on impact. If we can - 'as some Cartesians do' - infer that 'mind is different from body from the premise that 'thinking doesn't include the idea of extension in it, we should be able by parity of argument to conclude that 'space is not body, because 'it doesn't include the idea of solidity in it. Here are three reasons why *body* and *extension* are two distinct ideas.

12. First, extension doesn't include solidity or resistance to the motion of body, as body does.

13. Secondly, the parts of pure space are inseparable from one another; so that the continuity can't be broken up - either really or in thought. One couldn't possibly break up a region of space into two separated parts, with two surfaces where there had been a continuity; and the very *thought* of such a separation is impossible, being inconsistent with the idea of pure space.

I am not denying that one can consider a portion of space - say a cubic foot of it - without considering the rest; but that is a partial consideration, not a mental separation, which is something different. . . . One may consider light in the sun without its heat, or mobility in a body without its extension, without thinking of their separation - 'that is, without thinking of the sun as cold or of the body as unextended'. . . .

14. Thirdly, the parts of pure space are immovable, which follows from their being inseparable, because motion is nothing but change of distance between any two things, and this can't happen between parts that are inseparable.

Thus the established idea of simple space distinguishes it plainly and sufficiently from body, since its parts are *inseparable*, *immovable*, and *without resistance to the motion of body* 'whereas none of these is true of body'.

15. If anyone asks me, *What is this space you speak of?* I will tell him when he tells me what his extension is. For to say, as is usually done, that being extended is having *parts outside parts* [Locke puts it in Latin] is to say only that *extension is extension*. I learn nothing about the nature of extension when I am told that extension is to have extended parts that are exterior to extended parts. As if someone asked what a fibre is, and I answered that it is a thing made up of several fibres! . . .

16. Those who contend that space and body are the same challenge us with a dilemma that they learned from Descartes. Either space is something or it is nothing; if we say it is nothing, then they reply that in that case two bodies cannot be separated by it, because if there is nothing between two bodies they must touch one another. If on the other hand we say that space is something, they demand that we tell them whether it is body or mind. I answer their question with a question: who told them that there could be nothing but solid beings that can't think, and thinking beings that aren't extended? . . .

17. If someone asks (as people usually *do*) whether space with no body in it is substance or accident [here = 'property'], I answer: I don't know, and I shan't be ashamed to admit my ignorance until the challengers show me a clear distinct idea of substance. I shall stay with 'substance' for the next three sections, returning to space in section 21a.

18. I do my best to avoid the fallacies that we tend to fall into when we take words for things. It doesn't help our ignorance when we *pretend* to have knowledge by making meaningless noises. Made-up names don't alter the nature of things, and unless they stand for definite ideas they don't enable us to understand things either. Those who lay so much stress on the sound of the two syllables *substance* should ask themselves what is going on when they apply this word to •the infinite incomprehensible God, to •finite spirits, and to •body. Do they apply it in the same sense? Does it stand for the same idea when each of those three so-different beings are called substances? If it is, does it follow that God, spirits, and body, agreeing in the same common nature of *substance*, differ only in having different modifications of it, comparably with how a tree and a pebble are alike in having the common nature of *body* and differ only in having different modifications of it. That would be very hard to swallow. If instead they say that they apply 'substance' to God, finite spirit, and matter in three different meanings, expressing three different ideas, they ought to make known what those distinct ideas are, or at least to give them three different names, to prevent the confusion and errors that will naturally follow from the promiscuous use of such a suspect term. So far from its having three different meanings, in ordinary usage 'substance' scarcely has *one* that is clear and distinct! . . .

19. The philosophers who first rushed into the notion of *accidents*, as a sort of real beings that needed something to inhere in, were forced to find out the word 'substance' to support them. [In this context an 'accident' is a property-*instance*. Locke is accusing his opponents of some such thought as this: 'In this ball that I hold in my hand there is sphericity, rubberiness, softness, a certain smell, and so on; that is, there are *this ball's instances* of those general properties; but there must also be something that *has* them, something that they are properties *of*. That must be a substance.'] Consider the poor Indian philosopher who imagined that the earth also needed something to hold it up. If only he had thought of this word 'substance', he wouldn't have needed to find an elephant to support the world and a tortoise to support the elephant: the word 'substance' would have met his needs! That would have been as good an answer to *his* question as it is to the question of our European philosophers who ask what supports a thing's accidents, and answers that it is 'substance'. We have in fact no idea of what substance *is*, but only a confused obscure one of what it *does*, namely, it supports accidents.

[In section 20 Locke continues his attack on ‘substance’, ending with this sarcastic jibe against the view that accidents must *inhere* in a *substance*:] If the Latin words *inhaerentia* and *substantia* were put into the plain English that translates them - ‘sticking on’ and ‘under-propping’ - it would be easier for us to see the very great clearness there is in the doctrine of substance and accidents, and show how useful they are in deciding of questions in philosophy.

21a. [Through a mistake in the original work, this section and the next were both labelled ‘21’.] Returning now to our idea of space and to the wrongness of identifying it with our idea of body: I think everyone will agree that there is not an infinite extent of matter (‘body’) in the universe. Well, then, if a man were placed by God at the edge of the world of bodies, could he stretch his hand beyond his body? If he could, then he would put his arm where there had previously been space without body; and if he spread the fingers of his outstretched hand, there would be space between them without body. If on the other hand he *couldn’t* stretch out his hand, that would have to be because of some external obstacle; and then I ask whether that obstacle is substance or accident, something or nothing? When they (the Cartesians) have settled *that*, they will be able to settle what it is that •can be between two bodies at a distance and •is not body itself and •has no solidity. Anyway, this line of thought about *nothing*:

If a body is put in motion and *nothing* hinders it (as would be the case beyond the utmost bounds of all bodies), it can continue to move,
is at least as good as this one:

If there is *nothing* between two bodies, they must necessarily touch one another.
·Really the former is better than the latter, for •pure space between two bodies is sufficient to block the inference to their being in contact with one another, whereas •bare space in the way isn’t sufficient to stop motion. In fact, these men must either admit that they think body to be infinite (though they don’t like saying this aloud) or else affirm that space isn’t body after all. A thoughtful person can no more have the thought of a boundary to space than he can think of a limit to time; if anyone’s idea of eternity is infinite, so is his idea of immensity; either time and space are both finite or they are both infinite.

21b. Furthermore, those who assert the impossibility of space existing without matter must not only make body infinite but must also deny that God has a power to annihilate a part of matter. Presumably no-one will deny that God could put an end to all motion, keeping all the bodies in the universe completely immobile for as long as he pleased. Well, then, if you allow that God could, during such a period of universal rest, annihilate the book you are now reading, you must also admit the possibility of a vacuum, for the space that was filled by the annihilated book would still exist, and would be a space without body. For the surrounding bodies, being perfectly still, make a diamond-hard wall through which no other body can possibly get in.

Indeed, the supposition of plenitude - i.e. that the universe is full - has the consequence that if a particle of matter is removed another particle must move in to take its place. But plenitude is only an unsupported supposition, which needs some better proof than a *supposed* matter of fact which experiment can never establish. And it can’t be accepted on conceptual rather than matter-of-fact grounds, for our own clear and distinct ideas plainly satisfy us that there is no necessary connection between space and solidity, since we can conceive the one without the other. [Locke then repeats a point from iv.3: anyone who joins in the debate over plenitude as a matter-of-fact issue thereby commits himself to having distinct *ideas* of space and of matter or body.]

22. Without thinking about the edge of the material world, and without appeal to God's omnipotence, we get evidence for the existence of a vacuum from the motion of bodies that we see in our own neighbourhood. I defy anyone to divide a solid body so as to make it possible for the solid parts to move up and down freely every way within the bounds of that surface, without leaving in it an empty space as big as the smallest part into which he has divided the body. [Locke goes on to say, with some eloquence, that this reasoning applies at any size-level you care to choose.]

23. But my topic was the question whether the idea of space or extension is the same as the idea of body; and to answer No to this it isn't necessary to prove the *real existence* of a vacuum. All that is needed is that we have the *idea* of it, and it is plain that men have that - i.e. the idea of vacuum, or space without body - when they argue about whether or not there is a vacuum. If they didn't have the idea of space without body, they couldn't make a question about its existence. . . .

[In section **24** Locke offers a suggestion about *why* the Cartesians made their mistake. (The better Cartesians, that is; he is rude about the others.) By sight and by touch, he says, the extension of bodies is forced in on us all the time, so it has come to dominate the thinking of the Cartesians, seducing them into thinking that none of the other properties of bodies could exist in the world except as properties of extended things. He concludes:] If they had reflected on their ideas of •tastes and smells, as much as on those of •sight and touch, they would have found that the former didn't include in them any idea of extension. Extension is just one affection [= 'property'] of body - one among others - and it is discoverable by our senses, which are hardly acute enough to look into the pure essences of things. The Cartesian view, remember, is that extension is *the whole essence of body*.

[Section **25** presents a mild philosophical joke: the sort of thinking the Cartesians seem to have done should lead one to conclude that '*unity* is the essence of every thing' because every thing is an instance of it - i.e. is *one*.]

[In section **26** Locke repeats his main case against the Cartesian view. He also mentions, but doesn't answer, the question of whether space is •'only a relation resulting from the existence of other beings at a distance' or whether instead it is •a kind of container. He declines to take sides on that question. He ends by suggesting some terminology, including this:] To avoid confusion it might be helpful if the word 'extension' were applied only to matter, or the distance between the boundaries of particular bodies, and the term 'expansion' were used for space in general, with or without solid matter possessing it. . . .

28. That last suggestion points to a more general issue that will loom large in Book III, but which warrants one section here. Knowing precisely what our words stand for would, I imagine, quickly end this dispute and very many others. For I am inclined to think that when men come to examine their simple *ideas* they find them generally to agree, though in conversation they may confuse one another by using different *names*. I imagine that men who abstract their thoughts from the words in which they express them, and examine well the ideas of their own minds, can't differ much in their •thinking, however much they may puzzle one another with •words, which they use according to the ways of speaking of the various schools or sects they grew up in. Though amongst unthinking men who don't scrupulously and carefully examine their own ideas, and don't peel them off from the words men use for them, but rather confound them with words, there is

bound to be endless dispute, wrangling, and jargon; especially if they are learned bookish men who are devoted to some sect, and have learned to parrot its way of talking. But if any two *thinking* men really had different ideas, I don't see how they could converse or argue one with another.

Don't misunderstand me. The sort of ideas I am speaking of don't include every floating imagination in men's brains. It isn't easy for the mind to put off those confused notions and prejudices it has absorbed from custom, carelessness, and ordinary talk. It requires trouble and concentration for the mind to examine its ideas far enough to resolve them into the clear and distinct simple ideas out of which they have been compounded, and to see which of its simple ones have a necessary connection with which others. . . .

Chapter xiv: Duration and its simple modes

1. There is another sort of distance or length the idea of which we get not from the permanent parts of *space* but from the fleeting and perpetually perishing parts of *succession*. This we call *duration*; its simple modes are the different lengths of it of which we have distinct ideas - hours, days, years, etc., and time and eternity.

2. A great man - St. Augustine - when asked by someone what time is, answered: 'When you don't ask me, I know what it is' [Locke gives this in Latin], which amounts to this: 'The more I set myself to think about it, the less I understand it.' This might lead one to think that time, which reveals all other things, is itself not to be discovered. Duration, time, and eternity are plausibly thought to have something very abstruse in their nature. But if we trace these ideas right back to their origins in *sensation* and *reflection*, one of *those* will be able to make these ideas as clear and distinct to us as many others that are not thought to be so obscure. 'Among other things', we shall find that the idea of *eternity* itself is derived from the same origin as the rest of our ideas.

3. To understand *time* and *eternity* correctly, we should attend to the nature of our idea of *duration*, and to how we came by it. Anyone who observes what happens in his own mind must realize that there is a sequence of ideas constantly following one another in his mind, as long as he is awake. Reflection on these appearances of various ideas one after another in our minds is what provides us with the idea of *succession*; and the distance between two any parts of that sequence, or between the appearance of any two ideas in our minds, is what we call *duration*. For while we are thinking, or while we receive successively various ideas in our minds, we know that we exist; and so we call the existence (or the continuation of the existence) of ourselves our 'duration'. We also speak of the duration of other things that coexist with our thinking.

4. We don't perceive duration except when we attend to the sequence of ideas that take their turns in our understandings; which convinces me that our notion of succession and duration comes from *reflection*. [When Locke writes a phrase like 'a succession of ideas', this text replaces 'succession' by 'sequence'. In phrases like 'our notion of succession', the word 'succession' is left alone.] When the sequence of ideas ceases, our perception of duration ceases with it - as everyone finds from his own experience of sleeping for any period of time, long or short. While he is sleeping and not thinking, he has no perception at all, and the duration of his sleep is quite lost to him; there seems to him to be no 'temporal' distance from the moment he stops thinking to the moment he starts again. I am sure that it would be just like that for a man awake, if he could keep only one unvarying idea in his mind. We do in fact see that someone who fixes his thoughts very intently on one thing, not attending much to the sequence of ideas that pass in his mind, lets slip out of his

account a good part of that duration and thinks the time that has passed is shorter than it really is. [Locke adds the point that even a sleeping man retains a sense of time passing if he dreams; which he takes as confirmation of his view.]

5. Someone who has in this way acquired the notion or idea of duration, can apply it to things that exist while he isn't thinking; just as someone who has acquired the idea of extension from bodies through his sight or touch can apply it to distances where no body is seen or felt. That enables a man to judge how much time has passed while he was asleep and not dreaming. Having observed the revolution of days and nights, and found the length of their duration to appear regular and constant, he can suppose that this revolution went on in the same way while he was sleeping as it did at other times, and this will give him a measure of how long he slept. But if Adam and Eve (when they were alone in the world), instead of their ordinary night's sleep, had passed a whole twenty-four hours in one continued sleep, the duration of those twenty-four hours would have been irrecoverably lost to them.

6. If you think that we get the notion of succession from •sensation rather than •reflection, then consider this: the motion of external bodies produces an idea of succession in your mind only to the extent that it produces there a continued series of distinguishable ideas. A man becalmed at sea may look on the sun, or the sea, or his ship for a whole hour, during which time two and perhaps three of those objects have moved, but because •he hasn't perceived their motion he doesn't get from them any sense of duration, ·i.e. of time passing·. But if during this hour of quiet he has been thinking, •he will perceive the various ideas of his thoughts appearing one after another in his own mind, and thereby find *succession* where he could observe no *motion*.

7. I think this is why very slow uniform motions are not perceived by us. In such a case, the change of relative distance is so slow that it causes no new ideas in us - or only ones that are widely separated in time - and so we don't have a constant series of new ideas following one another immediately in our minds, and thus have no perception of motion. . . .

8. On the other side, things that move very swiftly are also not perceived to move. It is because they don't affect the senses distinctly with the distinguishable distances of their motion [the last five words are Locke's], and so don't cause any sequence of ideas in the mind. When we see a thing moving around in a circle in less time than our ideas ordinarily succeed one another in our minds, we don't perceive it to move, and see it rather as a perfect unbroken circle of that matter or colour, and not a part of a circle in motion.

9. I conjecture (you decide for yourself) that while we are awake our ideas succeed one another in our minds at certain distances, somewhat like the images inside a lantern that are turned around by the heat of a candle. Their appearance in sequence may be sometimes faster and sometimes slower, but I guess that it doesn't vary much in a waking man. There seem to be limits to how quickly and to how slowly ideas can succeed one another in our minds.

10. My reason for this odd conjecture is my observation that in the impressions made on any of our senses we can perceive succession only within limits. If the sequence of impressions is exceedingly fast, the •sense of succession is lost, even in cases where it is obvious that there *is* a •real succession. Suppose that a cannon-bullet shoots across a room, on its way ripping off someone's leg: it couldn't be clearer that it must *successively* strike the two sides of the room, and that its damage to the victim must occur *between* those two events. And yet I don't think that anybody who felt the pain of such a shot and heard the blows against the two walls would

perceive any succession in these events. A stretch of time like this, in which we perceive no succession, is what we call *an instant*. It is that which takes up the time of *only one idea in our minds*.

11. This also happens when the motion is very slow, not providing the mind with a constant series of fresh sensory ideas as fast as the mind is capable of receiving them. In these cases, •other ideas *of our own thoughts* can insert themselves into our minds between •the ideas offered to our senses by the •slowly moving body. So the sense of motion is lost. Although the body really does move, its •changes of perceivable distance from some other bodies is slower than the rate at which •ideas of our own minds - •ideas of reflection - naturally follow one another in sequence. The thing therefore seems to stand still; as is evident in the hands of clocks and shadows of sun-dials, and other constant but slow motions. . . .

12. It seems to me, then, that the constant and regular succession of ideas in a waking man is the measure and standard - so to speak - of all other successions. [The remainder of this section repeats the content of sections 10 and 11. Locke will take up temporal measurement in section 17 and run with it to the end of the chapter.]

13. Someone may say: 'If the ideas of our minds constantly change and shift in a continual succession, it would be impossible for a man to think long about any one thing.' If this means that a man can't have one single idea for a long time alone in his mind, with no variation, I agree that it isn't possible. The only reason I can give for this opinion is an appeal to experience; and I invite you to try whether you can keep one unvaried single idea in your mind, without any other, for a considerable period of time. 'I can't give a deeper and more explanatory reason for my view, because I lack the knowledge that this would require'. I don't know how the ideas of our minds are made, or what they are made of, or what lights them up for us, or how they come to make their appearances.

[In sections **14-15** Locke predicts the difficulties that will be encountered by anyone who accepts his 'try it for yourself' challenge. Section **16** repeats the thought of section 6, namely that the motions of bodies support our idea of succession only *through* the succession of ideas they cause in us.]

17. Once the mind has acquired the idea of duration, the next thing it is natural for it to do is to get some *measure* of this common duration, by which to judge its different lengths and think about the order in which various events occur. Without this, much of our knowledge would be confused, and much of history would be useless. When duration is considered as broken up into measured periods, the proper name for it is 'time'.

18. To measure extension we need only to apply our standard or measure to the thing we are measuring - for example, laying a tape-measure along a length of cloth. But in measuring duration we can't do that, because no two parts of a sequence can be laid alongside one another. And nothing can measure duration except duration (just as nothing can measure extension except extension); but we can't keep by us any standing unvarying measure of duration, as we can of certain lengths of extension, marked out in durable material things. All we are left with for a convenient measure of time is the dividing up of long periods into *apparently* equal portions, 'these being measured' by constantly repeated kinds of event. Portions of duration that aren't thought of as distinguished and measured by such periods aren't strictly speaking instances of *time*, and we reflect this in phrases like 'before all time' and 'when time shall be no more'.

[Sections 19-20 make and defend the following point: Although in our civilisation we measure time by movements, e.g. those of the earth around the sun, it is a mistake to think - as some philosophers have - that time and motion are essentially tightly linked to one another. All the measuring of time requires is regular periodic events *of some kind*; they need not be movements. Locke gives examples of other standards for the measurement of time.]

21. ‘Without a regular motion such as the sun’s’, it may be demanded, ‘how could it ever be known that such periods were equal?’ I answer that the equality of any other periodic events could be known in the same way that days were known or presumed to be equal at first - namely, through judging them in terms of the contemporaneous series of ideas that had passed in men’s minds. [Locke develops this point in a long discussion of which the following episodes are especially notable.] We must carefully distinguish duration itself from the measures we make of it. Duration in itself is to be considered as going on in one constant, equal, uniform course; but none of our bases for measuring it can be known to do so. . . . If anyone should ask us how we know that the two successive swings of a pendulum are equal, it would be hard to satisfy him that they are infallibly so. . . . Since no two portions of a sequence can be brought together, it is impossible ever certainly to know their equality. All we can do for a measure of time is to take such kinds of events as have continual successive appearances at *seemingly* equidistant periods. And of this seeming equality we have no measure except the sequence of our own ideas, with some confirmation from other probable reasons, to persuade us of their equality.

[In section 22 Locke criticises the view that ‘time should be *defined* to be the ‘measure of motion’, bringing against it the points made in sections 19-20, and adding one further point, namely that •time has no more right to the label ‘measure of motion’ than •space has.]

[In section 23 Locke contends that there is no necessity about any of the measures of duration that we happen to use - minutes, hours, days, etc. We could adopt any others that satisfied the requirement of ‘regular periodical returns’.

24. Once the mind has acquired a measure of time such as the annual revolution of the sun, it can apply that measure to durations in which that measure didn’t exist. . . . The idea of duration equal to an annual revolution of the sun is as easily applicable in our thoughts to duration where no sun or motion was, as the idea of a foot or yard, taken from bodies here, can be applied in our thoughts to distances beyond the confines of the world, where are no bodies at all.

[Section 25 expands this point a little.]

26. If it is objected that in my account of time I have illegitimately assumed that the world is neither eternal nor spatially infinite, I answer that my present purposes don’t require me to *argue* that the world is finite in duration and extension. That it *is* so is at least as conceivable as that it *isn’t*, so I am as entitled to assume the finiteness of the world as anyone is to suppose the contrary. As regards conceivability: I am sure that anyone who tries it will easily conceive in his mind the beginning of motion, and so may come to a stop - a go-no-further - in his consideration of motion; but he can’t in the same way conceive a beginning of all *duration*. So also in his thoughts he can set limits to body, but not to *space*. The utmost limits of •space and •duration are beyond the reach of thought, as are also the utmost limits of •number - and all for the same reason, as we shall see later.

27. The origin of our idea of time also gives us the idea of *eternity*. Here is how. Having acquired the idea of succession and duration in the manner I have described, and having from the

revolutions of the sun acquired the ideas of certain lengths of duration, we can in our thoughts add such lengths of duration to one another as often as we please, and apply the results of that addition to durations past or future. We can continue to do so without bounds or limits, proceeding ad infinitum. This lets us apply the length of the sun's annual motion to a duration before there was any sun or any motion; which is no more difficult or absurd than to apply my notion of one hour, based on the moving of a shadow on a sun-dial, to the duration of the burning of a candle last night, which is now absolutely separate from all actual motion. All this requires is the thought that if the sun *had* been shining on the dial at that time, its shadow *would have* moved from one hour-line to the next while the candle's flame candle lasted.

[In sections 28-9 Locke develops the idea that we can have the thought of determinate periods of time before there were any events by which to measure it. The crux is this, from 29:] For measuring the duration of anything by *time*, the thing need not be co-existent with any motion that we use for temporal measurement, or indeed with *any* periodic revolution of a kind we *could* use for such measurement. All we need is to have *the idea of* the length of some regular periodical appearances, an idea that we can in our minds apply to durations with which the motion or appearance never co-existed.

30. . . . I can imagine that light existed *three days* before the sun existed and moved, by having this thought:

The duration of light before the sun was created was of a length such that: if the sun *had* been moving then as it does now, it *would have* been equal to three of its daily revolutions.

. . . In this way I can have the thought of something's being the case a minute, an hour, a day, a year, or a thousand years before there were any moving bodies or any other regular periodic events. For I need only to consider duration equal to one minute, and then I can add one minute more, and so on until I come to sixty; and by the same way of adding minutes, hours, or years, . . .

. . . I can proceed ad infinitum. That involves supposing a duration that exceeds as many such periods as I can count, however long I go on; and I think that is the notion we have of eternity. The infiniteness of eternity involves the same idea as we have for the infiniteness of number, to which we can add for ever without end.

31. And thus I think it is plain that we get our ideas of duration, and our measures of it, from the two fountains of all knowledge that I have spoken of - reflection and sensation. [Then Locke swiftly recapitulates the six main topics of this chapter: idea of succession, idea of duration, measure of duration, thought of determinate lengths of duration when no measure exists, idea of eternity, idea of 'time in general'.]

Chapter xv: Duration and expansion, considered together

1. Though I have dwelt pretty long on the topics of space and duration, I shall stay with them, comparing them with one another. They are important, and also in some ways abstruse and peculiar; and we may be helped to get a clear understanding of them by considering them together. I shall use the term '*expansion*' for the most general and abstract notion of space, because '*extension*' for some people involves some thought of extended bodies. . . . In both *expansion* and *duration* the mind has the common idea of continued lengths, capable of greater or less quantities; for we have as clear an idea of how an hour differs from a day as we have of how an inch differs from a foot.

2. The mind, having acquired the idea of the length of any part of expansion, can repeat it as often as it wants, moving out to the distance of the sun or of the remotest star. In moving out in this way the mind encounters nothing to stop its going on, inside the material world or beyond it. We can easily in our thoughts come to •the end of solid extension: •the outer edge of all body we can easily arrive at •in our thought. But when the mind is there, it finds nothing to hinder it from moving on into the endless expansion beyond; of *that* it can't even conceive any end. Don't say 'Beyond the bounds of body there is *nothing at all*', unless you are willing to confine God within the limits of matter. . . .

3. Similarly with duration: having acquired the idea of some length of duration, the mind can double, multiply, and enlarge it - beyond the existence of all bodies and all the measures of time taken from the great bodies of the world and their motions. Yet everyone readily admits that although we rightly make duration boundless we cannot extend it beyond all being. We all agree that God fills eternity; and (•returning for a moment to the last topic of section 2•) it is hard to find a reason for anyone to doubt that God likewise fills immensity. His infinite being is certainly as boundless in one way as in the other; and to say that *where there is no body there is nothing at all* is, I think, to give too much importance to matter.

[In section 4 Locke says that many people who are sure that time is infinite hesitate to say the same about space, and he suggests a reason. It is because we think of both time and space - or, more strictly, duration and expansion - as states of properties of some being, some *thing*; where duration is concerned, the thing can be God; but we don't think of God as extended, and so where space is concerned we are apt to think that it stops where matter stops because beyond the edge of the material world there is no *thing* for space to be an attribute of. Here Locke interpolates some thoughts about a likeness between the Latin roots of the words for 'enduring' and for 'hard'. Then, returning to his main thought in this section:] But be that as it may, it is certain that anyone who pursues his own thoughts will find that they sometimes launch out beyond the extent of body into the infinity of space or expansion, the idea of which is distinct and separate from body and all other things.

5. *Time* in general is to *duration*, as *place* is to *expansion*. Time and place are such portions of those boundless oceans of eternity and immensity as have been set out and distinguished from the rest, as it were by land-marks. [The remainder of this section elaborates that a little.]

6. 'Time' and 'place', taken thus •to stand• for determinate distinguishable portions of those infinite abysses of space and duration that are supposed to be marked off from the rest by known boundaries, have each of them a double meaning.

First, *time* in general is commonly taken for that part of infinite duration that is measured by, and co-existent with, the motions of the great bodies of the universe. In that sense time begins and ends when this sensible world begins and ends - see iv.18. *Place* is also sometimes taken for that portion of infinite space that is occupied by the material world, and is thereby distinguished from the rest of expansion (though this is better called 'extension' than 'place'). . . .

7. Secondly, sometimes 'time' is used in a broader sense, and is applied not only to parts of that infinite duration that were really distinguished and measured out by periodical motions of bodies that we use as our measures of time, but also to other portions of it that we suppose to be equal to certain lengths of measured time - thus considering them as bounded and determined •even if they were really not so•. In this spirit we might say 'Angels were created 7640 years before the

world was', thereby marking out as much of that undifferentiated duration as we suppose would have allowed 7640 annual revolutions of the sun if it moved at its actual rate. Likewise we sometimes speak of *place*, *distance*, or *volume* in the great emptiness beyond the edge of the world, when we pick out in thought an amount of it that could contain a body of any assigned dimensions, such as a cubic foot; or suppose a point in it at such-and-such a distance from a given part of the 'material' universe.

8. *Where?* and *When?* are questions that can be asked about any finite existent, and we always answer them in terms ('for *Where?*') of relations to some known parts of this perceptible world and ('for *When?*') of relations to certain periods marked out to us by the motions observable in it. Without some such fixed parts or periods, our finite minds would be lost in the boundless invariable oceans of duration and expansion. [Locke then adds details to this comparison between expansion and duration, space and time.]

9. Space and duration are greatly alike in another way, namely that although they are rightly counted as •simple ideas, every distinct idea we have of either of them involves some •composition 'because' it is the very nature of each to consist of parts. Still, they are entitled to count as simple ideas, because their parts are all of the same kind, involving no mixture of any other idea. If the mind could (as with number) reach the thought of a part of extension or duration that is too small to be divided, that would be the indivisible unit or idea by repetition of which the mind would make its more enlarged ideas of extension and duration. But since the mind can't form an idea of any space without parts, it instead makes use of common measures such as inches and feet, and repeats *them* to get ideas of larger extents. 'And similarly with time'. [Locke continues with remarks about the 'obscure and confused' ideas that we have of very large or very small amounts of space or time. (Our idea of *ten million cubic miles* isn't clear, though its *ten million* component is so.) He observes that we have a rough and ready idea of a minimum amount of time or of space - namely the smallest amount of which we can form a clear and distinct idea.]

[In section **10** Locke likens expansion to duration in this: both have parts, but it makes no sense to think of either of them as being taken apart.]

11. Here is a manifest difference between expansion and duration. The ideas of •length that we have can be turned in every direction, and so make shape, and breadth, and thickness; whereas •duration is like the length of one straight line, extended ad infinitum, and not capable of multiplicity, variation, or shape. Duration is something of which all things, while they exist, equally partake. For *this present moment* is common to all things that are now in being, and contains that 'present' part of their existence, . . . and we may truly say that they all exist in the same moment of time.

Whether angels and Spirits have any analogy to this in respect to expansion is beyond my comprehension. Our understandings and comprehensions are suited to our own survival and the purposes of our own lives, but not to the reality and extent of all other things. So it is nearly as hard for us to conceive of any real being with a perfect negation of every kind of expansion as it is to have the idea of a real being with a perfect negation of every kind of duration. So we don't know 'and can't even think about' what •Spirits have to do with space, or how they relate to one another in it. All that we know is that each •body possesses its own portion of it, according to the extent of its solid parts, excluding all other bodies from that portion of space for as long as it is there.

12. Duration - and time, which is a part of it - is the idea we have of *perishing distance*, of which *no two parts exist together*, but follow each other in sequence; and expansion is the idea of *lasting distance*, *all of whose parts exist together*, and are not capable of succession. [By 'perishing distance' Locke seems mean the ever-shrinking temporal distance between the present time and some future event.] 'Because our idea of duration is as it is', we can't get our minds around the thought of a being that •now exists tomorrow, or that •now has more than the present moment of duration. Yet we can conceive God's eternal duration as being far different from ours and any other finite being's. Our knowledge and power don't range over all past and future things; our thoughts are only of yesterday, and we don't know what tomorrow will bring. We can never bring anything back once it is past; and we can't make present what is yet to come. What I say here about *us* I say of *all finite beings*. Even ones that far exceed man in knowledge and power are still no more than the meanest creature in comparison with God. Something finite, however great and grand it is, stands in no proportion to what is infinite. Because God's infinite duration is accompanied by infinite knowledge and infinite power, he sees all things past and to come; and they are no more distant from his knowledge than the present. And there is nothing that he can't make exist whenever he likes. For the existence of all things depends on his good pleasure, so all things exist at every moment that he thinks fit to have them exist.

A final remark: expansion and duration *contain* each other: every part of space is in every part of duration, and every part of duration is in every part of expansion. In all the great variety of our thoughts, this combination of two distinct ideas seems to have almost no equal. It may be worth thinking about further.

Chapter xvi: Number

1. Among all the ideas that we have, none is •suggested to the mind by more ways, and none is •more simple, than the idea of *unity* or *one*. It •hasn't a trace of variety or composition in it; and •every object that our senses are brought to bear on, every idea in our understandings, every thought of our minds, brings this idea along with it. This makes it the most intimate to our thoughts, and also the most universally applicable idea that we have. For *number* applies itself to men, angels, actions, thoughts, everything that exists or can be imagined.

2. By repeating this idea in our minds, and adding the repetitions together, we come by the complex ideas of its modes. [Here and in many later passages, 'mode' means what 'modification' meant earlier, e.g. in xiii.1, namely 'special case', so that *two* is a mode of *number*.] Thus by adding one to one we have the complex idea of a couple; by putting twelve units together we have the complex idea of a dozen; and so on for any other number.

3. The simple modes of number are the most distinct of all our ideas. Every least variation - namely, of *one unit* - makes each combination as clearly different from its nearest neighbour as it is from the most remote: *two* is as distinct from *one* as from *two hundred*. . . . This is not so with other simple modes, where it can be hard and perhaps impossible for us to distinguish between two nearby ideas even though they are really different. Who will undertake to find a difference between the white of this paper and that of the next degree 'of whiteness' to it? Who can form distinct ideas of every difference in size, however small?

4. Demonstrations with numbers may not be more evident and exact than demonstrations with extension, but they are more •general in their use and more •determinate in their application. Or so I am inclined think, because each mode of number is so clearly distinct from all others, even

close ones, whereas with extension not every equality and excess is so easy to observe or measure. With number we have the idea of a *unit*, but with extension our thoughts can't arrive at any determined smallness beyond which it can't go, comparable with a unit. . . . No-one can specify an angle that is the *next biggest* to a right angle!

5. By repeating the idea of a unit, joining it to another unit, we make one collective idea marked by the name 'two'. If someone can do this, and can carry the procedure further by adding *one* to each collective idea that he reaches, and also gives a name to every number whose idea he comes to, then he can *count*. . . . He can add one to one, and so to two, and so go on with his tally, taking with him the distinct names belonging to every stage in the progression; and so he is capable of all the ideas of numbers for which he has names. Perhaps not of ideas for which he doesn't have names; because the various simple modes of numbers have no variety, and can't differ from one another in any way except as *more* or *less*, so that names or marks for each separate combination seem more necessary than with any other sort of ideas. For without such names or marks we can seldom make use of numbers in calculating, especially in cases involving a great multitude of units. When such a multitude is assembled in thought without a name or mark to distinguish that precise collection, it will hardly be kept from collapsing into a confused heap.

6. I think this is why some Americans [= 'American Indians'] with whom I have spoken, though otherwise quick and intelligent, didn't have our ability to count to 1000, and had no distinct idea of that number, though they could calculate very well up to 20. Their language was scanty, being accommodated only to the few necessities of survival in a simple way of life that didn't involve either trade or mathematics; so it contained no word to stand for 1000. When I spoke to them about those greater numbers, they would show the hairs of their head, to express a great multitude that they couldn't number. [After giving another example, Locke speaks of the possibility of our wanting to think about higher numbers than we usually do, and thus needing names for them. He proposes that as well as 'million' we adopt 'billion', 'trillion', 'quadrillion' and so on, up to 'nonillion' - and further if we need to. His billion is a million millions.]

[In section 7 Locke discusses children, who at a time when they have a great deal of intellectual capacity can't count or handle particular numbers in other ways; and some adults who 'through the default of their memories' have a life-long inability to cope with higher numbers. He concludes:] To calculate correctly, one must do two things: (1) distinguish carefully two ideas that differ from one another only by one unit; (2) retain in memory the names or marks of the several combinations, from a unit up to that number - not confusedly and at random, but in the exact order in which the numbers follow one another. If one goes wrong in *either* of these, the whole business of numbering will be disturbed, the ideas necessary for distinct numeration won't be achieved, and one will be left only with the confused idea of *multitude*.

8. Number is what the mind makes use of in measuring things. The main things that are measurable are expansion and duration; and our idea of infinity, even when applied to those - in the ideas of •infinite expansion and •infinite duration - seems to be nothing but the infinity of *number*. What else are our ideas of •eternity and •immensity but the repeated additions of certain ideas of imagined parts of duration and expansion, with help from the infinity of number, in which we can come to no end of addition? Regarding that last point: Let a man collect into one sum as great a number as he pleases, its size doesn't lessen even slightly his power of adding to it, or bring him any nearer the end of the inexhaustible stock of number, where there still remains as much to be added as if none were taken out. This addition - or *addibility*, if you wish - of

numbers which is so apparent to the mind is, I think, what gives us our clearest and most distinct idea of infinity. More about that in the next chapter.

Chapter xvii: Infinity

1. If you want to know what kind of idea it is that we name 'infinity', you can't do better than to consider •what the idea of infinity is most immediately applied to by the mind, and then •how the mind comes to form this idea.

Finite and *infinite* seem to me to be viewed by the mind as modes of *quantity*, and to be attributed primarily and initially only to things that have parts, and can be augmented or diminished by the addition or subtraction of parts, however small. Such are the ideas of *space*, *duration*, and *number*, which we have considered in xiii-xvi. No doubt we must accept that the great God is incomprehensibly infinite; but when we apply 'infinite' to that first and supreme being, we do it primarily in respect to *when* and *where* he exists, in the judgment that he exists always and everywhere; and we apply infinity more figuratively (I think) to his power, wisdom, and goodness, and other attributes, which are in their own natures inexhaustible and incomprehensible, etc. When we call them 'infinite' we have no other idea of this infinity except what carries with it some reflection on, and imitation of, that *number* or *extent* of the acts or objects of God's power, wisdom, and goodness. I make no claim about how these attributes are in God, who is infinitely beyond the reach of our narrow capacities. They certainly contain in them all possible perfection. But this, I say, is how we conceive them, and these are our ideas of their infinity.

2. *Finite* and *infinite*, then, are viewed by the mind as modifications of expansion and duration. Next we must consider how the mind comes by these ideas. There is no great difficulty about *finite*. The obvious portions of extension that affect our senses carry the idea of *finite* with them into the mind; and the ordinary periods (hours, days, years) whereby we measure time and duration are bounded lengths, and thus *finite*. What is difficult is to grasp how we come by those boundless ideas of eternity and immensity, since the objects we interact with fall so far short - immeasurably short - of that largeness.

3. Someone who has an idea of some stated length of space finds that he can repeat it, going from the idea of one foot (say) to that of two feet, and that by further addition he can go to three feet, and so on without ever reaching an end of his addition. This holds good whether he started with the idea of a foot, or of a mile, or of the diameter of the earth. Whatever he starts with, and however often he multiplies it, he finds that however far he has gone he has no more reason to stop - and isn't one jot nearer the end - than he was when he set out. From this he takes the idea of infinite space.

4. That account of the source of the idea of infinite space doesn't settle whether there actually exists a boundless space answering to the idea, because our ideas aren't always proofs of the existence of things. Still, since the question of space's infinity has come up here, I remark that we are apt to think that space *is* actually boundless; the idea of space or expansion naturally draws us in that direction. Whether we consider it as the extension of body or as existing by itself without any solid matter occupying it, the mind can't possibly find or suppose any end of it, or be stopped anywhere in its progress in this space. Any boundary to the world of bodies - even one with diamond-hard walls - is so far from *stopping* the mind's further progress in space and extension that it actually *helps it to continue*. When we reach the utmost extremity of body, what do we find

that can put a stop, and satisfy the mind that it *is* at the end of space when it perceives that it *is not* - when, indeed, it is satisfied that body itself can move into it [= into the space outside the present material boundary]? Here is why. A body can move through empty space within the world of bodies; indeed it can't move anywhere *except* into empty space (·see xiii.22·). It is clear and evident that if a body can move into an empty space interspersed amongst bodies, it must be equally possible for it to move into empty space beyond the outer boundaries of the world of bodies. That is because idea of empty pure space is exactly the same *within* as *beyond* the limits of all bodies, and there is nothing to hinder body from moving into it in either case. Thus, wherever the mind places itself by any thought, either in among bodies or far away from them, it can't find any *end* anywhere in this uniform idea of space; and so it has to conclude, by the very nature and idea of each part of space, that space is actually infinite.

[Section 5 gives a similar account of how we 'come by the idea of eternity' or infinite duration. The question of whether any real thing lasts for ever, Locke says, isn't answered merely by our having an idea of eternity. He holds that if something exists now, then something has existed for eternity, but he will discuss this 'in another place' (IV.x.2-3). and won't discuss it here.]

6. If we get our idea of infinity from our ability to repeat our own ideas without end, you may wonder why we don't attribute infinity to ideas other than those of space and duration. Other ideas can be as easily and as often repeated in our minds as can those of space and duration; but nobody ever thinks of infinite sweetness, or infinite whiteness, although we can repeat the idea of sweet or white as frequently as those of a yard or a day. Here is my answer. All the ideas that are considered as having parts, and can be increased by adding equal or lesser parts, give us through their repetition the idea of infinity; because this endless repetition generates a continued enlargement that cannot come to an end. But with other ideas it is not so. [Locke defends this by canvassing the possibilities for what goes on when one tries to add one idea of whiteness to another. The reason why they don't allow of endless additions, he says, is that the idea of whiteness involves *degrees* but not *parts*. He concludes:] Those ideas that don't consist of parts can't be augmented to whatever proportion men please, or be stretched beyond what men have received by their senses; but space, duration, and number, being capable of increase by repetition, leave in the mind an idea of endless room for more. The latter ideas alone lead our minds towards the thought of infinity.

7. Although our idea of infinity arises from thoughts about quantity, when we join infinity to any supposed idea of quantity, and so think about an *infinite quantity* - an infinite space, or an infinite duration - we fall into great confusion. That is because our idea of infinity is an *endlessly growing* idea, while any idea the mind has of a quantity *terminates* in that very idea (which can't be greater than itself); so when we try to combine them in the thought of an infinite quantity we have to adjust a standing measure to a growing volume. So I think there is serious reason to distinguish the idea of •*the infinity of space* from the idea of •*a space that is infinite*. The former is nothing but •a supposed endless progression of the mind over whatever repeated ideas of space it pleases; but to have actually in the mind the idea of •a space that is infinite is to suppose that the mind has already passed over and actually viewed all those repeated ideas of space. Even an endless repetition can never go through them all; so to suppose that one has done so is a plain contradiction.

8. This may become clearer if we apply it to numbers. [Locke then presents a line of thought like that of section 7, leading to the conclusion that we have a clear and legitimate idea of the infinity

of number(s) but that it is absurd to think that we can have an ‘actual idea of an infinite number’. He applies this also to ‘infinite duration’, and repeats it for ‘infinite space’. A typical episode is this:] However large an idea of space I have in my mind, it is no larger than it is at this instant when I have it, though I am capable of doubling it an instant later, and so on ad infinitum.

[In sections **9-11** Locke argues - amplifying a hint he gave in xvi.8 - that when we think about the infinity of space or of duration, what we are engaged with is ‘the infinity of number applied to determinate parts of which we have distinct ideas’. Our thought of eternity is that of a duration that is *infinitely many* years long; our thought of ‘immensity’ is that of a region whose volume is *infinitely many* cubic yards.]

12. In any mass of matter our thoughts can never arrive at the ultimate division, so there is an apparent infinity to us in that also. It too involves the infinity of number, but with the difference that it is like division rather than addition. Still, it does involve proceeding ad infinitum, with new numbers - ‘smaller and smaller fractions’ - all the way. A similarity: just as we can’t by addition reach the idea of an infinitely great space, so by division we are unable to reach the idea of an infinitely small body; because our idea of infinity is (so to speak) a growing or fugitive idea, always in a boundless progression, stopping nowhere.

13. Although hardly anyone is so absurd as to claim to have the positive idea of an actual infinite number, . . . there are people who imagine they have positive ideas of infinite duration and space. I think it would be enough to destroy any such ‘purported’ positive idea of something infinite to ask its owner whether he could add to it; that would easily show his mistake. . . . An infinite idea of space or duration must be made up of infinite parts; so ‘the thought of’ its infinity must consist in ‘the thought of’ its having parts •whose number can always be further added to; it doesn’t involve •an actual positive idea of an infinite number. It is evident that by adding together finite things (and all the lengths of which we have positive ideas *are* finite) we can never produce the idea of infinite in any way except the way we do with number . . . - adding more and more units of the same kind, without coming one jot nearer to the end of the process.

14. Those who want to prove that their idea of infinite is positive seem to do it through a ridiculous argument: the idea of an *end* is negative, so the idea of infinity - the *negation of an end* - is positive! Someone who sees that where bodies are concerned an end is just the extremity or surface of the body will not readily grant that the end is a bare negative, any more than will someone who sees that the *end* of his pen is black or white! Where duration is concerned, an end isn’t •the bare negation of existence but rather •the last moment of it. Even if that is wrong, the people I am arguing against here can’t deny that the *beginning* is the first instant of being, and isn’t conceived by anyone to be a bare negation; so by their own argument they should admit that the idea of an eternal past, or of a duration *without* a beginning, is a negative one.

[In section **15** Locke develops these views further. He agrees that when we think of (say) the infinity of space our thought does include a positive element, namely the vague thought of a really enormously large stretch of space; but he distinguishes that from a genuine thought about infinity. His crucial triple-point in this section is the following.] (1) The idea of *so much* is positive and clear. (2) The idea of *greater* is also clear, but it is only a comparative idea. (3) The idea of *so much greater that it cannot be comprehended* is a plain negative, not a positive. [A little later:] What lies beyond our positive idea towards infinity lies in obscurity, and has the indeterminate confusion of

a negative idea in which I know that I can't include all that I want to, because that is too large for a finite and narrow ·mental· capacity ·such as mine·; and that - where the greatest part of what I want to include is left out, and merely given the vague label 'still greater' - must be very far from a positive complete idea. . . .

[In section 16 Locke challenges those who think they have a positive idea of eternity. If there is or could be an eternally existing thing, he demands, has it lasted longer today than it had yesterday? The answer Yes strikes him as absurd because it involves different eternities, with different lengths. But the only way to support the answer No is to equate eternal duration with a kind of eternal *present*, to which the idea of succession, of longer and shorter durations, doesn't apply. He aligns himself with those who find this unintelligible. Section 17 repeats section 14's point that there is nothing negative about the concept of a *beginning*.]

18. We can no more have a positive idea of the largest space than we can of the smallest space. The latter seems the easier of the two, and more within our intellectual reach, but really all we can manage is a comparative idea of smallness - the idea of a smallness that *will always be less than any of which we have a positive idea*. All our •positive ideas of any quantity, whether big or small, have bounds; though there are no bounds to the •comparative idea through which we can always add to the big or take from the small. [Locke has mostly been using 'positive' as the opposite of 'negative'; but here and in some other places he uses it as the opposite of 'relational' or 'comparative'.] But the part (big or small) that isn't covered by our positive idea lies in obscurity; and we have no idea of it except the idea of the power of endlessly enlarging one and diminishing the other. The acutest thought of a mathematician can no more isolate ·the idea of· an indivisible ultimate particle of matter than a chemist wielding a pestle and mortar can ·physically· isolate such a particle. And a philosopher by the quickest flight of mind can no more reach ·a thought of· infinite space, containing it within a positive idea, than a surveyor can mark it out with his chain measure. When you think of a cube with a one-inch side, you have a clear and positive idea of it in your mind, and so can form one of $\frac{1}{2}$, $\frac{1}{4}$, and so on, until you have the idea something very small. But it still isn't the idea of that incomprehensible smallness that division *can* produce. What remains of smallness [Locke's phrase] is as far from your thoughts as it was when you first began; so you never come to have a clear and positive idea of that smallness that is implied by infinite divisibility.

[Section 19 repeats the main point in a mildly joking manner.]

20. I have encountered people who agree that they cannot have a positive idea of •infinite space, but are sure they have one of •eternity. Here is my explanation for their mistaken view that the two should be treated differently. By thinking about causes and effects, they are led to think that we must admit some *eternal being*, and so to consider the real existence of that being as matched by their idea of eternity; but on the other hand they have no argument driving them to admit the existence of some *infinite body*, which indeed they find absurd; and so they rush into •concluding that they can have no idea of infinite space because they can have no idea of infinite matter. [The argument about causes and effects and an eternal being is approvingly presented in IV.x.2-3.] This •inference is a poor affair, because the existence of matter isn't necessary to the existence of space any more than the existence of motion or of the sun is necessary to duration, although duration is commonly measured by motion of the sun. A man can have the idea of ten thousand miles square without any body as big as that, as well as the idea of ten thousand years without any body as old as that Why should we think our idea of infinite space requires the real existence of matter to support it, when we find that we have as clear an idea of an •infinite duration to come as we have of •infinite

duration past? [In the remainder of this section Locke expands these points somewhat, concluding thus:] If a man had a positive idea of infinity, whether of duration or of space, he could add two infinities together, making one infinite infinitely bigger than another - an absurdity too gross to be worth arguing against.

21. If after all this you still think you *do* have clear positive comprehensive ideas of infinity, enjoy your privilege! Some of us who *don't* would like to hear from you about it. Until now I have been apt to think that the great and inextricable difficulties that perpetually arise in all discussions about infinity, whether of space, duration, or divisibility, have been sure signs of a defect in our ideas of infinity - namely the disproportion between •infinity itself and •how much our narrow minds can take in. Men talk and dispute about infinite space or duration, as if they had complete and positive ideas of them; . . . but the incomprehensible nature of the thing they are talking or thinking about leads them into perplexities and contradictions; and their minds are swamped by an object too large and mighty to be surveyed and managed by them.

22. If I have lingered rather long on duration, space, and number, and on what arises from thinking about them, namely infinity, it may be no more than the topic requires, for there are few simple ideas whose modes give more exercise to the thoughts of men than those do. I don't claim to have treated them in their full extent; all I need is to show how the mind receives those ideas, such as they are, from •sensation and •reflection, and how even our idea of infinity - remote as it seems to be from any •object of sense or •operation of our mind - originates in sensation and reflection as do all our other ideas. Perhaps some very advanced mathematicians have other ways to introduce ideas of infinity into their minds; but this doesn't alter the fact that even they, like all other men, first acquired their ideas of infinity from sensation and reflection in the manner I have described.

Chapter xviii: Other simple modes

1. Perhaps I have given enough examples of *simple modes* of the *simple ideas of sensation*, going so far as to show how from simple ideas taken in by sensation the mind comes to extend itself even to infinity. . . . Still, for method's sake I shall briefly describe a few more 'simple modes' before moving on to ideas that are more complex. Remember that in my classificatory system *simple modes* are *complex ideas*, though they are *less* complex than *complex modes* are.

2. To 'slide', 'roll', 'tumble', 'walk', 'creep', 'run', 'dance', 'leap', 'skip', and many others that might be named, are words for which every English-speaker has in his mind distinct ideas, which are all modifications of *motion*. Modes of motion correspond to those of extension: *swift* and *slow* are two different ideas of motion, measured by distances of time and space put together; so they are complex ideas comprehending time and space with motion.

3. We have a similar variety with *sounds*. Every articulate word is a different modification of sound; and from hearing such modifications the mind can be provided with almost infinitely many distinct ideas. [Locke also mentions the sounds of birds and beasts, and the auditory ideas that a composer may have in his mind when silently composing a tune.]

4. Ideas of colours are also very various. We pick out some of them as the different degrees or 'shades' (as they are called) of the same colour. But since we very seldom put different *colours* together for use or for pleasure without also giving a role to *shape* - as in painting, weaving, needle-work, etc. - the colours that we pick out for attention usually belong to mixed modes, as being made up of ideas of two kinds, shape and colour, as for example *beauty*, *rainbow*, etc.

5. All compounded tastes and smells are also modes made up of the simple ideas of those senses. But because we seldom have names for them, we take less notice of them, and they can't be explained in writing. you'll have to think up your own examples from your own experience.

6. Here is a point about simple modes that are considered to be merely different degrees of the same simple idea, .e.g. slightly different shades of green. Though many of them are in themselves entirely distinct ideas, when the difference between them is very small they ordinarily don't have separate names, and the differences are not much taken notice of. I leave it to you to think about whether this is •because men haven't had ways of precisely distinguishing amongst them, or rather •because distinguishing them wouldn't yield knowledge that would be of general or necessary use. . . . Once the mind has acquired some simple ideas, it can variously repeat and compound them, and so make new complex ideas. This actually happens with some of our simple ideas and not with others: Though *white*, *red*, *sweet*, etc. haven't been modified or made into complex ideas by various combinations so as to be named and thereby sorted into kinds, some other simple ideas, namely those of *unity*, *duration*, *motion*, etc. (already discussed) and also *power* and *thinking* (-to be discussed in xxi and xix respectively), have been modified into a great variety of complex ideas with names belonging to them.

[In section 7 Locke offers to explain this. The primary concerns of people have been with *one another*; they have mainly needed efficient ways of thinking and talking about their own behaviour - including the actions performed in specialized trades, for which technical terms are coined that the rest of the populace wouldn't understand. Ideas such as those of tastes and smells haven't had a great role in this kind of thought and speech, which is why we have few names for them. Locke undertakes to return to this in III.]

Chapter xix: The modes of thinking

1. When the mind looks in on itself and attends to its own actions, *thinking* is the first action it encounters. The mind observes a great variety of kinds of thinking, receiving different ideas from each. For example, the perception that accompanies and is attached to any impression made on the body by an external object gives the mind a distinct idea that we call *sensation*, which is, as it were, the actual entrance of any idea into the understanding by way of the senses. The same idea, when it occurs without the operation of any such object on the organs of sense, is *remembrance*; if it is sought by the mind and eventually, with considerable effort and difficulty, brought back into view, it is *recollection*. [The section continues with some others: contemplation, 'that which the French call *rêverie*', attention, 'intention, or study', dreaming, ecstasy. Here and in section 4 Locke uses 'intention' in its old sense of 'intentness' or 'strenuous mental focus'.]

2. These are a few examples of the various modes of thinking that the mind can observe in itself, and so have distinct ideas of. I don't claim to enumerate them all, or to give an extensive treatment of this set of ideas that are acquired from reflection, for that would fill a book. However, I shall later treat at some length *reasoning*, *judging*, *volition*, and *knowledge*, which are some of the most considerable operations of the mind and ways of thinking.

[Section 3 adds some detail about differences amongst attention, *rêverie*, and dreaming. It ends with this:] Sometimes the mind fixes itself so earnestly on thinking about some objects that it shuts out all other thoughts, and takes no notice of the ordinary impressions that are then being made on the senses At other times it hardly notices the sequence of ideas that succeed in the

understanding, and doesn't pursue any of them. And at other times it lets them pass almost entirely unregarded, as faint shadows that make no impression.

4. I think everyone must have experienced within himself this difference in degree of •intention (and of its opposite, •remission) on a scale running from •*earnest study* at one end to •*very nearly minding nothing at all* at the other. Go down the scale a little further still and you find the mind in sleep - withdrawn from the senses, and out of the reach of motions made on the sense-organs that at other times produce very vivid and perceptible ideas. . . . In this state of withdrawal from the senses, the mind often retains a looser and less coherent manner of thinking that we call *dreaming*. Finally, sound sleep lowers the curtain in front of the stage, putting an end to all appearances. . . . A side remark, returning briefly to the main topic of i.10-22: We all have experience of our minds' thinking with various degrees of intensity; even a waking man may have thoughts that are so dim and obscure as to be close to having none at all; so isn't it probable that thinking is something the soul *does* but is not its *essence*? A thing's •operations can easily be performed more or less intensely, but we don't think of the •essences of things as capable of any such variation.

Chapter xx: Modes of pleasure and pain

1. Among the simple ideas that we receive from both sensation and reflection, *pain* and *pleasure* are two very considerable ones. •Bodily sensations may occur alone or accompanied by pain or pleasure; and •the thoughts or perceptions of the mind may also occur solo or else accompanied by pleasure or pain, delight or trouble, call it what you will. Like other simple ideas, these two can't be described, nor can their names be defined; the only way to know them is by experience. A 'definition' of them in terms of the presence of good or evil makes them known to us only by making us reflect on *what we feel in ourselves* when we think about or undergo various operations of good and evil.

2. Things, then, are good or bad only in reference to pleasure or pain. [Locke wrote 'good or evil', but in his usage 'evil' means merely 'bad', without the extra force the word has today. When used as a noun, as in 'presence of evil', it is left unchanged because 'bad' doesn't work well as a noun.] 'So that the attempt to define 'pleasure' and 'pain' in terms of good and evil puts things back to front'. We call something 'good' if it is apt to cause or increase pleasure or diminish pain in us, or else to enable us to get or retain some other good. On the other side, we call something 'bad' if it is apt to produce or increase pain or diminish pleasure in us or [etc.] I am speaking of pleasure and pain of body or of mind, as they are commonly distinguished, though really they are all states of the mind - sometimes caused by disorder in the body and sometimes by thoughts of the mind.

3. Pleasure and pain and that which causes them, good and evil, are the hinges on which our passions turn. If we reflect on ourselves, and observe how these operate in us in various contexts, what states of mind and internal sensations (if I may so call them) they produce in us, this may lead us to form the ideas of our *passions*.

4. Anyone reflecting on the thought he has of the delight that any present or absent thing is apt to produce in him has the idea we call *love*. [Locke gives the example of someone who - in season and out - loves grapes.]

5. On the other side, the thought of the pain that anything present or absent is apt to produce in us is what we call *hatred*. If my theme were not confined to the bare *ideas of* our passions in their dependence on different kinds of pleasure and pain, I would remark that our love and hatred of

•inanimate or unfeeling things is commonly founded on the pleasure and pain we get from using them and encountering them through our senses, even if such use destroys them. But hatred or love towards •beings who are capable of happiness or misery is often the uneasiness or delight that we get just from the thought that they exist, or from the thought of their being happy. . . . But it suffices to note that our ideas of love and hatred are merely 'ideas of' the dispositions of the mind to experience pleasure or pain, however caused in us.

6. A man's uneasiness over the absence of something whose present enjoyment carries the idea of delight with it is what we call *desire*; which is greater or less according to whether the uneasiness is more or less intense. [Locke adds some remarks about uneasiness as 'the chief if not only spur to human industry and action'. He admits that this is off his intended path; he'll deal with it at length in xxi.29-40.]

7. *Joy* is a delight of the mind from the thought of a good that one now possesses or will certainly possess in the future. We are possessed of a good when we have it in our power so that we can use it when we please. Thus a nearly starving man has joy at the arrival of food, even before he has the pleasure of eating it. . . .

8. *Sorrow* is uneasiness in the mind upon the thought of a lost good that might have been enjoyed longer; or the sense of a present evil.

9. *Hope* is that pleasure in the mind that everyone finds in himself when he thinks about a probable future enjoyment of something that is apt to delight him.

10. *Fear* is an uneasiness of the mind from the thought of future evil that is likely to come to us.

11. *Despair* is the thought that some good is unattainable. This works variously in men's minds, sometimes producing uneasiness or pain, sometimes slack passivity.

12. *Anger* is uneasiness or discomposure of the mind when one is harmed and intends to get revenge for this.

13. *Envy* is an uneasiness of the mind caused by the thought of a good that we desire that has been obtained by someone we think should not have had it before us.

14. These two last, envy and anger, are not caused simply by pain and pleasure, but have other ingredients in them - thoughts regarding oneself or others - which is why they aren't to be found in all men, because some men don't have those thoughts of their own merits (envy) or of intending revenge (anger). All the rest, which come down to purely pain and pleasure, are I think to be found in all men. For basically we •love, desire, rejoice, and hope only in respect of pleasure, and •hate, fear, and grieve only in respect of pain. In short, all these passions are moved by things only when they appear to be causes of pleasure and pain, or to be in some way associated with pleasure or pain. Thus we extend our hatred usually to the subject (at least if it is an agent that has perceptions and purposes) which has given us pain, because the fear it leaves with us is a constant pain. But we don't so constantly love what has done us good, because pleasure doesn't operate on us as strongly as pain does, and because we aren't as apt to •hope that a good-doer will bring pleasure again as we are to •fear that a bad-doer will bring pain again. But this is by the way.

[In section 15 Locke repeats that he means 'pleasure' and 'pain', 'delight' and 'uneasiness', to cover mental as well as bodily ups and downs.]

16. It should further be noted that so far as the passions are concerned, the removal or lessening of a pain is considered as a pleasure and operates as such; and the loss or diminishing of a pleasure, as a pain.

17. Most of the passions in most persons operate on the body, causing various changes in it; but as these aren't always perceptible, and indeed in some cases don't occur at all, they don't make a necessary part of the idea of each passion. For example, *shame*, which is an uneasiness of the mind on the thought of having done something that is indecent or will lessen others' valued esteem for us, isn't always accompanied by blushing.

18. Don't take me to be offering a treatise on the passions. There are many more of them than I have named; and each of those I have attended to merits a much fuller and more detailed treatment. I have mentioned these only as so many instances of *modes of pleasure and pain* resulting in our minds from various considerations of good and evil. I might perhaps have given instances that are simpler than these and don't count as passions, such as the pains of hunger and thirst and the pleasure of eating and drinking to remove them; the pain of sore eyes, and the pleasure of music; the pain of quarrelsome uninformative argument, and the pleasure of reasonable conversation with a friend. But the passions are more important to us than the simpler pleasures and pains, which is why I chose to focus on them and to show how our ideas of them come from sensation or reflection.

Chapter xxi: Power

1. The mind being every day informed by the senses of the alteration of the simple ideas [here = 'qualities'] that it observes in things outside it, and

- noticing how one comes to an end and another begins to exist,
 - reflecting also on what passes within itself, and observing a constant change of its ideas, sometimes by the impression of outer objects on the senses and sometimes by its own choice; and
 - concluding from what it has so constantly observed to have happened that similar changes will in the future be made in the same things by similar agents and in similar ways,
- considers in one thing the possibility of having any of its simple ideas changed, and in another the possibility of making that change, and •so comes by that idea that we call *power*. Thus we say that fire has a power to melt gold, and gold has a power to be melted . . . ; that the sun has a power to blanch wax, and wax a power to be blanched by the sun. . . . In all such cases the power we think of is in reference to the change of perceivable ideas, for we can't observe or conceive any alteration to be made in a thing except by observing or conceiving a change of some of its ideas.

2. Power is twofold - the ability to make a change, and the ability to be changed; one may be called *active*, the other *passive* power. [In Locke's usage, 'power' doesn't mean 'strength'; our nearest word to it is 'ability' or 'capability'; sugar's (passive) *power* to be dissolved in hot water is simply its *being able* to be thus dissolved.] God is entirely above passive power; and perhaps matter lacks all active power, so that only *created minds* have powers of both sorts; but I shan't go into that question. My present business isn't to enquire into what things have power, but rather to explore how we come by the *idea* of it. Still, I thought it worthwhile to make the foregoing remarks, directing our minds to the thought of *God* and *minds* for the clearest idea of active powers because otherwise that might have been lost sight of in what follows. We shall see that active powers loom large in our complex ideas of *natural substances*, and I shall speak of such substances as having active

powers, following common assumptions about them, even though they may not be such genuinely active powers as our casual thoughts are apt to represent them. That is why I have thought it worthwhile to direct our mind to God and spirits for the clearest idea of *active power*.

3. In xii.3 I announced that the three great categories of complex ideas are those of •modes, •substances, and •relations. We are still not finished with •modes. And yet: I admit that *power* includes in it some kind of •relation - to action or to change - but then *all* our ideas turn out on close inspection to involve a relational element. Our ideas of extension, duration, and number all contain a secret *relation* of the parts. Shape and motion have something *relative* in them, much more obviously. As for sensible qualities such as colours and smells etc. - what are they but the powers of different bodies in *relation* to our perception? As for their basis in the things themselves, they depend on the volume, shape, texture, and motion of the parts, all of which include some kind of *relation* in them. So our idea of power, I think, being no more relational than any of the others, is entitled to a place among the simple ideas, and be considered as one of them, being one of the ideas that make a principal ingredient in our complex idea of substances, as we shall see later. [Locke should have said 'a place among the simple *modes*', which he has classified as complex ideas - see xii.5.]

4. We are abundantly provided with the idea of passive power by almost all sorts of perceptible things. In most of them we can't help noticing that there are continual changes in their sensible qualities, and indeed a continual turn-over in the stuff they are made of; and from this we reasonably infer that they go on being liable to similar changes which is to attribute to them a •passive power to be thus changed. We are at least as richly provided with examples of •active power (which is the more proper meaning of the word 'power'), because whatever change we observe, the mind must infer an active power somewhere to make that change, as well as a passive power, a possibility in the thing to undergo the change.

But if we think about it hard we'll see that bodies don't give us through our senses as clear and distinct an idea of active power as we get from reflecting on the operations of our minds. All power relates to action, and there are just two sorts of action of which we have any idea, namely •thinking and •motion. So let us consider from where we get our clearest ideas of the powers that produce these actions. (1) Body gives us no idea of *thinking*; it is only from reflection that we have that. (2) Neither does body give us any idea of *the beginning of motion*. A motionless body doesn't give us any idea of any active power to move; and when a body is put in motion, that motion is a •passion in it rather than an •action [= 'something with respect to which it is •passive rather than •active']. For when the ball obeys the motion of a billiard cue, that isn't any action on its part but mere passion; and when it hits another ball and sets it in motion, it only communicates the motion it had received from something else and loses in itself so much as the second ball received. This gives us only a very obscure idea of an *active power of moving* in body, because all we see the body do is to *transfer* motion, not to *produce it*. For it is a very obscure idea of *power* that doesn't stretch as far as •the production of an action, and merely takes in •the continuation of a passion. That's all that is involved in the movement of a body that is put into motion: its *continuing to move* after it has been set in motion is no more an action on its part than is its *continuing to be flat* after something has flattened it.

The idea of the beginning of motion is one that we get only from reflection on what happens in ourselves, where we find by experience that merely by willing something - merely by a thought of the mind - we can move parts of our bodies that have been at rest.

So it seems to me that our sensory perception of the operations of bodies gives us only a very imperfect and obscure idea of active power, since it provides no idea of the power to begin any action, whether physical or mental. If you think you have a clear idea of power from your observations of colliding bodies, I shan't quarrel with you, because sensation is one of the ways by which the mind gets its ideas. But I thought it worthwhile to consider - just in passing - whether the mind doesn't receive its idea of active power more clearly from reflection on its own operations than from any external sensation.

5. This at least seems to me evident:- We find in ourselves a power to begin or not begin, and to continue or end, various actions of our minds and motions of our bodies, by a mere thought or preference of the mind in which it commands (so to speak) that such and such an action be done or that it not be done. This power that the mind has to order that a given idea be thought about or that it not be thought about, or to prefer that a given part of the body move rather than stay still (or vice versa), is what we call *the will*. The actual exercise of that power in a particular case is what we call *volition* or *willing*. If your doing x (or not doing y) results from such an order or command of the mind, your doing x (or not doing y) is called *voluntary*. And any action that is performed without such a thought of the mind is called *involuntary*.

The power of perception is what we call *the understanding*. Perception, which is the act of the understanding, is of three sorts: (1) the perception of ideas in our minds; (2) the perception of the meanings of signs; (3) the perception of the connection or inconsistency, agreement or disagreement, that there is between any 'two' of our ideas. All these are attributed to the understanding, or perceptive power, though in ordinary parlance we are said to 'understand' only with the latter two, not with the mere perception of ideas in our minds.

6. These *powers* of the mind, namely of perceiving and of preferring, are usually called two *faculties* of the mind. The word 'faculty' is proper enough as long as it isn't allowed to breed confusion in men's thoughts by being taken to stand for some real beings - 'some *things*' - in the soul that perform those actions of understanding and volition. For when we say

the will is the commanding and superior faculty of the soul,

the will is (or is not) free,

the will determines the inferior faculties,

the will follows the dictates of the understanding,

and so on, statements like these can carry a clear and distinct sense, for anyone who attends carefully to his own ideas, and whose thoughts follow the evidence of things rather than the sound of words. But I suspect that this way of speaking of 'faculties' has misled many into a confused notion of so many distinct *agents* [= 'things that act'] in us, . . . and that this has led to wrangling, obscurity, and uncertainty in questions relating to them.

7. Everyone, I think, finds in himself a power to begin or not begin, continue or put an end to, various actions in himself. From thoughts of the *extent* of this power of the mind over the actions of the man the ideas of liberty and necessity arise. These two ideas have been at the heart of an enormous amount of philosophical wrangling, encouraged by much confusion. I shall try to sort all that out in the next twenty sections. In section 28 I shall turn to other topics, though freedom will return to the spotlight in sections 47-56.

8. A man is *free* to the extent that he has the power to think or not, to move or not, according to the preference or direction of his own mind. (The only •actions of which we have any idea boil down to •thinking and •moving, which is why I mention only them.) Whenever it is not equally in a man's power to do something x or not to do it - i.e. whenever doing it is *not* the case that

- if the preference of his mind directs him to do x, he will do x, and
- if the preference of his mind directs him not to do x, he won't do x,

he isn't free, isn't at liberty, is under necessity. Thus, there can't be liberty where there is no thought, no volition, no will; but there may be thought, will, volition, where there is no liberty. Some examples make this clear.

9. Nobody thinks that a tennis-ball, whether moving because it has been hit or lying still on the ground, is a free agent. Why? Because we don't think of a tennis-ball as thinking or (therefore) as having any volition, any preference of motion to rest or vice versa. Lacking volition, the ball comes under our idea of *necessary*, and that is how we describe it. Another example: a man is crossing a bridge when it collapses, pitching him into the river below; he doesn't have liberty in this, and isn't a free agent. He does have *volition*, and *prefers* his not falling to his falling, but not-falling isn't within his power and so doesn't follow from his volition; and therefore in this matter he isn't free. A third example: a man strikes himself or a friend through a convulsive movement of his arm that it isn't in his power - by volition or the direction of his mind - to stop or refrain from; and nobody thinks he has liberty in this; everyone sympathizes with him, as acting by necessity and constraint.

10. A fourth example: a man is carried while fast asleep into a room where there is a person he has been longing to see and speak with; and he is there locked in securely; when he awakes he is glad to find himself in such desirable company, which he stays in willingly, preferring his staying to his going away. Nobody will doubt, I think, that his staying is *voluntary*; and yet it is clear that being locked in he isn't *at liberty not to stay*. So liberty is not an idea belonging to •volition or preferring [Locke's exact words], but to •the person's having the power of doing or not doing something, according to what his mind chooses or directs. Our idea of liberty reaches as far as *that* power and no further. The moment that power is restrained, or some compulsion removes one's ability to act or refrain from acting, liberty is extinguished.

11. We have examples of this - sometimes too many! - in our own bodies. A man's heart beats, and the blood circulates, and it isn't in his power by any thought or volition to stop either process; and therefore in respect to these motions he isn't a free agent. Convulsive motions agitate his legs, so that although he wills it ever so much he can't by any power of his mind stop their motion (as in that strange disease called St. Vitus's dance) but he is perpetually dancing; he isn't at liberty in this action - he *has to* move, just as does as a tennis-ball struck with a racket. On the other side, paralysis or the stocks prevent his legs from obeying the decision of his mind when it prefers that they take his body elsewhere. In all these there is a *lack of freedom*; though the sitting still even of a paralytic, while he prefers it to a removal, is truly *voluntary*. Voluntary then is not opposed to necessary, but to involuntary. For a man may prefer what he can do to what he can't do; he may prefer the state he is in to its absence or change, even though necessity makes it unalterable.

12. As with the motions of the body, so with the thoughts of our minds: where any thought is such that we have power to take it up or set it aside according to the preference of the mind, there we are at liberty. A waking man being under the necessity of having some ideas constantly in his mind, is not at liberty *to think or not think*, any more than he is at liberty *to touch other bodies or not* - given that he touches the ground he stands on. But whether he turns his thoughts from one idea to another is often within his choice; and then he is as much at liberty in respect of his ideas as he is in respect of bodies he stands on; in each case he can move from one to another as he pleases. Still, just as some bodily movements are unavoidable, so some ideas are unavoidable by

the mind, which can't drive them away by the utmost effort it can use. A man on the rack isn't at liberty to set aside the idea of pain and distract himself with other thoughts; and sometimes a boisterous passion hurries our thoughts along as a hurricane does our bodies, without leaving us free to think about other things that we would rather choose. But we consider the man as a free agent again as soon as •his mind regains the power to stop or continue, begin or not begin, any of these thoughts or bodily movements according as •it thinks fit to prefer either to the other.

13. *Necessity* occurs where thought is lacking, and where thought is present but doesn't have the power to direct the behaviour. If an agent •has thought and• is capable of volition, but •starts or continues some action that is contrary to the preference of his mind, that is called *compulsion*; if he •stops or restricts an action when this is contrary to his volition, this is called *restraint*.

14. If I am right about all this, consider whether it might help to put an end to the question *Is man's will free or not?* This has been long agitated, but I think it is unreasonable because unintelligible. It follows from what I have said that the question itself is as improper and meaningless as *Is man's sleep swift or not?* and *Is man's virtue square or not?* because liberty no more applies to the will than speed does to sleep or squareness to virtue. Liberty, which is a power, belongs only to *agents*, and cannot be an attribute of the will, which is only another *power*.

15. It is so difficult to convey in words clear notions of internal actions that I must warn you that my words 'ordering', 'directing', 'choosing', 'preferring', etc. will not distinctly enough tell you what volition is unless you reflect on what you yourself do when you will. For example, 'preferring', though it seems perhaps best to express the act of volition, doesn't do it precisely. A man would *prefer* flying to walking, yet who can say he ever *wills* himself to fly? Clearly, volition is an act of the mind knowingly exerting that control *it takes itself to have* over any part of the man, •so that we can't will ourselves to fly because we know that we can't do so. [The rest of this section repeats material from preceding sections.]

16. Plainly the will is simply one power or ability, and freedom is another; so that to ask whether the will has freedom is to ask whether one power has another power, whether one ability has another ability - a question too obviously and grossly absurd to argue about or to need an answer. For anyone can see that powers belong only to •agents, and are attributes only of •substances, and not of powers themselves! So that the question 'Is the will free?' contains the question 'Is the will a substance, an agent?', since freedom can properly be attributed only to acting substances. If freedom can with any propriety of speech be applied to •any• power, it is to the power a has man to affect movements of parts of his body by his choice or preference. But his having *that* power is what entitles him to be called 'free'; indeed, that power *is* freedom. So now we have the question 'Is freedom free?', and if anyone asked *that*, we would conclude that he didn't know what he was talking about. It would be like someone who, knowing that 'rich' was a word to express the possession of riches, asks 'Are riches rich?' - making himself a candidate for Midas's ears!

17. But the absurdity is somewhat disguised - its meaning somewhat hidden - when men speak of the will as a 'faculty' •and slip into thinking of it as an active substance rather than as a power, which is what it really is. As soon as it is made clear that the will is merely the power to do something, the absurdity of saying that it is or isn't free plainly reveals itself. If it were reasonable to think and talk of faculties as distinct beings that can act ('The will orders', 'The will is free'), it would also be all right to have a speaking faculty, a walking faculty, and a dancing faculty, and to think and talk of these as producing the relevant actions - 'The singing faculty sings', 'The

dancing faculty dances'. And when we say such things as that •the will directs the understanding, or •the understanding obeys or disobeys the will, this is no more correct and intelligible than to say that the power of speaking directs the power of singing, or the power of singing obeys or disobeys the power of speaking.

[Section 18 continues that last point, criticising the statement that 'the understanding operates on the will, or the will on the understanding', as though a power could operate on a power.]

19. I grant that this or that •thought may be the occasion of a •volition, that is, of a man's exercising the power he has to choose; and that the •choice of the mind may cause the man's •thinking about this or that thing. (Similarly, the singing of a tune may cause the dancing of a dance, or vice versa.) But in all these cases it isn't one power that operates on another. Rather, the mind operates and exerts these powers; it is the man that does the action, it is the agent that has power or ability. For powers are *relations*, not *agents*; and the only thing that can be free or not free is •that which *has* or *lacks* the power to operate, not •the power itself. . . .

[Section 20 continues with the theme of the misuse of the notion of a faculty. Of course the mind and the body have faculties, because that is to have powers; and they couldn't operate if they had no power to operate. The trouble comes when faculties are treated as things, agents, rather than as powers; and Locke provides examples.]

21. To return now to the enquiry about liberty, I think the proper question is not *Is the will free?* but *Is a man free?* There are two ways of taking the former question; I shall deal with one in the remainder of this section, and the other in sections 22-4. [Locke then repeats the position he has already laid out: that freedom consists in the ability to act in the manner one's mind chooses. 'How can we think anyone freer than to have the power to do what he will?' He concludes:] So that in respect of actions within the reach of such a power in him, a man seems as free as it is possible for freedom to make him.

22. But the inquisitive mind of men who want to clear themselves of guilt as far as they can, even if that involves putting themselves into a worse state than that of total necessity, is not content with this notion of freedom. For their purposes freedom isn't useful unless it goes further than this. And so we find people arguing that a man isn't free at all unless he is as *free to will* as he is *free to do what he wills*. So a further question about liberty is raised, namely *Is a man free to will?* Arguments about whether the will is free are, I think, really about this. Here is my answer to it.

[In sections 23-4 Locke presents one basic point: If at some time you have in your mind the question of whether to start walking right now, and you do have the power to start walking and also the power not to do so, you *cannot be free* with respect to the relevant act of volition. Either you will start walking or you won't; whichever it is will be an upshot of your choosing to walk or choosing not to; so you *cannot get out of* making an act of the will settling the matter; and so your act of the will is not free. In such a case, whatever you do will be 'unavoidably voluntary'.]

25. Plainly, then, a man is hardly ever at liberty whether to will or not to will. But a new question arises: *Is a man at liberty to will which of the two he pleases, motion or rest?* This question is so obviously absurd that it might suffice to convince people that the question of freedom shouldn't be asked about the will. To ask whether a man is at liberty to will either motion or rest, speaking or silence, whichever he pleases, is to ask, whether a man can will what he wills, or be pleased with what he is pleased with. This needs no answer, I think; and those who insist on asking it must

suppose that one act of will arises from another, which arises from yet another, and so on ad infinitum.

26. The best way to avoid such absurdities is to establish in our minds definite ideas of the things we are talking about. If the ideas of *liberty* and *volition* were well fixed in our understandings, and if we kept them in our minds through all the questions that are raised about liberty and volition, it would be easier (I think) to resolve most of the difficulties that perplex men's thoughts and entangle their understandings; because it would be easier for us to see where the obscurity arose from •the nature of the thing under discussion and where it arose merely from •the confused meanings of some words.

27. *First* then, it should be borne in mind that freedom consists in the dependence on our volition ·or preference· of

an action's being done *or not done*,

not in the dependence on our preference ·or volition· of

any action *or its contrary*.

A man standing on a cliff is at liberty to leap twenty yards downwards into the sea, not because he has a power to do the contrary action, which is •to leap twenty yards upwards (for he has no such power), but because he has a power to leap or •not to leap. . . . A prisoner in a room twenty feet square, when he is at the north side of the room, is at liberty to walk twenty feet southward because he can walk or •not walk it; but he isn't at the same time at liberty to do the contrary, i.e. to •walk twenty feet northward.

Freedom, then, consists in our being able to act or not to act according as we shall choose or will. ·With that I leave the topic of freedom until I re-engage with it in section 47·.

28. *Secondly*, we must remember that volition or willing is an act of the mind directing its thought to the performing of some action and thereby exerting its power to produce it. In the interests of brevity I ask permission to use the word 'action' to include also refraining from action. When walking or speaking are proposed to the mind, *sitting still* and *staying silent* are mere non-actions, but they need the determination of the will as much as *walking* and *speaking* do, and they are often as weighty in their consequences as the other two, the real actions. Those are reasons for counting such refrainings as actions too, but anyway I am doing so for brevity's sake.

29. Thirdly, to the question *What determines the will?* the true answer is *The mind*. The will is the general power of directing action this way or that; it is a power that the agent has; and what determines its exercise in a given case is the agent, the mind, exercising its power in some particular way. If you aren't satisfied with this answer, then you must be asking *What determines the will?* with the meaning *What moves the mind, in every particular instance, to perform the particular act of volition that it does perform?* ·This is an intelligible and respectable question, which doesn't involve treating the will as an agent or anything like that·. To this question I answer:

The motive for •continuing in the same state or action is one's *present satisfaction* in it; the motive to •change is always some *uneasiness*.

The only thing that ever leads us to will a change of state or the performing of a new action is some uneasiness ·with our present state or action·. This is the great motive that works on the mind, getting it to act. For brevity's sake I shall call this *determining the will*. I shall explain it at more length.

30. First, though, I must say something about terminology. Volition is a very simple act, and if you want to understand what it is you will do better by reflecting on your own mind and observing what it does when it wills than by any variety of verbal explanations. Yet I have tried to put it into familiar words by using the terms ‘prefer’ and ‘choose’ and their like, and these are not really right because they signify *desire* as well as *volition*. . . . I find the will often confounded with desire, and one put for the other I think that this has frequently led to obscurity and mistake in this matter, and should be avoided as much as possible. If you turn your thought inwards onto what goes on in your mind when you *will*, you’ll see that the will or power of volition has to do only with actions and non-actions that the mind *takes to be in its power*. So the will is quite different from desire, which may go directly against the will in a particular case. [Locke gives two examples, this being one: A man may be suffering pain, knowing that the only way for him to relieve it would give him other, worse, physical ailments. So he *wants* the pain to go away, but he doesn’t *will* any action that would make it go away.] This makes it evident that desiring and willing are two distinct acts of the mind, and thus that the will (the power of volition) is distinct from desire.

31. To return then to the question *What determines the will in regard to our actions?* I used to accept the widespread opinion - to which I shall return in section 35 - that what determines the will is *the greater good in view*; but I now think that what does it is some *uneasiness* that the man is at present under. That is what determines the will from moment to moment, getting us to behave as we do. This uneasiness can be called *desire*, for that’s what it is: *desire is an uneasiness of the mind for the lack of some absent good*. All bodily pain of whatever kind, and all disquiet of the mind, is uneasiness; and it is always accompanied by - and indeed is hardly to be distinguished from - a desire that is equal to the pain or uneasiness that is being felt. For desire being an uneasiness in the lack of an absent good, in the case of pain the absent good is *ease*, freedom from the pain; and until ease is attained we can call the uneasiness ‘desire’, for nobody feels pain without wanting to be eased of it, with a desire equal in intensity to that pain. Besides this desire for ease from pain - which is essentially a desire for something negative - there is also desire for absent positive good; and here also the desire and uneasiness are equal. The more strongly we desire any absent good the more intensely are we in pain from not having it. But the intensity of the pain doesn’t vary with how great the good is or is thought to be - only with the strength of the desire for it. Absent good can be contemplated without desire. But when there *is* desire there is an equally intense uneasiness.

32. Everyone who reflects on himself will quickly find that desire is a state of uneasiness. Everyone has felt in desire what the wise man says of hope (which isn’t much different from it) ‘that it being deferred makes the heart sick’ [Proverbs 13:12], and that the greatness of the desire sometimes raises the uneasiness to a level where it makes people cry out ‘Give me children, give me the thing desired, or I die’ [Genesis 30:1]. Life itself, with all its enjoyments, is a burden that cannot be borne under the lasting and unremoved pressure of such an uneasiness.

33. It is true that good and evil, present and absent, work on the mind; but what *immediately* determines the will to each voluntary action is the uneasiness of desire, fixed on some absent good - whether the good be negative (such as the absence of pain) or positive (such as pleasure). I shall now try to show, by argument and from experience, that it is indeed this uneasiness that determines the will to the series of voluntary actions of which the greatest part of our lives is made up.

34. When a man is perfectly content with the state he is in, and thus is without uneasiness, there is nothing to move him to stop being in that state. Observe yourself and you'll see that this is right. And so we see that our All-wise Maker has put into us the uneasiness of hunger and thirst and other natural desires, which return at the proper time and determine our wills for the preservation of ourselves and the continuation of our species. If the mere *thought* of those good ends had been sufficient to determine the will and set us to work, it is reasonable to think we would then have had none of these natural pains, and perhaps in this world little or no pain at all. 'It is better to marry than to burn', says St. Paul, [1 Corinthians 7:9] exhibiting what chiefly drives men into the enjoyments of the married state. There is more power in •the push of a little *actual* burning than •the pull of the *prospect of* greater pleasures.

35. It is so widely and confidently accepted that what determines the will is *good, the greater good*, that I am not surprised that I took this view for granted when I first published on this topic in the first edition of this *Essay*. And I suspect that many readers will blame me not for that but rather for my present retraction. But when I looked harder into the matter, I was forced to conclude that even what a person *knows to be* the greater good doesn't determine his will until his desire has been correspondingly raised and has made him uneasy in his lack of the good in question. [Locke gives the example of a poor man who agrees that affluence is better than poverty, but who isn't uneasy over his poverty and therefore doesn't bestir himself to get rich; and the example of a man who knows that virtue brings advantages, but who does nothing about it because he doesn't 'hunger and thirst after righteousness'. He writes colourfully of the alcoholic whose knowledge of what would be better for him leads him frequently to resolve to give up drinking, but doesn't lead him actually to give it up because] the uneasiness to miss his accustomed delight returns, the acknowledged greater good loses its hold, and the present *uneasiness* determines his will to start drinking again. He may at the same time make secret promises to himself that he won't drink any more - that this is the last time he'll act against the attainment of those greater goods. And thus he is from time to time in the state of that unhappy complainer who said *Though I see and approve the better, I follow the worse*. We have constant experience of the truth of this for many people at many times; I know of no way except mine to make this fact intelligible.

36. Experience makes it evident that uneasiness alone operates on the will; but *why* is this so? In answering this, I shall assume that whenever volition occurs there is some uneasiness, the question being *why it* and not something else acts immediately on the will in every case. The answer is that at any given time only one item can determine our will, and it naturally happens that uneasiness takes that role to the exclusion of anything else that might take it. The reason for that is that while we are in a state of uneasiness we can't sense ourselves as being happy or on the way to happiness, because everyone finds that pain and uneasiness are inconsistent with happiness, spoiling the savour even of the good things that we do have. So our will always, as a matter of course, chooses the removing of any pain or uneasiness that we still have, as the first and necessary step towards happiness.

37. Here is another possible reason why the will is immediately determined only by the will and not by the prospect of greater good. The greater good is only prospective, lying in a possible future; it isn't *present* and actual. Uneasiness is the only relevant factor that is *present*; and it is against the nature of things that something *absent* should operate where it is not. So a merely *future* possible good cannot operate in the actual *present*. You may object that absent good can,

through thought, be brought home to the mind and made to be present. The idea of it may indeed be in the mind and viewed as present there; but for •something that is in the mind in that way to counter-balance the removal of an uneasiness that we have, •it must raise our desire to a point where the uneasiness of *that* prevails over the other uneasiness in determining the will. Until that happens, the idea in the mind of some good is there only in the way other ideas are, as merely something to think about - not operating on the will and not setting us to work. (I shall give the reason for this shortly.)

[In section 38 Locke writes at length about the fact of sinful conduct by people who really do believe that they are risking the loss of eternal joy in heaven. This would be inexplicable if mere unaided beliefs about the good could determine the will, because in that case *those* beliefs would surely always prevail. But their frequent failure to do so can be understood if one brings in Locke's thesis that uneasiness is what determines the will. Near the end he writes:] Any intense pain of the body, the ungovernable passion of a man violently in love, or the impatient desire for revenge, keeps the will steady and focussed; and the will that is thus determined never lets the understanding set its object aside; all the thoughts of the mind and powers of the body are uninterruptedly employed in one direction by the determination of the will, which is influenced by that towering uneasiness as long as it lasts. . . . That completes my defence of my view that uneasiness is always what immediately determines the will. The notion of uneasiness will go on working for me, but won't itself be the topic of further discussion.

39. Up to here my examples of uneasiness have mainly concerned desire. That kind of uneasiness is the chief determinant of desire, and the one we are most conscious of; and it seldom happens that the will orders an action without some desire being involved. (I think that is why the will and desire are so often taken to be one and the same thing.) Still, some part in the story should be given to kinds of uneasiness that make up or at least accompany the other passions. *Aversion, fear, anger, envy, shame*, etc. each have their uneasiness too, which is how they influence the will. Each of those passions usually comes mixed with others, and I think that desire is nearly always an element in the mix. I am sure that wherever there is uneasiness there is desire. Here is why: we constantly desire happiness; and to the extent that we feel uneasiness, to that extent we lack happiness and therefore desire to have it. . . . Also, the present moment is not our eternity! However greatly we are enjoying the present, we look beyond it to the future, and desire goes with that foresight, and it carries the will with it. So that even in joy, what keeps up the action on which the enjoyment depends is the *desire* to continue it and the *fear* of losing it. . . .

40. We are attacked by various uneasinesses, distracted by different desires, which raises the question: which of them takes precedence in determining the will to the next action? The answer is that ordinarily it is the *most pressing* of them. (That is, the most pressing of the ones that the person thinks *can* be removed; for the will can never be moved towards something it then thinks is unattainable. . . .) What ordinarily determines the will in that series of voluntary actions that makes up our lives is at each moment the most important and urgent uneasiness that we feel at that time. Don't lose sight of the fact that the proper and only object of the will is *some action of ours*, and nothing else. The only outcome we can produce by willing is an action of our own, so that is as far as our will reaches.

41. If it is further asked *What is it that moves desire?*, I answer: Happiness, and that alone. 'Happiness' and 'misery' are the names of two extremes whose outer bounds we don't know. . . . But we have very lively impressions of some degrees of each, made by various instances of delight

and joy on the one side, and torment and sorrow on the other. For brevity's sake I shall bring all these under the labels 'pleasure' and 'pain', because there is pleasure and pain of the mind as well as of the body. . . . Indeed, strictly speaking they are all of the mind, though some arise in the mind from thought, others in the body from certain modifications of motion.

42. *Happiness* then in its full extent is the utmost pleasure we are capable of, and *misery* the utmost pain Now because pleasure and pain are produced in us by the operation of certain objects on our minds or our bodies, and in different degrees, anything that is apt to produce pleasure in us we call 'good', and what is apt to produce pain we call 'bad', *just* because it is apt to produce in us the pleasure or pain that constitutes our happiness or misery. Further, even when what is apt to bring us some degree of pleasure is in itself good, and what is apt to produce some degree of pain is bad, we often don't call it so because it is in competition with a •greater of its sort. . . . If we rightly estimate what we call 'good' and 'bad', we shall find it lies to a large extent in •comparison: the cause of every lesser degree of pain, as well as every greater degree of pleasure, has the nature of good, and vice versa.

43. Although good is the proper object of desire in general, sometimes a man's desire remains unmoved by the prospect of good, because he doesn't regard that good as a necessary part of his happiness. Everyone constantly pursues happiness, and desires whatever contributes to it; *other* acknowledged goods a person can look at without desire, pass by, and be content to go without. There is pleasure in knowledge, and many men are drawn to sensual pleasures. Now, let one man place his satisfaction in sensual pleasures, another in the delight of knowledge; each admits there is great pleasure in what the other pursues; yet neither makes the thing that delights the other a part of *his* happiness, and their desires are not moved that way. (As soon as the studious man's hunger and thirst make him uneasy, . . . his desire is directed towards eating and drinking, though possibly not caring much *what* food he gets to eat. And on the other side, the epicure buckles down to study when shame, or the desire to look good to his mistress, makes him uneasy in his lack of some sort of knowledge.) Thus, however intent men are in their pursuit of happiness, a man may have a clear view of good - great and acknowledged good - without being concerned for it or moved by it, if he thinks he can be happy without it. But men are always concerned about pain, which is an intense uneasiness. They can feel no uneasiness without being moved by it. And therefore whenever they are uneasy from their lack of some good that they think they need for their happiness, they start to desire it.

44. Something that each of us can observe in himself is this: although •the greater visible good doesn't always raise a man's desires in proportion to the greatness he acknowledges it to have, •every little trouble moves us and sets us to work to get rid of it. The nature of our happiness and misery makes it evident why this should be so. Any present pain, of whatever kind, makes a part of our present misery; but the absence of a good doesn't necessarily do so. If it always did, we would be constantly and infinitely miserable, because there are infinite degrees of happiness that we don't possess. So when we are free of all uneasiness, a moderate portion of good is enough to keep us content in the present; and a fairly low level of pleasure in a series of ordinary enjoyments adds up to a happiness with which most of us can be satisfied. (If this were not so, there'd be no room for the obviously trivial actions that we so often exercise our wills on, voluntarily spending much of our lives on them - a pattern of conduct that couldn't persist if our will or desire were constantly directed towards the greatest apparent good.) Few people need go far afield to be convinced that this is so. In this life, indeed, most people who are happy to the extent of having a

constant series of *moderate* pleasures with no admixture of uneasiness would be content to continue in •this life for ever; even though they can't deny that there *may be* a state of eternal durable joys in an •after-life, far surpassing all the good that is to be found in this one. In fact they can't avoid realizing that such a wonderful after-life is *more* possible than is their getting and keeping the pittance of honour, riches, or pleasure that they are now pursuing to the neglect of that eternal state. And yet,

•with a clear view of this difference, •satisfied of the possibility of a perfect, secure, and lasting happiness in a future state, and •quite sure that it is not to be had in this life while they limit their happiness to some little enjoyment and exclude the joys of heaven from making a necessary part of it,

still their desires are not moved by this greater apparent good, nor are their wills determined to any action or effort towards its attainment.

[In section 45 Locke discusses at length the phenomenon of people not being moved to seek what they believe are very great long-term goods because their wills are activated by little present uneasinesses aimed at smaller goods that they think of as necessary for their happiness. These dominant uneasinesses may be for food, drink and so on, but there are also 'fantastical' uneasinesses directed at honour, power, riches, etc. 'and a thousand other irregular desires that custom has made natural to us'. When we are in pain, misery, uneasiness, Locke says, the first thing we need, in order to become happy, is to get out of that state; and in that situation:] the absence of absent good does not contribute to our unhappiness, and so the thought of absent good - even if we have it, and admit that the item in question *would* be good - is pushed aside to make way for the removal of the uneasinesses that we feel. This situation will change only if appropriate and repeated contemplation of an absent good •brings it nearer to our mind, •gives us a taste of that good, and •raises in us some desire. That desire then starts to contribute to our present uneasiness, and competes with our other uneasinesses in the push to be satisfied; and if it exerts enough pressure it will in its turn come to determine the will.

46. By thoroughly examining any proposed good, we can raise our desires to a level that is proportional to *how good* it is, and then it may come to work on the will, and be pursued. . . . Our wills are influenced only by the uneasinesses that are present to us; while we have any of those they are always soliciting, always ready at hand to give the will its next push. When any balancing goes on in the mind, it isn't a balancing of prospective goods against one another; rather it concerns only which desire will be the next to be satisfied, which uneasiness the next to be removed. So it comes about that as long as any uneasiness, any desire, remains in our mind, there is no room for good - considered just in itself as *good* - to come at the will or to have any influence on it. . . .

47. Despite what I have said in section 40, it doesn't *always* happen that the greatest and most pressing uneasiness determines the will to the next action. As we find in our own experience, the mind is usually able to *suspend acting* on some one of its desires, and so - taking them one at a time - to suspend acting on any of them. Having done this, the mind is at liberty to consider the objects of its desires - the states of affairs that it wants to bring about - to examine them on all sides and weigh them against others. In this lies man's liberty; and all the mistakes, errors, and faults that we run into in living our lives and pursuing happiness arise from not availing ourselves of this liberty, and instead rushing into the determination of our wills, going into action before thinking enough about what we are aiming at. Our ability to suspend the pursuit of this or that

desire seems to me to be the source of all freedom; it is what so-called 'free will' consists in. When we exercise it and *then* act, we have done our duty, all that we can or ought to do in pursuit of our happiness; and it isn't a *fault* but a *perfection* of our nature to desire, will, and act according to the last result of a fair examination.

48. This is so far from confining or weakening our freedom, that it is the very essence of it; it doesn't cut short our liberty, but brings it to its proper goal; and the further we are removed from such a determination - that is, from being made to act by the judgments we have made and the uneasinesses that result from them - the nearer we are to misery and slavery. If the mind were perfectly indifferent [= 'in perfect balance'] about how to act, not fixed by its last judgment of the good or evil that is thought to attend its choice, that would be a great imperfection in it. A man is at liberty to lift his hand to his head, or let it rest in his lap; he is perfectly indifferent as between these, and it would be an imperfection in him if he lacked that power - that is, if he were unable to lift his hand, or unable not to lift it, given that no desire of his selects one course of action rather than the other. But it would be as great an imperfection if he had the same indifference as between lifting his hand and not lifting it in a situation where by raising it he would save himself from a blow that he sees coming. It is as much a perfection that desire (or the power of preferring) should be determined by good as that the power of acting should be determined by the will; and the more certain such determination is, the greater is the perfection. Indeed, if we were determined by anything *but* the last result of our judgments about the good or evil of an action, *we would not be free*. . . .

49. If we think about those superior beings above us who enjoy perfect happiness - that is, the angels in heaven - we shall have reason to judge that they are more steadily determined in their choice of good than we are; and yet we have no reason to think they are less happy or less free. And if such poor finite creatures as us were entitled to say anything about what infinite wisdom and goodness could do, I think we might say that God himself *cannot* choose what is not good; his freedom does not prevent his being determined by what is best.

50. Would anyone choose to be an imbecile so as to be less determined by wise thoughts than a wise man? Is it worth the name of 'freedom' to be at liberty to play the fool, and draw shame and misery upon oneself? Breaking loose from the conduct of reason, and lacking that restraint of examination and judgment that keeps us from choosing or doing the worse - if *that* is liberty, true liberty, then madmen and fools are the only free men! Anyone who chose to be mad for the sake of such 'liberty' would have to be mad already. I don't think that anybody thinks that our liberty is restricted in a way we might complain of by the fact that we are constrained to act so as to secure the happiness that we constantly desire. God Almighty himself is under the necessity of being happy; and the more any thinking being is under that necessity, the nearer it comes to infinite perfection and happiness. To protect us - ignorant and short-sighted creatures that we are - from mistakes about true happiness, we have been given a power to suspend any particular desire and keep it from determining the will and engaging us in action. This is •standing still when we aren't sure enough of which way to go. Examination of the possibilities is •consulting a guide. The determination of the will after enquiry is •following the direction of that guide. And someone who has a power to act or not to act, according as such determination of the will directs, is free; such determination doesn't limit the power in which liberty consists. Someone who has his chains knocked off and the prison doors opened for him is perfectly at liberty, because he can either go or stay, as he chooses, even if his preference is determined to stay because of the darkness of the

night, the badness of the weather, or his lack of anywhere else to sleep. He doesn't stop being free, although his desire for some convenience gives him a preference - all things considered - for staying in his prison.

[Section 51 continues with this theme.]

52. The liberty of thinking beings in their constant pursuit of true happiness turns on the hinge of their ability in particular cases to

suspend this pursuit until they have looked forward in time and informed themselves about whether the particular thing they want and are considering pursuing really does lie on the way to their main end, really does make a part of the 'happiness' that is their greatest good.

By their nature they are drawn towards happiness, and that requires them to take care not to mistake or miss it; and so it demands that they be cautious, deliberate, and wary about how they act in pursuit of it. Whatever necessity requires us to pursue real happiness, the same necessity with the same force requires us to suspend action, to deliberate, and to look carefully at each successive desire with a view to discovering whether the satisfaction of it - rather than promoting our happiness - won't interfere with our true happiness and lead us away from it. This, it seems to me, is the great privilege of finite thinking beings; and I ask you to think hard about whether the following isn't true:

The course of men's behaviour depends on what use they make of their ability to suspend their desires and stop them from determining their wills to any action until they have examined the good and evil of the contemplated action, fairly and with as much care as its importance merits. This ability is what brings freedom into the lives of men - all the freedom they have, all they can have, all that can be useful to them. This 'suspension of desire, followed by deliberation', is something we *can* do, and when we have done it we have done our duty, all we can do, all we need to do.

Since the will needs knowledge to guide its choice, all we can do is to hold our wills undetermined until we have examined the good and evil of what we desire. What follows after that follows in a chain of consequences linked one to another, all depending on the last ruling of the judgment; and we have power over whether that ruling comes from a hasty and precipitate view or from a due and mature examination.

[In section 53 Locke writes about how greatly people vary in their tastes and in what they think would make them happy, and urges the importance of our exercising our *freedom* to suspend judgment and give ourselves time for further reflection and enquiry. In extreme cases one can't do this, for example a man under torture may be unable to refrain from telling his torturers *right now* what they want to know. And 'love, anger, or any other violent passion' may have the same effect. But we should work on freeing ourselves from being dominated in that manner. He continues:] In this we should •take trouble to bring it about that whether something is to our mind's taste depends on the real intrinsic good or bad that is in it, and •not permit an admitted or supposed possible great good to slip out of our thoughts without leaving any taste of itself, any desire for it, until by adequate thought about its true worth we form an appetite in our mind that is suitable to it, and make ourselves uneasy in the lack of it or in the fear of losing it. . . . Let no-one say he *can't* govern his passions, can't prevent them from taking over and sweeping him into action; for what you can do before a prince or a great man you can do alone or in the presence of God, if you want to.

54. How does it come about that, although all men desire happiness, their wills carry them in such contrary directions and thus carry some of them to do bad things? What I have said makes it easy to answer this, which I do as follows. The various and contrary choices that men make show •not that they don't all pursue good but •rather that different people find different things good - that we don't all place our happiness in the same thing, or choose the same way to get it. If we were concerned only with how things go in this life, the explanation of why •one man devotes himself to study and knowledge and •another to hawking and hunting, why •one chooses luxury and debauchery and •another sobriety and riches, would not be because some of these didn't aim at their own happiness but because different things make them happy. So the physician was right in what he said to his patient who had sore eyes: 'If you get more pleasure from the taste of wine than from the use of your sight, wine is good for you; but if the pleasure of seeing is greater to you than that of drinking, wine is bad.'

55. The mind has its own taste for things, as well as the palate; and you'll do no better trying to delight all men with riches or glory . . . than trying to satisfy all men's hunger with cheese or lobsters. . . . As •pleasant tastes depend not on the things themselves but on how they suit this or that particular palate (and palates vary greatly), so also •the greatest happiness consists in having the things that produce the greatest pleasure and not having any that cause disturbance or pain. Now these, to different men, are very different things. So if men have nothing to hope for in an after-life, if *this* is the only life in which they can enjoy anything, it is neither strange nor unreasonable that they should seek their happiness by avoiding all the things that disease them here and pursuing all that delight them here - and it's not surprising that there should be much variety and difference among these. For if there is no prospect beyond the grave, the inference is certainly right: 'let us eat and drink,' let us enjoy what we delight in, 'for to-morrow we shall die' [Isaiah 22:13]. This, I think, may serve to show us why men pursue different ends even though the desires of all of them are bent on happiness. It can happen that men choose different things and they all choose rightly - if we suppose them to have no prospect of an after-life, which involves supposing them to be merely like a crowd of poor insects - some of them bees delighting in flowers and their sweetness, others beetles enjoying other kinds of food - all of them able to enjoy themselves for a season, after which they go out of existence for ever.

56. . . . Liberty plainly consists in a power to do or not to do, as we choose. This much is undeniable; but it seems to cover only the actions of a man resulting from his volition, so there remains the question *Is he at liberty to will or not?* In sections 23-4 I have answered that in most cases a man isn't at liberty to refrain from the act of volition: he must exert an act of his will through which the proposed action is done or one through which it is not done. Still, in one kind of case a man *is* at liberty in respect of willing, namely in choosing a remote good as an end to be pursued. Here a man can suspend choosing either for or against the thing proposed until he has examined whether it really is - or really will lead to - something that will make him happy. Once he has chosen it, thereby making it a part of his happiness, it raises desire, which gives him a corresponding uneasiness, which determines his will, which sets him to work in pursuit of his choice.

This shows us how a man can deserve punishment, even though in all his particular actions he *necessarily* wills what he then judges to be good. His will is always determined by whatever is judged good by his understanding, but that doesn't excuse him if *by a too hasty choice* of his own making he has adopted wrong measures of good and evil - judgments which, however false they

are, have the same influence on all his future conduct as if they were true. He has spoiled his own palate, and must take responsibility for the sickness and death that follows from that. . . .

What I have said may help to show us why men prefer different things and pursue happiness by contrary courses. But since men are always constant and in earnest about happiness and misery, the question still remains *How do men come to prefer the worse to the better*, and to choose what they admit has made them miserable?

[In section 57 Locke sketches an answer to his question. Some of the variation, and especially some of the conduct that isn't conducive to the happiness of the agent, is due to (1) 'causes not in our power', such as extreme pain, overwhelming terror, and so on. The other source of counterproductive behaviour is (2) wrong judgment. Locke deals briefly with (1) in this section, and devotes sections 58-68 to (2).]

58. I shall first consider the wrong judgments men make of future good and evil, whereby their desires are misled. Nobody can be wrong about whether his present state, considered just in itself and apart from its consequences, is one of happiness or misery. Apparent and real good are in this case always the same; and so if every action of ours ended within itself and had no consequences, we would never err in our choice of good; we would always infallibly prefer the best. . . .

59. But our voluntary actions don't carry along •with them in their present performance all the happiness and misery that •depend on them. They are *prior* causes of good and evil that come to us *after* the actions themselves have passed and no longer exist. So our desires look beyond our present enjoyments, and carry the mind forward to any absent good that we think is needed to create or increase our happiness. The absent good gets its attraction from the belief that it is needed for happiness. Without that belief we are not moved by absent good. In this life we are accustomed to having a narrow range, in which we enjoy only one pleasure at a time; and when we have such a single pleasure and have no uneasiness, the pleasure is enough to make us think we are happy; and we aren't affected by all remote good, even when we are aware of it. Because our present enjoyment and freedom from pain suffices to make us happy, we don't want to risk making any change. . . . But as soon as any new uneasiness comes in, our happiness is disturbed and we are set to work again in the pursuit of happiness.

60. One common reason why men often are not raised to the desire for the greatest absent good is their tendency to think they can be happy without it. While they think *that*, the joys of a future state don't move them; they have little concern or uneasiness; and the will, free from the determination of such desires •for distant-future goods•, is left to pursue nearer satisfactions, removing those uneasinesses that it feels from its lack of them and its longing for them. [The remainder of this section develops this line of thought, applying it especially to those who ignore the prospects of the after-life in their pursuit of relatively trivial earthly pursuits. The section concludes:] For someone who - •unlike a bee or a beetle• - has a prospect of the different state that awaits all men after this life, a state of perfect happiness or of misery depending on their behaviour here, the measures of good and evil that govern his choice are utterly changed. For no pleasure or pain in this life can be remotely comparable to the endless happiness or intense misery of an immortal soul in the after-life, so his choices about how to act will depend not on the passing pleasure or pain that accompanies or follows them •here but on whether they serve to secure that perfect durable happiness •hereafter.

61. To understand in more detail the way men often bring misery on themselves, although they all earnestly pursue happiness, we must consider how things come to be *mis*represented to our desires. That is done by the faculty of judgment telling untruths about them. To see what causes wrong judgments, and what their scope is, we must note that things are judged good or bad in a double sense.

In the strict and proper sense, only pleasure is good, only pain bad.

But things that draw pleasure and pain after them are also considered as good and bad, because our desires - those of any creature with foresight - aim not only at present pleasure and pain but also at whatever is apt to cause pleasure or pain for us at a later time.

62. The wrong judgment that often misleads us and makes the will choose the worse option lies in misreporting the various comparisons of these consequences that I have just mentioned. I am not talking about one person's opinion about someone else's choices, but of the choices a man makes that he himself eventually admits were wrong. Now, it is certain that every thinking being seeks happiness, which consists in the enjoyment of pleasure without much uneasiness mixed into it; and it is impossible that anyone should willingly slip something nasty into his own drink, or leave out anything in his power that would help to complete his happiness - impossible, that is, unless he has made a wrong judgment. . . . Such judgments are of two kinds: (1) about the relative goodness or badness of items considered just in themselves, and (2) about what the consequences will be of various items. I'll discuss (1) in sections 63-5, and (2) in sections 66-7. Yet another kind of judgment will be discussed in section 68.

63. When we compare *present* pleasure or pain with *future* (which is usually the case in most important questions about what to do), we often make wrong judgments about them, measuring them differently because of our different temporal distances from them. Nearby objects are apt to be thought to be bigger than ones that are actually bigger but are further away; and so it is with pleasures and pains, with which *the present* is apt to win the contest. Thus most men, like spendthrift heirs, are apt to judge a little in hand to be better than a great deal to come. But everyone must agree - whatever his values are - that this is a wrong judgment. That which is future will certainly come to be present, and then, having the same advantage of nearness, will show itself in its full size, revealing the mistake of someone who judged it by unequal measures. [In the remainder of the section Locke develops this point at some length, with special reference to the drinker who knows he'll have a hangover in the morning.]

64. It is because of the weak and narrow constitution of our minds that we judge wrongly when comparing present pleasure or pain with future. We can't thoroughly enjoy two pleasures at once, much less enjoy a pleasure - with a few exceptions - while pain possesses us. A present pleasure, if it isn't feeble to the point of hardly being a pleasure, fills our narrow souls, taking up the whole mind so as to leave hardly any room for thoughts of absent things. Even if among our pleasures there are some that aren't strong enough to exclude thoughts about things in the future, we so intensely hate pain that a little of it extinguishes all our pleasures. So we come to desire to be rid of the present evil, whatever the cost; we are apt to think that nothing absent can equal it, because in our present pain we find ourselves incapable of any degree of happiness. . . . Nothing, we passionately think, can exceed - hardly anything can *equal* - the uneasiness that now sits so heavily on us. And *not* having a present pleasure that is available is a pain, often a very great one, with one's desire being inflamed by a near and tempting object. So it is no wonder that *that* operates in the same way that pain does, lessens future goods in our thoughts, and so forces us blindfold (so to speak) into the embraces of the nearby pleasure.

[In section 65 Locke makes the point that in our judgments about possible future pleasure ‘of a sort we are unacquainted with’ we are apt, if that pleasure is in competition with something that is closer in time, to underestimate the former on the ground that if we actually had it we would find that it didn’t live up to its billing. He continues:] But this way of thinking is wrong when applied to the happiness of the after-life. . . . For that life is intended ‘by God’ to be a state of happiness, so it must certainly be agreeable to everyone’s wish and desire. . . . The manna in heaven will suit everyone’s palate. . . .

66. When there is a question of some action’s being good or bad in its consequences, we have two ways of judging wrongly. (1) We may underestimate *how* bad a given bad consequence would be. (2) We may underestimate the probability that a given bad upshot *will* be a consequence of the proposed action - allowing ourselves to believe wrongly that the threatened consequence may somehow be avoided, e.g. by hard work, skill, nimbleness, change of character, repentance, etc. I could show, case by case, that these are wrong ways of judging; but I shall merely offer the following general point. It is very wrong and irrational to risk losing a greater good in order to get a lesser one on the basis of uncertain guesses and before the matter has been examined as thoroughly as its importance demands. Everyone must agree with this, I think, especially if he considers the usual causes of this wrong judgment, of which I now describe three.

67. One is ignorance. Someone who judges without informing himself as fully as he can is guilty of judging amiss.

The second is carelessness, when a man overlooks things that he *does* know. This is a sort of self-induced temporary ignorance, which misleads our judgments as much as the other. Judging is like balancing an account to see whether there is profit or loss; so if either column is added up in a rush, resulting in the omission of some figures that ought to be included, this haste causes as wrong a judgment as if it were perfect ignorance. What usually causes it is the domination by some present pleasure or pain. Our understanding and reason were given us so that we won’t rush in, but instead will search and see and *then* judge. Understanding without liberty would be useless, and liberty without understanding (if there could be such a thing) would signify nothing. If a man sees what would do him good or harm, make him happy or miserable, without being able to move one step towards or from it, what good is it to him that he sees it? And if someone is at liberty to ramble in perfect darkness, how is his liberty any better than if he were driven up and down as a bubble by the force of the wind? Being acted on by a blind impulse from •within oneself is no better than being acted on by one from •outside. So the first great use of liberty is to hinder blind headlong rushing; the principal exercise of freedom is to stand still, open the eyes, look around, and take a view of the consequences of what we are going to do - doing all this with as much thoroughness as the weight of the matter requires. I shan’t here explore this matter further. . . . I shall consider only one other kind of false judgment, which I think I ought to mention because it has great influence though it may usually be overlooked.

68. All men desire happiness, that’s past doubt; but when they are rid of pain they are apt to settle for any pleasure that is readily available or that they have grown to be fond of, and to be satisfied with that, and thus to be happy until some new desire disturbs that happiness and shows them that they are not happy. Some goods exclude others; we can’t have them all; so we don’t fix our desires on every apparent greater good unless we judge it to be necessary to our happiness; if we *think we can be happy without it*, it doesn’t move us. This brings up a third way in which men judge wrongly, namely by thinking something not to be necessary to their happiness when really it

is so. This can mislead us •in our choice of goods to aim at and •in the means we adopt to achieve a good. We are encouraged to think that some good would not contribute to our happiness by the real or supposed unpleasantness of the actions needed to achieve it, for we tend to find it so absurd that we should *make ourselves unhappy* in order to *achieve happiness* that we don't easily bring ourselves to it.

69. We now come to a fourth and final kind of error - not exactly an error of *judgment* - that men can make in their approach to issues concerning goods and happiness. Before presenting it, we need to grasp a background fact. It is evident that in many cases a man has it in his power to change the pleasantness and unpleasantness that accompanies a given sort of action. It's a mistake to think that men can't come to take pleasure in something they used to dislike or regard with indifference. In some cases they can do it just by careful thinking; in most cases they can do it by practice, application, and habit. Bread or tobacco may be neglected even when they are shown to be useful to health, because of an indifference or dislike for them. But thought about the matter recommends that they be tried, and if they are tried the person finds that they are pleasant after all, or else through frequent use they *become* pleasant to him. This holds in the case of virtue also. Actions are pleasing or displeasing, either in themselves or considered as a means to a greater and more desirable end. [Locke the makes the point that •careful thought about the good to be attained may make one *reconciled to the unpleasantness* of the means to it, whereas •'use and practice' can lead one to *enjoy* those means, finding them pleasant after all.] Habits have powerful charms. They put so much easiness and pleasure into what we accustom ourselves to doing that we can't give it up without uneasiness. Though this fact about human nature is very visible, and everyone's experience displays it to him, it is much neglected as a help to men in their achievement of happiness. So neglected, indeed, that many people will think it paradoxical to say as I do that men can make things or actions more or less pleasing to themselves, and in that way remedy something that is responsible for great deal of their wandering. . . .

70. I shan't go on about how men mislead themselves by wrong judgments and neglect of what is in their power. That would make a volume, and it isn't my business. But there is one point about it that I shall present here because it is so important. If someone is so unreasonable as to fail to think hard about *infinite* happiness and misery, he isn't using his understanding as he should. The •rewards and punishments of the after-life that the Almighty has established as the enforcements of his law have enough weight to determine the choice, against •*whatever* pleasure or pain this life can show. For this to be so, the eternal state has only to be regarded as a bare *possibility*, and nobody could question that. Exquisite and endless happiness is a possible consequence of a good life here, and the contrary state the possible reward of a bad one; and someone who accepts this must admit that his judgment is wrong if he doesn't conclude that a virtuous life (which may bring the certain expectation of everlasting bliss) is to be preferred to a vicious one (with the fear of that dreadful state of misery that may overtake the guilty, or at best the terrible uncertain hope of annihilation). This would obviously hold good even if the virtuous life here had nothing but pain, and the vicious one brought continual pleasure; which in fact is far from the case. . . . The •worst that comes to the pious man if he is *wrong* is that there is no after-life, which is the •best that the wicked man can get if he is *right*. With possible infinite happiness on the virtue side of the balance and possible infinite misery on the vice side, it would be *madness* to choose the latter. . . . •If the good man is right, he will be eternally happy; if he is wrong, he won't be miserable - he won't feel anything. On the other side, •if the wicked man is right, he won't be happy (he won't

feel anything); if he is wrong, he'll be infinitely miserable. . . . I have said nothing about the certainty or *probability* of a future state, because I have wanted to show the wrong judgment that anyone must admit that he is making - *on his own principles* - if he prefers the short pleasures of a vicious life while he is certain that an after-life is at least *possible*.

71. . . . In correcting a slip that I had made in the first edition of this work, I was led to my present view about human liberty ·which I now repeat, before arguing against a rival view that I didn't mention earlier·.

Liberty is a power to act or not act according as the mind directs. A power to direct the operative faculties to motion or rest in particular instances is *the will*. What determines the will to any change of operation is some present *uneasiness*, which is - or at least is always accompanied by - *desire*. Desire is always moved to avoid evil, because a total freedom from pain is always a necessary part of our happiness. But a ·prospective· greater good may fail to move desire, because it doesn't make a necessary part of the person's happiness or because he thinks it doesn't. All that we ever desire is to be happy. But although this general desire of happiness operates constantly and invariably, the satisfaction of any particular desire can be suspended from determining the will until we have maturely examined whether the apparent good in question really does make a part of our real happiness. What we judge as a result of that examination is what ultimately determines us. A man couldn't be free if •his will were determined by anything other than •his own desire, guided by •his own judgment.

I know that some people equate a man's liberty with his being, before his will is determined, *indifferent* - ·that is, able to go either way·. I wish those who lay so much stress on this supposed indifference had told us plainly whether it comes •before the thought and judgment of the understanding as well as •before the decree of the will. ·It may seem that they have to say that it does·. For it is pretty hard to place the indifference between them, that is, immediately *after* the judgment of the understanding and *before* the determination of the will; because the determination of the will *immediately* follows the judgment of the understanding. On the other hand, to equate liberty with an indifference that *precedes* the thought and judgment of the understanding places it in such darkness that we can neither see nor say anything of it. At any rate, it gives 'liberty' to something that isn't capable of having it, because we all agree that no agent is capable of liberty except as a *consequence* of thought and judgment. If liberty is to consist in indifference, then, it must be an indifference that remains after the judgment of the understanding and indeed after the determination of the will ·because, as we have seen, it cannot occur before both, and cannot come between them either·. That, however, isn't •an indifference of *the man*. He has judged whether it is best to act or not to act ·and has decided or chosen accordingly·, so *he* isn't now indifferent. Rather, it is •an indifference of his operative powers: they are equally able to operate and to refrain from operating now, *after* the will's decree, just as they were *before* it; if you want to call this 'indifference', do so! This indifference gives a man a kind of freedom: for example, I have the ability to move my hand or to let it rest; that operative power is 'indifferent' as between moving and not moving; I am then in that respect perfectly free. My will determines that operative power to keep my hand still; but I am free, because my operative power remains indifferent as between moving and not moving; my will has ordered the keeping-still of my hand, but the *power to move it* hasn't been lost or even lessened; *that power's* indifference as between moving and not moving is just as it was before the will commanded, as can be seen if the will puts it to the trial by ordering that my hand move. It would be otherwise if my hand were suddenly paralysed, or (on

the other side) if it were put into motion by a convulsion; in either of those cases, the indifference of the operative faculty is lost. That is the only sort of indifference that has anything to do with liberty.

[Section 72 opens with Locke saying that he has spent so long on liberty because of the topic's importance. He also reports that the view about liberty that he presented in the first edition came to seem to him wrong, and expresses some pride in his willingness to admit to his errors and to correct them. In the remainder of the section he returns to something he said in section 4, namely that when bodies move their movement is given to them by other bodies, so that this is *passive* rather than *active* power. He now remarks that many mental events exhibit passive rather than active power, for example when the mind acquires an idea 'from the operation of an external substance'. He concludes:] This reflection may be of some use to preserve us from mistakes about powers and actions that we can be led into by grammar and the common structure of languages - the point being that grammatically 'active' verbs don't always signify action. When for example I *see* the moon or *feel* the heat of the sun, the verbs are active but what they report is no action by me but only the passive reception of ideas from external bodies. On the other hand, when I *turn* my eyes another way, or *move* my body out of the sunbeams, I am genuinely active, because I put myself into that motion of my own choice, by a power within myself. Such an action is the product of active power.

73. So now I have presented in compact form [chapters ii-xxi] a view of our original [here = 'basic'] ideas, out of which all the rest are made up. I believe that hard philosophical work would show that all our ideas come down to these very few primary and original ones:

extension
solidity
mobility, or the power of being moved.

We get these ideas from bodies, through our senses. Also (coining two new words, which I think will be useful):

perceptivity, or the power of perception or thinking
motivity, or the power of moving.

We get these from our own minds, through reflection. When we add

existence
duration
number

which come to us through sensation and reflection, we may have completed the list of original ideas on which the rest depend. For I think that these would suffice to explain the nature of colours, sounds, tastes, smells, and all our other ideas, if only we had faculties acute enough to perceive the textures and movements of the minute bodies that produce in us those sensations of colour, taste, and so on. But it is no part of my purpose in this book to investigate scientifically the textures and structures of bodies through which they have the power to produce in us the ideas of their sensible qualities. For my purposes it is enough to note that gold or saffron has a power to produce in us the idea of yellow, and snow or milk the idea of white, which we can only have by our sight; I needn't explore the physics of what gives them those powers. Though I'll say just this about the causes of those powers: when we go beyond the bare ideas in our minds and start to think about their causes, we can't conceive anything in a sensible object through which it could produce different ideas in us except the sizes, shapes, numbers, textures, and motions of its imperceptible parts.

Chapter xxii: Mixed modes

1. In the foregoing chapters ·xiii-xxi· I have discussed *simple modes*, showing through examples of some of the most important of them what they are and how we come by them. Now I am ready to consider the ideas that we call *mixed modes*. Examples are the complex ideas of *obligation*, *drunkenness*, a *lie*, etc., which I call mixed modes because they consist of combinations of simple ideas of different kinds, unlike the more simple modes, which consist of simple ideas all of the same kind. These mixed modes are distinguished from the complex ideas of *substances* by the fact that they are not looked upon to be typical marks of any real beings that have a steady existence, and are only scattered and independent ideas put together by the mind.

2. Experience shows us that the mind gets its simple ideas in a wholly passive manner, receiving them all from the existence and operations of things presented to us by sensation and reflection; we can't make such an idea for ourselves. But mixed modes - our present topic - are quite different in their origin. The mind often exercises an active power in making these several combinations: once it has some simple ideas, it can assemble them into various complexes, thus making a variety of complex ideas, without examining whether they exist together in that way in nature. I think that is why these ideas are called *notions*, implying that they have their origin and their constant existence more in the thoughts of men than in the reality of things. To form such ideas it sufficed that the mind puts the parts of them together, and that they were consistent in the understanding, without considering whether they had any real being; though I don't deny that some of them might be taken from observation. The man who first formed the idea of *hypocrisy* might either have •taken it at first from observing someone who made a show of good qualities that he didn't really have, or else have •formed that idea in his mind without having any such pattern to fashion it by. ·There must be cases of the latter sort·. For it is evident that in the beginning of languages and societies of men, some of their complex ideas . . . must have been in men's minds before they existed anywhere else; and that many names standing for such complex ideas were in use before the combinations they stood for ever existed.

3. Now that we have languages that abound with words standing for such combinations, one common way of acquiring these complex ideas is through *explanations* of ·the meanings of· the terms that stand for them. Because such an idea consists of a number of simple ideas combined, the words standing for those simple ideas can be used to explain what the complex one is. This procedure requires only that the pupil understand those names for simple ideas; he needn't ever have encountered this particular combination of them in the real world. In this way a man can come to have the idea of *sacrilege* or *murder* without ever seeing either of them committed.

4. What gives a mixed mode its unity? How do precisely *these* simple ideas come to make a single complex idea? In some cases the combination doesn't exist in nature, so *that* can't be the source of the idea's unity. I answer that the idea gets its unity from *the mind's act* of combining those simple ideas and considering them as one complex idea of which those are the parts; and the giving of a name to the complex idea is generally viewed as the final stage in the process of combination. For men seldom think of any collection of simple ideas as making one complex one unless they have a name for it. Thus, though *the killing of an old man* is as fit in nature to be united into one complex idea as *the killing of one's father*, because the former has no name (comparable with 'parricide' for the latter) it isn't taken for a particular complex idea. . . .

5. Of all the combinations of simple ideas that are, in the nature of things, fit to be brought together into complex ideas, men select some for that treatment and neglect others. Why? The answer lies in the purposes for which men have language. The purpose of language is for men to show their thoughts, or to communicate them to one another, as quickly as possible; so men usually make *and name* the complex modes for which they have frequent use in everyday life and conversation; and ones that they seldom have occasion to mention they leave loose, without names to tie them together. When they *do* need to speak of one of these combinations, they can do so through the names of their constituent simple ideas. The alternative is to trouble their memories with the burden of too many complex ideas that they seldom or never have any occasion to make use of.

[In sections 6-7 Locke gets two explanations out of his view that complex-idea words are coined when *needed*. It explains, he says in section 6, why every culture has words that aren't strictly translatable into the language of others; and (in section 7) why within a single language the meanings of words constantly change. He then returns to his main theme:] If you want to see how many different ideas are in this way wrapped up in one short sound, and how much of our time and breath is thereby saved, try to list all the 'simple' ideas that are involved in the meaning of 'reprieve' or 'appeal'!

8. Mixed modes are fleeting and transient combinations of simple ideas; they have a short existence everywhere except in the minds of men, and even there they exist only while they are thought of; their greatest permanency is in their *names*, which are therefore apt to be taken for the ideas themselves. If we ask where the idea of a *triumph* . . . exists, it is evident this collection of ideas could not exist all together anywhere in the thing itself, for a triumph is an action that stretches through time, so that its constituents could never all exist together. [Locke is using 'triumph' in its sense of 'victory parade'.] This will be dealt with more extensively when I come to treat of words and their use in Book III, but I couldn't avoid saying this much at the present stage.

9. So there are three ways in which one can acquire a complex idea of a mixed mode. •By experience and observation of things themselves: by seeing men wrestle, we get the idea of *wrestling*. •By invention, putting together several simple ideas in our own minds: he that first invented *printing* had an idea of it in his mind before it ever existed. The most usual way, •by explaining the names of actions we never saw or notions we can't see, enumerating all the ideas that are their constituent parts. . . . All our complex ideas are ultimately resolvable into simple ideas out of which they are built up, though their immediate ingredients (so to speak) may also be complex ideas. The mixed mode that the word 'lie' stands for is made of these simple ideas:

- Articulate sounds.
- Certain ideas in the mind of the speaker.
- Those words the signs of those ideas.
- Those signs put together by affirmation or negation, otherwise than the ideas they stand for are 'related' in the mind of the speaker.

I don't think I need to go any further in the analysis of that complex idea we call a *lie*. What I have said is enough to show that it is made up of simple ideas, and it would be tedious to enumerate every particular simple idea that goes into this complex one. . . . All our complex ideas . . . can ultimately be resolved 'or analysed' into simple ideas, which are the only materials of knowledge or thought that we have or can have. There is no reason to fear that this restricts the mind to too scanty a supply of ideas: think what an inexhaustible stock of •simple modes we get

from *number* and *shape* alone! So we can easily imagine how far from scanty our supply of •mixed modes is, since they are made from the various combinations of different simple ideas and of their infinite modes. . . .

10. The simple ideas that have been most modified, and had most mixed ideas (with corresponding names) made out of them are these three: *thinking* and *motion* (which cover all action) and *power* (from which these actions are thought to flow). Action is the great business of mankind, and the whole subject-matter of all laws; so it is no wonder that all sorts of modes of thinking and motion should be attended to, their ideas observed and laid up in the memory, and names assigned to them. Without all this, laws could not be well made, or vice and disorders repressed. Nor could men communicate well with one another if they didn't have such complex ideas with names attached to them. So men have equipped themselves with settled names, and supposedly settled ideas in their minds, of kinds of •actions distinguished by their causes, means, objects, ends, instruments, time, place, and other circumstances, and also of their •powers to perform those actions. For example, *boldness* is the •power to speak or do what we want, publicly, without fear or disorder. . . . When a man has acquired a power or ability to do something through doing it frequently, we call that a 'habit'; when he has a power that he is ready to exercise at the drop of a hat, we call it a 'disposition'. Thus ·for example· *testiness* is a disposition or aptness to be angry.

Summing up: Let us examine any modes of action, for example
 consideration and assent, which are actions of the mind,
 running and speaking, which are actions of the body,
 revenge and murder, which are actions of both together;

and we shall find them to be merely collections of simple ideas that together make up the complex ideas signified by those names.

11. Power is the source of all action; and the substances that *have* the powers, when they exert a power to produce an act, are called *causes*; and what comes about by the exerting of that power - a substance that is produced, or simple ideas [here = 'qualities'] that are introduced into any subject - are called *effects*. The efficacy through which the new substance or idea is produced is called *action* in the subject that exerts the power, and *passion* in the subject in which any simple idea is changed or produced. Although this efficacy takes many forms, I think that in thinking beings it is conceivable only as modes of •thinking and •willing, and in bodies only as modifications of •motion. If there is any kind of action other than these, I have no notion or idea of it; and so it is far from my thoughts, apprehensions, and knowledge, and I am as much in the dark about it as I am about five extra senses or as a blind man is about colours.

Many words that *seem* to express some action, really signify nothing of the action - nothing of the *how* of it - but merely the effect together with some facts about •the thing that causes or •the thing upon which the cause operates. Thus, for example, *creation* and *annihilation* contain in them no idea of the action or how it is produced, but merely of the cause and the thing done. Similarly, when a peasant says 'Cold freezes water', although the word 'freeze' seems to import some ·specific kind of· action, all it really means ·in the mouth of the peasant· is that water that was fluid has become hard, implying no idea of the action through which this is done.

[In section **12** Locke remarks that his purpose has been to show how words with complex meanings can be defined, not actually to define them all.]

Chapter xxiii: Our complex ideas of substances

1. The mind is supplied with many simple ideas, which come to it through the senses from outer things or through reflection on its own activities. Sometimes it notices that a certain number of these simple ideas go constantly together, and it presumes them to belong to *one thing*; and - because words are suited to ordinary ways of thinking and are used for speed and convenience - those ideas when united in one subject are called by *one name*. Then we carelessly talk as though we had here one simple idea, though really it is a complication of many ideas together. What has happened in such a case is that, because we can't imagine how these simple ideas could exist by themselves, we have acquired the habit of assuming that they exist in (and result from) some substratum, which we call *substance*. ['Substratum' = 'what underlies' = something that serves as the *basis* or *foundation* of something else.]

2. So that if you examine your notion of *pure substance in general*, you'll find that your only idea of it is a supposition of *an unknown support of qualities* that are able to cause simple ideas in us - qualities that are commonly called 'accidents'. If anyone were asked •'What is the subject in which colour or weight inheres?', he would have to reply 'In the solid extended parts'; and if he were asked •'What does that solidity and extension inhere in?', he wouldn't be in a much better position than the Indian philosopher who said that the world was supported by a great elephant, and when asked what the elephant rested on answered 'A great tortoise'. Being further pressed to know what supported the broad-backed tortoise, he replied that it was *something he knew not what*. So too here, as in all cases where we use words without having clear and distinct ideas, we talk like children who, being asked 'What's *this*?' about something they don't recognize, cheerfully answer 'It's a *thing*'. Really all this means, when said by either children or adults, is that they don't know what it is, and that 'the thing' they purport to know and talk about isn't something of which they have any distinct idea at all - they are indeed perfectly in the dark about it. So the idea of ours to which we give the general name 'substance', being nothing but the supposed but unknown support of those qualities we find existing and which we imagine can't exist '*sine re substantive*' - that is, without some thing to support them - we call that support *substantia*; which, according to the true meaning of the word, is in plain English *standing under* or *upholding*. ['Sub' is Latin for 'under', and 'stans' is Latin for 'standing'; so 'substans' (English 'substance') literally means something that stands under something.]

3. In this way we form an obscure and relative idea of substance in general. It is *relative* because it isn't an idea of what substance is like in itself, but only an idea of how it •relates to something else, namely the qualities that it •upholds or stands under. From this we move on to having ideas of various sorts of substances, which we form by collecting combinations of simple ideas that we find in our experience tend to go together and which we therefore suppose to flow from the particular internal constitution or unknown essence of a substance. Thus we come to have the ideas of a *man*, *horse*, *gold*, *water*, etc. If you look into yourself, you'll find that your only clear idea of these sorts of substances is the idea of certain simple ideas existing together. It is the combination of ordinary qualities observable in *iron*, or a *diamond*, that makes the true complex idea of those kinds of substances - kinds that a smith or a jeweller commonly knows better than a philosopher does. Whatever technical use he may make of the term 'substance', the philosopher or scientist has no idea of *iron* or *diamond* except what is provided by a collection of the simple ideas that are to be found in them - with •one further ingredient. Our complex ideas of substances are made up of those simple ideas plus •the confused idea of some *thing* to which they belong and

in which they exist. So when we speak of any sort of substance, we say it is a thing having such or such qualities: body is a thing that is extended, shaped, and capable of motion; •spirit, a thing that can think; and we say that hardness and power to attract iron are qualities to be found *in* a loadstone, 'conceived of as a *thing* containing these qualities'. [Loadstone is a kind of rock that is naturally magnetic.] These and similar ways of speaking show that the substance is always thought of as some thing in addition to the extension, shape, solidity, motion, thinking, or other observable ideas, though we don't know what it is. [Locke uses 'spirit', as he does 'soul', to mean merely 'thing that thinks' or 'thing that has mental properties'. It doesn't mean something *spiritual* in any current sense of the term.]

4. So when we talk or think of any particular sort of corporeal substances - e.g. horse, stone, etc. - although our idea of it is nothing but the collection of simple ideas of qualities that we usually find united in the thing called 'horse' or 'stone', still we think of these qualities as existing in and supported by some common subject; and we give this support the name 'substance', though we have no clear or distinct idea of what it is. We are led to think in this way because we can't conceive how qualities could exist unsupported or with only one another for support.

5. The same thing happens concerning the operations of the mind - thinking, reasoning, fearing, etc. These can't exist by themselves, we think, nor can we see how they could belong to body or be produced by it; so we are apt to think that they are the actions of some other substance, which we call 'spirit'. We have as clear a notion of the substance of •spirit as we have of •body. The latter is supposed (without knowing what it is) to be •the substratum of those simple ideas that come to us from the outside, and the former is supposed (still not knowing what it is) to be •the substratum of the mental operations we experience within ourselves. Clearly, then, we have as poor a grasp of the idea of bodily substance as we have of spiritual substance or spirit. So we shouldn't infer that there is no such thing as spirit because we have no notion of the substance of spirit, any more than we should conclude that there is no such thing as body because we have no clear and distinct idea of the substance of matter.

6. Whatever the secret, abstract nature of substance in general may be, therefore, all our ideas of particular sorts of substances are nothing but combinations of simple ideas co-existing in some unknown cause of their union. We represent particular sorts of substances to ourselves through such combinations of simple ideas, and in no other way. They are the only ideas we have of the various sorts of things - the sorts that we signify to other people by means of such names as 'man', 'horse', 'sun', 'water', 'iron'. Anyone who hears such a word, and understands the language, forms in his mind a combination of those simple ideas that he has found - or thinks he has found - to exist together under that name; all of which he supposes to rest in and be fixed to that unknown common subject that doesn't inhere in anything else in its turn. Consider for instance the idea of the sun: it is merely a collection of the simple ideas, bright, hot, roundish, having a constant regular motion, at a certain distance from us - and perhaps a few others, depending on how accurately the owner of the idea has observed the properties of the sun.

7. The most perfect idea of any particular sort of substance results from putting together most of the simple ideas that do exist in it - 'i.e. in substances of that sort' - including its active powers and passive capacities. (These are not simple ideas, but for brevity's sake let us here pretend that they are.) Thus the complex idea of the substance that we call *a loadstone* has as a part *the power of attracting iron*; and *a power to be attracted by a loadstone* is a part of the complex idea we call 'iron'. These *powers* are counted as inherent *qualities* of the things that have them.

Every substance is as likely, through the powers we observe in it, (a) to change the perceptible qualities of other subjects as (b) to produce in us those simple ideas that we receive *immediately* from it. When (b) happens with fire (say), our senses perceive in fire its heat and colour, which are really only the fire's powers to produce those ideas in us. When (a) happens, we also learn about the fire because it acts on us *mediately* [= 'through an intermediary'] by turning wood into charcoal and thereby altering how *the wood* affects our senses. . . . In what follows, I shall sometimes include these powers among the simple ideas that we gather together in our minds when we think of particular substances. Of course they aren't really *simple*; but they are *simpler* than the complex ideas of kinds of substance, of which they are merely parts.

8. It isn't surprising that powers loom large in our complex ideas of substances. We mostly distinguish substances one from another through their secondary qualities, which therefore make a large part of our complex ideas of substances. (Our senses will not let us learn the sizes, textures, and shapes of the minute parts of bodies on which their real constitutions and differences depend; so we are thrown back on using their secondary qualities as bases for distinguishing them one from another.) And all the secondary qualities, as has been shown in viii, are nothing but powers.

9. The ideas that make our complex ideas of bodily substances are of three sorts. First, the ideas of the *primary qualities* of things, including the size, shape, number, position, and motion of the parts of bodies. We discover these by our senses, but they are in the bodies even when we don't perceive them. Secondly, the sensible [= 'perceptible'] *secondary qualities*. They depend on the primary qualities, and are nothing but the powers that bodies have to produce certain ideas in us through our senses. These ideas are not in the things themselves except in the sense that a thing is 'in' its cause. Thirdly, when we think that one substance can cause an alteration in the primary qualities of another, so that the altered substance would produce in us different ideas from what it did before, we speak of the active *powers* of the first substance and the passive *powers* of the second. We know about the powers of things only through sensible simple ideas. For example, whatever alteration a loadstone has the power to make in the minute particles of iron, we wouldn't suspect that it had *any* power to affect iron if that power weren't revealed by how the loadstone makes the iron particles move. I have no doubt that bodies that we handle every day have powers to cause thousands of changes in one another - powers that we never suspect because they never appear in sensible effects.

10. So it is proper that powers should loom large in our complex ideas of substances. If you examine your complex idea of *gold*, you'll find that several of the ideas that make it up are only ideas of powers. For example, the power of being melted without being burned away, and the power of being dissolved in aqua regia [a mixture of nitric and hydrochloric acids] - these ideas are as essential to our complex idea of gold as are its colour and weight. Indeed, colour and weight when properly understood turn out also to be nothing but powers. For yellowness is not actually in gold, but is a power that gold has, when placed in proper light, to produce a certain idea in us through our eyes. Similarly, the heat that we can't leave out of our idea of the sun is no more really in the sun than is the white colour it gives to wax. These are both equally powers in the sun, which operates on a man - through the motion and shape of its sensible parts - so as to make him have the idea of heat; just as it operates on wax so as to make it capable of producing in a man the idea of white.

11. If our senses were sharp enough to distinguish the minute particles of bodies and the real constitution on which their sensible qualities depend, I am sure they would produce in us ideas quite different from the ones they now produce; the yellow colour of gold, for example, would be replaced by an admirable texture of parts of a certain size and shape. Microscopes plainly tell us this; for what to our naked eyes produces a certain colour is revealed through a microscope to be quite different. Thus sand or ground glass, which is opaque and white to the naked eye, is transparent under a microscope; and a hair seen this way loses its former colour and is mostly transparent, with a mixture of bright sparkling colours like the ones refracted from a diamond. Blood to the naked eye appears all red; but when its lesser parts are brought into view by a good microscope, it turns out to be a clear liquid with a few red globules floating in it. We don't know how these red globules would appear if glasses could be found that would magnify them a thousand or ten thousand times more.

12. God in his infinite wisdom has given us senses, faculties, and organs that are suitable for the conveniences of life and for the business we have to do here. Our senses enable us to know and distinguish things, and to examine them in enough detail to be able to make use of them and in various ways accommodate them to our daily needs. Our insight into their admirable structures and wonderful effects goes far enough for us to admire and praise the wisdom, power, and goodness of their author. . . . But it seems that God didn't intend that we should have a perfect, clear, and adequate knowledge of things; and perhaps no finite being *can* have such knowledge. Our faculties, dull and weak as they are, suffice for us to discover enough in created things to lead us to •the knowledge of the creator, and •the knowledge of our duty; and we are also equipped with enough abilities to •provide for the conveniences of living. These are our business in this world. But if our senses were made much keener and more acute, the surface appearances of things would be quite different for us, and, I'm inclined to think that this would be inconsistent with our survival - or at least with our well-being - in this part of the universe that we inhabit. Think about how little we are fitted to survive being moved into air not much higher than the air we commonly breathe - that will give you reason to be satisfied that on this planet that has been assigned as our home God has suited our organs to the bodies that are to affect them, and vice versa. If our sense of hearing were merely one thousand times more acute than it is, how distracted we would be by perpetual noise! Even in the quietest retirement we would be less able to sleep or meditate than we are now in the middle of a sea-battle. If someone's eyesight (the most instructive of our senses) were a thousand or a hundred thousand times more acute than it is now through the best microscope, he would be able to see with his naked eyes things several million times smaller than the smallest object he can see now; and this would have •a good result and •a bad one. •It would bring him nearer to discovering the texture and motion of the minute parts of corporeal things, and he would probably get ideas of the internal structures of many of them. But then •he would be in a quite different world from other people: nothing would appear the same to him as to others; the visible ideas of everything would be different. So that I don't think that he could converse with others concerning the objects of sight, or communicate in any way about colours, their appearances being so wholly different. [The section continues with further remarks about the disadvantages of having 'such microscopical eyes (if I may so call them)'. It ends thus:] Someone who was sharp-sighted enough to see the arrangement of the minute particles of the spring of a clock, and observe the special structure and ways of moving on which its elastic motion depends, would no doubt discover something very admirable. But if his eyes were so formed that he couldn't *tell the time* by his clock, because he couldn't from a

distance take in all at once the clock-hand and the numerals on the dial, he wouldn't get much advantage from the acuteness of his sight: it would let him in on the structure and workings of the parts of the machine while also making it useless to him!

[In section 13 - an admitted interruption of the main line of thought - Locke remarks that the structure of our sense organs is what sets limits to what we can perceive in the material world, and offers his 'extravagant conjecture' about 'Spirits', here meaning something like 'angels'. Assuming that they 'sometimes' have bodies, angels may be able to alter their sense organs at will, thus being able to perceive many things that we can't. Locke can't hide his envy about this, though he says that 'no doubt' God has good reasons for giving us sense-organs that we cannot flex at will, like muscles.]

14. Each of our ideas of a specific kind of substances is nothing but a collection of simple ideas considered as united in one thing. These ideas of substances, though they strike us as simple and have simple words as names, are nevertheless really complex and compounded. Thus the idea that an Englishman signifies by the name 'swan', is white colour, long neck, red beak, black legs, and webbed feet, and all these of a certain size, with a power of swimming in the water, and making a certain kind of noise - and perhaps other properties as well, for someone who knows a lot about this kind of bird - all united in one common subject.

15. Besides the complex ideas we have of •material sensible substances, we can also form the complex idea of an •immaterial spirit. We get this through the simple ideas we have taken from operations of our own minds that we experience daily in ourselves, such as

thinking
 understanding
 willing
 knowing, and
 power of beginning motion, etc.

all co-existing in some substance. By putting these ideas together, we have as clear a perception and notion of immaterial substances as we have of material ones. For putting together the ideas of •thinking and •willing and •the power of starting or stopping bodily motion, joined to *substance*, of which we have no distinct idea, we have the idea of an •immaterial spirit; and by putting together the ideas of •solid parts that hold together, and •a power of being moved, joined with *substance*, of which likewise we have no positive idea, we have the idea of •matter. [Here 'positive' contrasts with 'relative'. Our idea of substance in general is relative because it is only an idea of how substance relates to qualities - namely upholding and uniting them.] The one is as clear and distinct an idea as the other, the ideas of thinking and moving a body being as clear and distinct as the ideas of extension, solidity, and being moved. For our idea of substance is equally obscure, or none at all, in both: It is merely a supposed *I know not what*, to support qualities. Those who believe that our senses show us nothing but material things haven't thought hard enough! When you think about it, you'll realize that every act of sensation gives us an equal view of both parts of nature, the corporeal and the spiritual [= 'the bodily and the mental']. For while I know by seeing or hearing etc. that there is some bodily thing outside me that is the object of that sensation, I know with even more certainty that there is some spiritual being within me that sees and hears. This seeing and hearing can't be done by mere senseless matter; it couldn't occur except as the action of an immaterial thinking being.

16. All that we know of body is contained in our complex idea of it as extended, shaped, coloured, and having other sensible qualities; and all this is as far from the idea of the substance of body as we would be if we knew nothing at all. And although we think we are very familiar with matter, and know a great deal about many of its qualities, it may turn out that our basic ideas of •body are no more numerous, and no clearer, than our basic ideas of •immaterial spirit.

17. The basic ideas that we have that apply to body and not to spirit are •the holding together of parts that are solid and therefore separable, and •a power of causing things to move by colliding with them. Bodies also have shapes, but shape is merely a consequence of finite extension.

18. The ideas we have belonging exclusively to spirit are •thinking and •will (which is the power of putting body into motion by thought) and •liberty. Whereas a body can't help setting in motion a motionless body with which it collides, the mind is at liberty to put bodies into motion or refrain from doing so, as it pleases. The ideas of •existence, •duration, and •mobility are common to both body and spirit.

19. It shouldn't be thought strange that I attribute mobility to spirit. Spirits, like bodies can only operate *where they are*; we find that a single spirit operates at different times in different places; so I have to attribute *change of place* to all finite spirits (I'm not speaking of •God, the infinite spirit, here). For my soul [= 'spirit' = 'mind'] is a real thing just as much as my body is, and is equally capable of changing its distance from any other •spatially located• being; and so it is capable of motion. . . .

20. Everyone finds in himself that his soul •can think, will, and operate on his body in the place where that body is, but •cannot operate on a body or in a place a hundred miles away. You can't imagine that your soul could think or move a body in Oxford while you are in London, and you have to realize that your soul, being united to your body, continually changes its location during the whole journey between Oxford and London, just as does the coach or horse that you ride on - so I think it can be said to be truly *in motion* throughout that journey. If that isn't conceded as giving a clear idea enough of the soul's motion, you will get one from •the thought of• its being separated from the body in death; for it seems to impossible that you should think of it as •leaving the body while having no idea of •its motion.

[In section 21 Locke discusses a scholastic reason for denying that souls or spirits can move, and derisively challenges its supporters 'to put it into intelligible English'. He concludes:] Indeed motion cannot be attributed to God - not because he is an immaterial spirit but because he is an infinite one.

22. Let us compare our complex idea of *immaterial spirit* with our complex idea of *body*, and see whether one is more obscure than the other - and if so, which. Our idea of body, I think, is •that of

an extended solid substance, capable of transferring motion by impact;
and our idea of soul or immaterial spirit is •the idea• of

a substance that thinks, and has a power of making a body move, by willing or thought.
Which of these is more obscure and harder to grasp? I know that people whose thoughts are immersed in matter, and have so subjected their minds to their senses that they seldom reflect on anything that their senses can't reach, are apt to say that they can't comprehend a *thinking thing*. Perhaps they can't, but then if they think hard about it they'll realize that they can't comprehend an *extended thing* either.

23. If anyone says ‘I don’t know what it is that thinks in me’, he means that he doesn’t know what the substance is of that thinking thing. I respond that he has no better grasp of what the substance is of that solid thing. If he also says ‘I don’t know *how* I think’, I respond that he also doesn’t know *how* he is extended - that is, how the solid parts of body cohere together to make extension. I shall discuss the cohesion problem - the problem of explaining how portions of matter hang together to compose planets or pebbles or grains of sand - from here through to the end of section 27. The pressure of the particles of air may account for the cohesion of some parts of matter that are bigger than the particles of air and have pores that are smaller than those particles; but that can’t explain the coherence of the particles of air themselves. Whatever holds *them* together, it isn’t the pressure of the air! And if the pressure of any matter that is finer than the air - such as the *ether* - can unite and hold together the parts of a particle of air (as well as of other bodies), it still can’t make bonds *for itself* and hold together the parts that make up every least particle of that *materia subtilis* [= ‘extra-fine matter’]. Thus, however ingeniously we develop our explanation of how the parts of perceptible bodies are held together by the pressure of other imperceptible bodies - such as the particles of the ether -, that explanation doesn’t extend to the parts of the ether itself. The more success we have in showing that the parts of other bodies are held together by the external pressure of the ether, and can have no other conceivable cause of their cohesion and union, the more completely we are left in the dark about what holds together the *parts of each particle* of the ether itself. We •can’t conceive of those particles as not having parts, because they are bodies, and thus divisible; but we also •can’t conceive of how their parts cohere, because the explanation of how *everything else* coheres cannot be applied to *them*.

24. The foregoing argument shows that even if pressure from the ether •could explain the cohesion of most bodies, it leaves unexplained the cohesion of the particles of the ether itself. But in fact pressure, however great, from a surrounding fluid - such as the ether - •cannot be what causes the cohesion of the solid parts of matter. Such a pressure might prevent two things with polished surfaces from moving apart in a line •perpendicular to those surfaces, . . . but it can’t even slightly hinder their pulling apart in a line •parallel to those surfaces - I shall call this a ‘lateral motion’. The surrounding fluid is free to occupy each part of space that is deserted through such a lateral motion; so it doesn’t resist such a motion of bodies joined in that way, any more than it would resist the motion of a body that was surrounded on all sides by that fluid and didn’t touch any other body. And therefore, if there were no other cause of cohesion - than this surrounding-fluid one -, all parts of -all- bodies would be easily separable by such a lateral sliding motion. So it is no harder for us to have a clear idea of how the soul thinks than to have one of how body is extended. For the •extendedness of body consists in nothing but the •union and cohesion of its solid parts, so we shall have a poor grasp of the extension of body when we don’t understand the union and cohesion of its parts; and we *don’t* understand that, any more than we understand what thinking is and how it is performed.

25. Most people would wonder how anyone should see a difficulty in what they think they observe every day. ‘Don’t we see the parts of bodies stick firmly together? Is there anything more common? And what doubt can there be made of it?’ And similarly with regard to thinking and voluntary motion: ‘Don’t we experience it every moment in ourselves? So can it be doubted?’ The matter of fact is clear, I agree, but when we want to look more closely and think about *how* it is done, we are at a loss both about extension and about thought. . . .

26. The little bodies that compose the fluid we call ‘water’ are so extremely small that I have never heard of anyone claiming to see their distinct size, shape, or motion through a microscope (and I’ve heard of microscopes that have magnified up to a hundred thousand times, and more). And the particles of water are also so perfectly loose one from another that the least force perceptibly separates them. Indeed, if we think about their perpetual motion we must accept that they *don’t* cohere with another; and when a sharp cold comes they unite, they consolidate, these little atoms cohere, and they can’t be separated without great force. Something we don’t yet know - and it would be a great discovery - is what the bonds are that tie these heaps of loose little bodies together so firmly, what the cement is that sticks them so tightly together in ice. But someone who made that discovery would still be long way from solving the *general* problem, making intelligible the extension of body (which is the cohesion of its solid parts). For *that* he would need to show how the parts of those bonds - or of that cement, or of the least particle of matter that exists - hold together. It seems, then, that this primary and supposedly obvious quality of body - extension - turns out when examined to be as incomprehensible as anything belonging to our minds, and that it is as hard to conceive a solid extended substance as it is to conceive a thinking immaterial one. . . .

27. Here is a further difficulty about solving the cohesion problem through an appeal to surrounding pressures. Let us suppose that matter is finite (as no doubt it is). Now think about the outermost bounds of the universe, and ask yourself:

What conceivable hoops, what bond, can hold *this unified mass of matter* together with a pressure from which steel must get its strength and diamonds their hardness and indissolubility?

If matter is finite, it must have boundaries, and there must be something that stops it from scattering in all directions. If you try to avoid this latest difficulty by supposing that the material world is *infinite* in extent, ask yourself what light you are throwing on the cohesion of body - whether you are making it more intelligible by relying on the most absurd and incomprehensible of all suppositions. So far is our idea of the extension of body (which is nothing but the cohesion of solid parts) from being clearer or more distinct when we enquire into the nature, cause, or manner of it, than is the idea of thinking!

28. Another idea that we have of body is the idea of the *power of transferring motion by impact*: and of our souls the idea of the *power of exciting motion by thought*. Everyday experience clearly provides us with these two ideas, but here again if we enquire how each power is exercised, we are equally in the dark. In the most usual case of motion’s being communicated from one body to another through impact, the former body loses as much motion as the other acquires; and the only conception we have of what is going on here is that *motion passes out of one body into the other*. That seems to me to be as obscure and inconceivable as how our minds move or stop our bodies by thought, which we every moment find they do. Daily experience provides us with clear evidence of motion produced by impact, and of motion produced by thought; but as for *how* this is done, we are equally at a loss with both. So that when we think about •the communication of motion, whether by body or by spirit, •the idea of it that is involved in spirit-as-mover is at least as clear as •the one involved in body-as-mover.

And if we consider the *active power of moving* (called ‘motivity’ in xxi.73), it is much clearer in spirit than body. Place two bodies at rest side by side; they give us no idea of a power in the one to move the other, except through a borrowed motion. The mind, on the other hand,

every day gives us ideas of an active power of moving bodies. This gives us reason to think that active power may be the proper [here = 'exclusive'] attribute of spirits, and passive power the proper attribute of matter. If that is so, then created spirits are not totally other than matter, because as well as being active (as matter isn't) they are also passive (as matter is). Pure spirit, namely God, is only active; pure matter is only passive; and beings 'like us' that are both active and passive may be judged to involve both. . . .

29. In conclusion: Sensation convinces us that there are •solid extended substances, and reflection that there are •thinking ones. Experience assures us that •one has a power to move body by impact, •the other by thought. That much is sure, and we have clear ideas of it; but we can't go any further. If we start asking about nature, causes, and manner 'of operation', we see no more clearly into the nature of extension than we do into the nature of thinking. It is no harder to conceive how a substance that we don't know should •by thought set body into motion, than how a substance that we don't know should •by impact set body into motion. . . .

[In sections **30-31** Locke sums up the results of the last few sections, re-emphasizing that the idea of a thinking substance is not less respectable than that of an extended substance. He concludes section 31 with a new difficulty about the latter:] Nothing in our notion of spirit is more perplexed, or nearer a contradiction, than something that the very notion of body includes in it, namely the *infinite divisibility* of any finite extended thing. Whether we accept this or reject it, we land ourselves in consequences that we can't explain or make consistent within our thought - consequences that carry greater difficulty, and more apparent absurdity, than anything that follows from the notion of an immaterial knowing substance.

[In section **32** Locke starts by rehearsing the arguments he has given for the view that 'we have as much reason to be satisfied with our notion of immaterial spirit as with our notion of body, and of the existence of the one as well as of the other'. He then launches, without announcing that he is doing so, into a new issue: is a human being an extended thing that thinks, or rather a pair of things of which one is extended and the other thinks?] It is no more a contradiction that •thinking should exist separate and independent from solidity than that •solidity should exist separate and independent from thinking. Thought and extension are simple ideas, independent one from another; and we are as entitled to allow •a thinking thing without solidity as we are •a solid thing without thinking. It may be hard to conceive how thinking could occur without matter, but it's at least as hard to conceive how matter could think. Whenever we try to get beyond our simple ideas, to dive deeper into the nature of things, we immediately fall into darkness and obscurity, perplexity and difficulties.

But whichever of these complex ideas is clearer, that of body or that of immaterial spirit, each is evidently composed of the simple ideas that we have received from sensation or reflection. So are all our other ideas of substances, even that of God himself.

[In section **33** Locke develops that last remark, contending that we can build up our idea of God as infinitely powerful, wise, etc. through a general procedure that he illustrates with an example in section 34.]

34. If I find that I know a few things, some or all of them imperfectly, I can form an idea of knowing twice as many; which I can double again, 'and so on indefinitely', just as I can generate an endless series of numbers by repeated doubling. In that way I can enlarge my idea of knowledge by extending its coverage to all things existing or possible. And I can do the same with

regard to knowing them more perfectly, thus forming the idea of infinite or boundless knowledge. The same may also be done for power. . . . and also for the duration of existence. . . . We form the best idea of God that our minds are capable of, by •taking simple ideas from the operations of our own minds (through reflection) or from exterior things (through our senses) and •enlarging them to the vastness to which infinity can extend them.

35. It is infinity - joined to existence, power, knowledge, etc. - that makes our complex idea of God. Although in his own essence (which we don't know, any more than we know the real essence of a pebble, or of a fly, or of ourselves) God may be simple and uncompounded, still our only idea of him is a complex one whose parts are the ideas of existence, knowledge, power, happiness, etc. - all this infinite and eternal. . . .

36. Apart from infinity, there is no idea we attribute to God that isn't also a part of our complex idea of other Spirits [here = something like 'angels']. We can attribute to Spirits only ideas that we get from reflection; and we can differentiate them from God on one side, and from us on the other only through differences in the extent and degree of knowledge, power, duration, happiness, etc. that each has.

Here is another bit of evidence that we are confined to the ideas that we receive from sensation and reflection: even if we think of unembodied Spirits as ever so much, even *infinitely*, more advanced than bodies are, we still can't have any idea of how they reveal their thoughts one to another. *We* have to use physical signs and particular sounds; they are the best and quickest we are capable of, which makes them the most useful we can find. Of course unembodied Spirits must have also a more perfect way of communicating their thoughts than we have; but of such immediate communication we have no experience in ourselves, and consequently no notion at all.

37. Now we have seen what kind of ideas we have of substances of all kinds, what they consist in, and how we came by them. All this, I think, makes three things very evident.

(1) All our ideas of the various sorts of substances are nothing but collections of simple ideas, together with a supposition of something to which they belong and in which they exist, though we have no clear distinct idea at all of this supposed something.

(2) All the simple ideas which - when thus united in one common substratum - make up our complex ideas of various sorts of substances are received from sensation or reflection. Even •those extremely familiar ideas that apply to almost everything - such as the ideas of *time*, *motion*, *body*, *thought*, *feeling* - have such simple ideas of sensation and reflection as their only ingredients. So do •the ideas that seem furthest from having any connection with us, and that infinitely surpass anything we can perceive in ourselves by reflection or discover by sensation in other things. Even *those* ideas must be constructed out of the simple ideas that we originally received from sensation or reflection. This is clearly the case with respect to the complex ideas we have of angels, and especially our idea of God.

(3) Most of the simple ideas that make up our complex ideas of substances are really only ideas of powers, however apt we are to think of them as ideas of positive qualities. [Here again 'positive' contrasts with 'relative'.] For example, most of the ideas that make our complex idea of gold are yellowness, great weight, ductility, fusibility and solubility in aqua regia, etc. all united together in an unknown substratum; and these are all ideas of gold's relations to other substances. To be heavy is to have a power to outweigh other things; to be yellow is to have a power to cause certain visual sensations in human observers. [Ductility is the ability to be drawn out into a thin wire, and fusibility is the ability to melt when hot; neither of which is a relation to *other* substances. Perhaps Locke has a different thought at work here, not properly expressed: he may be contrasting 'positive' qualities not only

with *relative* qualities but also with *conditional* ones. Attributing a power to something is asserting a conditional about it - *If* it is heated, it will melt. A positive quality such as squareness isn't like that: the thing just *is square*, and 'if' doesn't come into it.] These powers depend on the real and primary qualities of the gold's internal constitution; they are what give it its power to operate on other substances and to be operated on by them; but the powers aren't really in the gold considered purely in itself.

Chapter xxiv: Collective ideas of substances

1. Besides these complex ideas of various kinds of *single* substances - *man, horse, gold, violet, apple*, etc. the mind also has complex *collective* ideas of substances. Such ideas are made up of many particular substances considered together as united into one idea, and which, so joined, are looked on as one. For example, the idea of a collection of men that make an army, though it consists of a great many distinct substances, is as much *one* idea as the idea of a man. Similarly with the great collective idea of all bodies whatsoever, signified by the name 'world'

[In section 2 Locke contends that power of the mind whereby it makes collective ideas out of complex ideas of individuals is the very one by which it makes the latter ideas out of simple ones. The crux is this:] It is no harder to conceive how an army of ten thousand men should make one idea than to conceive how a man should make one idea. Each involves constructing a complex out of parts that are simple (or simpler).

3. Artifacts, or at least the ones that are made up of distinct substances - e.g. carriages, houses, clocks - fall under collective ideas of the kind I have been discussing. Not only do man-made things tend to fall under collective ideas, but conversely collective ideas are in a special way man-made. All our collective ideas - such as those of army, constellation, universe - are merely artificial representations made by the mind. Such an idea gathers into a single view, under a single name, things that are very remote from and independent of one another, so as better to think and talk about them. As the meaning of the word 'universe' shows, no things are so remote or unlike that the mind can't bring them under a single idea by this technique of composition.

Chapter xxv: Relation

1. Besides the ideas, simple and complex, that the mind has of things considered on their own, it gets other ideas from comparison between different things. [For Locke, a 'comparison' can be any kind of *considering together* of two things, not necessarily *likening* them to one another.] When the understanding thinks about a thing, it isn't confined to that precise object: it can look beyond it, to see how it relates to some other thing. When the mind sets one thing alongside another (so to speak) and carries its view from one to the other, this is what we call *relation* and *respect*. A word is called *relative* if applying it to one thing signifies such a respect and leads the thought from the original subject to something else. The things that are thus brought together are said to be *related*. [Locke develops all this at some length, contrasting the non-relational thought that *Caius is white* with the relational thoughts that *Caius is a husband* and that *Caius is whiter than freestone*.]

[Section 2 points out that many relative terms come in pairs: 'father' and 'son', 'bigger' and 'smaller'. Some relative terms *could* be paired in this way but happen not to be; Locke gives the example of 'concubine'. He concludes:] All names that are more than empty sounds must signify some idea that either •is an idea of a quality in the thing to which the name is applied, and then it is *positive* and is looked on as united to and existing in the thing in question, or •arises from the respect or relation the mind finds the thing to bear to some other thing, and then it includes a *relation*.

[In section 3 Locke mentions terms that are tacitly relative though they are sometimes not seen to be so - for example 'old', 'great', 'imperfect', etc. Section 4 points out that two people might have very different ideas of *man* yet exactly the same idea of *fatherhood* - different relata, same relation. Section 5 points out that a relation ceases to hold if one of the related things ceases to exist. When his only child dies, Caius ceases to be a father though he hasn't altered within himself. Also, a thing can be related to many other things, some of the relations being 'contrary' to others: Caius is older than Titus and younger than Sempronia.]

6. Anything that can exist, or be considered as one thing, is positive - in contrast to being relative; and so not only simple ideas and substances but also modes are positive beings. Their parts are very often relative one to another, but the whole considered together as one thing is a positive or absolute thing or idea: it produces in us the complex idea of one thing, and this idea is in our minds as one picture, under one name, even though it is an aggregate of different parts. The parts of the idea of a triangle have relations to one another, yet the idea of the whole is a positive absolute idea; a thing's triangularity doesn't involve how it relates to anything *else*. The same may be said of a family, a tune, etc. Any relation must be between two things considered as two things. . . .

7. Concerning relation in general, there are four points to be made.

First, any single •item can be related in an almost infinite number of ways to other things.

The •item in question may be

a simple idea

a substance

a mode

a relation

a *name of* a simple idea or substance or mode or relation.

It is a remarkable fact that even •a relation or •a word can stand in relations to other things, but I shall not linger on that, and shall instead take the example of the many relations in which •a substance can stand to other things. Thus, one single man may at once be involved in all these relations, and many more: father, brother, son, grandfather, grandson, father-in-law, son-in-law, husband, friend, enemy, subject, general, judge, patron, client, professor, European, Englishman, islander, servant, master, possessor, captain, superior, inferior, bigger, less, older, younger, contemporary, like, unlike, and so on almost to infinity, he being capable of as many relations as there can be ways of considering him together with something else

8. Secondly, although relations aren't contained in the real existence of things, but are something extraneous and added-on, the ideas that relative words stand for are often clearer and more distinct than of the substances to which they belong. The notion we have of a *father* is a great deal clearer and more distinct than our idea of *man*. . . . That is because I can often get the notion of a relation from my knowledge of one action or one simple idea, whereas to know any substantial being I need an accurate collection of many ideas. . . . Thus having the notion that *one laid the egg out of which the other was hatched* I have a clear idea of *the relation of parent to chick* between the two cassowaries in St. James's Park, although I have only an obscure and imperfect idea of those birds themselves.

9. Thirdly, although ever so many relations hold between one thing and another, they are all made up of simple ideas of sensation or reflection - which I think are the whole materials of all our knowledge. To establish this I shall show it of •the most considerable relations that we have any

notion of, and also of •some that seem to be the most remote from sense or reflection. The seemingly remote ones will be shown also to have their ideas from sense or reflection: the notions we have of those relations are merely certain simple ideas, and so originally derived from sense or reflection.

10. Fourthly, relation is thinking of one thing along with another, so that any word is relative if it necessarily leads the mind to any ideas of qualities other than the ones that are supposed to exist in the thing to which the word is being applied. For example, 'father', 'brother', 'king', 'husband', 'blacker', 'merrier', etc. are relative, because each implies something else separate and exterior to the existence of the man to whom the word is applied. By way of contrast, such terms as 'black', 'merry', 'thoughtful', 'thirsty', 'angry', 'extended' are all absolute [= 'positive' = 'not relative'], because they don't signify anything beyond the man to whom they are applied.

11. Having laid down these four premises concerning relation in general, I shall now proceed to show through examples how all our ideas of relation, however refined or remote from sense they seem to be, are made up of nothing but simple ideas. I shall begin with the most comprehensive relation, wherein all things that do or can exist are concerned, namely the relation of *cause and effect*. My next topic is the derivation of this from the two fountains of all our knowledge, sensation and reflection.

Chapter xxvi: Cause and effect, and other relations

1. As we attend to the changes that things constantly undergo, we can't help noticing that various qualities and substances begin to exist, and that they come into existence through the operations of other things. From this observation we get our ideas of *cause* and *effect*. We use the general name 'cause' for whatever produces any simple or complex idea, and 'effect' is our name for what is produced. When we find that applying a certain degree of heat to a piece of wax regularly turns it into a fluid, we call the simple idea of heat the *cause* of the fluidity, and call fluidity the *effect* of the heat. . . . Whatever we consider as conducing to, or operating to bring into existence, any particular simple idea or substance or mode that didn't before exist, we take to be a *cause* and we label it accordingly.

2. So a cause is what makes some other thing - either simple idea, substance or mode - come into existence; and an effect is what is brought into existence by some other thing. We have no great difficulty in grouping the various origins of things into two sorts.

First, when a thing is made of which no part existed before - e.g. a new particle of matter comes into existence, having previously had no being. We call this *creation*.

Secondly, when a thing is made out of particles all of which already existed, although the whole thing of which they are made didn't previously exist. Examples would be a man, an egg, a rose, etc. When this happens with a substance that is produced in the ordinary course of nature by an •internal force that works in •imperceptible ways, having been triggered by some external agent or cause, we call it *generation*. When the cause is •external to the thing that comes into existence, and the effect is produced by separating or joining parts in ways that •we can perceive, we call it *making*; all artificial things are in this category. When any simple idea [here = 'quality'] is produced that wasn't in that subject before, we call it *alteration*. Thus a man is generated, a picture made, and either of them may be altered. . . . Things that are made to exist which weren't there before are *effects*, and things that operated to produce the existence are *causes*. In every case the notion of cause and effect arises out of ideas received through sensation or reflection;

and the cause-effect relation, however widely applicable it may be, at last terminates in [= ‘comes down to’] simple ideas. For all you need to have the idea of cause and effect is to consider any simple idea or substance as beginning to exist through the operation of something else; you don’t have to know *how* it was done.

[In section 3 Locke remarks that many of our *temporal* descriptions are really relational, though they don’t appear to be so on the surface. For example, when we say ‘Queen Elizabeth reigned for forty-five years’, we are implicitly likening the length of her reign to the time taken by forty-five annual revolutions of the sun. Similarly with all other measures of time. In section 4: not only measured time, but also some other temporal descriptions are covertly relational; for example ‘old’ means one thing applied to a dog and another applied to a human being, because calling a thing ‘old’ is comparing its duration with the usual duration of things *of that kind*. Where we know nothing of the latter, as with the sun, or a diamond, ‘young’ and ‘old’ have no application. In section 5: spatial words such as ‘large’ and ‘small’ are also covertly relative, in the same way as ‘young’ and ‘old’. A large apple is smaller than a small horse. Statements about *where* things are located are openly relational.]

6. So likewise ‘weak’ and ‘strong’ are relative, comparing the subject with some ideas we have at that time of ‘something having’ greater or less power. When we say ‘a weak man’ we mean one who has less strength than men usually have, or than men of his size usually have. . . . Similarly, when we say ‘Creatures are all weak things’ we use ‘weak’ as a relative term, signifying the disproportion in power between God and his creatures. An abundance of words in ordinary speech - perhaps the majority of them - stand only for relations, though at first sight they seem to have no such meaning. For example, in the statement ‘The ship has necessary stores’, ‘necessary’ and ‘stores’ are both relative words; one having a relation to accomplishing the intended voyage, and the other to future use. . . .

Chapter xxvii: Identity and diversity

1. Another context in which the mind compares things [= ‘considers things together’] is their *very being*: when we consider something as existing at a given time and place and compare it with itself existing at another time, we are led to form the ideas of *identity* and *diversity*. [In this context ‘diversity’ means ‘non-identity’. To say that *x is diverse from y* is to say only that *x is not y*.] When we see a thing - any thing, of whatever sort - to be in a certain place at a certain time, we are sure that it is *that very thing* and not *another thing existing at that time in some other place*, however alike the two may be in all other respects. And in this consists *identity*, when the ideas to which it is attributed don’t vary from what they were at the moment of their former existence that we are comparing with the present. We never find - and can’t even conceive of - two things of the same kind existing in the same place at the same time, so we rightly conclude that whatever exists in a certain place at a certain time excludes all ‘others’ of the same kind, and is there itself alone. So when we ask whether a thing is ‘the same’ or not, we are always referring to something that existed at a given time in a given place, a thing that at that instant was certainly the same as itself and not the same as anything else. From this it follows that •one thing can’t have two beginnings of existence because it is impossible for one thing to be in different places ‘at the same time’, and •two things can’t have one beginning, because it is impossible for two things of the same kind to exist in the same instant at the very same place. Thus, what had one beginning is the same thing; and what had a different beginning in time and place from that is not the same but diverse. The

difficulties philosophers have had with this relation of identity have arisen from their not attending carefully to the precise notions of the things to which it is attributed.

2. We have ideas of only three sorts of substances: *God*, *finite intelligences*, and *bodies*. (1) God is without beginning, eternal, unalterable, and everywhere; and so there can be no doubt concerning his identity. (2) Each finite spirit had its determinate time and place of beginning to exist, so its relation to that time and place will always determine its identity for as long as it exists. (3) The same holds for every particle of matter, which continues as the same as long as no matter is added to or removed from it.

. . . . These three sorts of ‘substances’ (as we call them) don’t exclude *one another* out of the same place, but we can’t conceive any of them allowing another *of the same kind* into its place. If that were to happen, the notions and names of identity and diversity would be useless, and there would be no way of distinguishing substances or anything else from one another. For example: if two bodies could be in the same place at the same time, then those two portions of matter would be one and the same, whatever their size. Indeed, *all* bodies would be one and the same, because allowing two bodies to be in one place at one time allows for all bodies to do so. To suppose this to be possible is to obliterate the distinction between identity and diversity, the difference between *one* and *more*. . . .

That all concerned the identity of *substances*. There remain *modes* and *relations*, but because they ultimately depend on substances [Locke says they are ‘ultimately terminated in substances’], the identity and diversity of each particular one of them will be determined in the same way as the identity of particular substances.

Questions of identity and diversity don’t arise for things whose existence consists in a sequence of events, such as the actions of finite beings, e.g. motion and thought. Because each of these events perishes the moment it begins, they can’t exist at different times or in different places, as enduring things can; and therefore no motion or thought can be the same as any motion or thought occurring at an earlier time.

3. There has been much enquiry after the *principle of individuation*; but what I have said enables us easily to discover what that is: it is *existence itself*, which ties a being of a given sort to a particular time and place that can’t be shared by any other being of the same kind. This seems easier to conceive in *simple* substances or modes, but if we are careful we can just as easily apply it to *compound* ones. Consider an atom, i.e. a continued body under one unchanging surface, existing at a particular time and place: it is evident that at that instant it is the same as itself. For being at that instant what it is and nothing else, it is the same and so must continue as long as its existence is continued; for so long it will be the same and no other. [That sentence is Locke’s.] Similarly, if two or more atoms are joined together into a single mass, every one of those atoms will be the same by the foregoing rule. And while they exist united together, the mass whose parts they are must be the same mass, or the same body, however much the parts have been re-arranged. But if one atom is removed from the mass, or one new one added, it is no longer the same mass, or the same body. The identity of living creatures depends not on a mass of the same particles but on something else. For in them the variation of large amounts of matter doesn’t alter the identity. An oak growing from a sapling to a great tree, and then lopped, is still the same oak; and a colt grown up to be a horse, sometimes fat, sometimes lean, is the same horse throughout all this. In neither case is there the same mass of matter, though there truly is the same oak, or horse. That is because in these two cases, a mass of matter and a living body, identity isn’t applied to the same thing.

4. How, then, does an oak differ from a mass of matter? The answer seems to me to be this: the *mass* is merely the cohesion of particles of matter anyhow united, whereas the *oak* is such a disposition of particles as constitutes the parts of an oak, and an organization of those parts that enables the whole to receive and distribute nourishment so as to continue and form the wood, bark, and leaves, etc. of an oak, in which consists the vegetable life. Thus, something is *one plant* if it has an organization of parts in one cohering body partaking of one common life, and it continues to be *the same plant* as long as it partakes of the same life, even if that life is passed along to new particles of matter vitally united to the living plant, in a similar continued organization suitable for that sort of plants. This organization is at any one instant in some one *collection of matter*, which distinguishes it from all others at that instant; and what has the identity that makes the same *plant* is

that *individual life*, existing constantly from that moment forwards and backwards, in the same continuity of imperceptibly succeeding parts united to the living body of the plant.

It also makes all the parts of it be parts of the same plant, for as long as they exist united in that continued organization that is fit to convey that common life to all the parts so united.

5. The identity of lower animals is sufficiently like that for anyone to be able to see, from what I have said, what makes one animal and continues it the same. It can be illustrated by something similar, namely the identity of machines. *What is a watch?* Clearly it is nothing but a construction of parts organized to a certain end - an end that it can attain when sufficient force is applied to it. If we suppose this machine to be one continued body whose parts were repaired, added to, or subtracted from, by a constant addition or separation of imperceptible parts, with one common life, it would be very much like the body of an animal; with the difference that in an animal the fitness of the organization and the motion wherein life consists begin together, because the motion comes from within; but in a machine the force can be seen to come from outside, and is often lacking even when the machine is in order and well fitted to receive it - for example, when a clock isn't wound up.

6. This also shows what the identity of the *same man* consists in, namely: a participation in the same continued life by constantly fleeting particles of matter that are successively vitally united to the same organized body. If you place the identity of man in anything but this, you'll find it hard to make an embryo and an adult the same man, or a well man and a madman the same man. Your only chance of doing this is by tying 'same man' to 'same soul', but by that standard you will make it possible for Seth, Ismael, Socrates, Pilate, St. Augustine, and Cesare Borgia to be the same man. If identity of soul alone makes the same man, and nothing in the nature of matter rules out an individual spirit's being united to different bodies, it will be possible that those men with their different characters and living at widely different times, may have been the same man! That strange way of using the word 'man' is what one is led to by giving it a meaning from which body and shape are excluded. . . .

7. So unity of substance does not constitute all sorts of identity. To conceive and judge correctly about identity, we must consider what idea the word it is applied to stands for: it is one thing to be the same *substance*, another the same *man*, and a third the same *person*, if 'person', 'man', and 'substance' are names for three different ideas; for such as is the idea belonging to that name, such must be the identity. If this had been more carefully attended to, it might have prevented a great deal of that confusion that often occurs regarding identity, and especially personal identity, to which I now turn after one more section on 'same man'.

8. An animal is a living organized body; and consequently the same animal, as I have said, is the same continued life communicated to different particles of matter, as they are successively united to that organized living body. And whatever other definitions are propounded, there should be no doubt that the word 'man' as we use it stands for the idea of an animal of a certain form. 'The time-hallowed definition of 'man' as 'rational animal' is wrong'. If we should see •a creature of our own shape and 'physical' constitution, though it had no more reason all its life than a cat or a parrot, we would still call him a man; and anyone who heard •a cat or a parrot talk, reason, and philosophize would still think it to be a cat or a parrot and would describe it as such. One of these two is •a dull, irrational man, the other •a very intelligent rational parrot. [Locke then quotes a tediously long traveller's tale about encountering a rational parrot. His point is that someone who believes this account will go thinking of this rational animal as a parrot, not as a man.]

9. With 'same man' in hand, let us turn to 'same person'. To find what *personal* identity consists in, we must consider what 'person' stands for. I think it is *a thinking intelligent being, that has reason and reflection, and can consider itself as itself, the same thinking thing at different times and places*. What enables it to think of itself is its *consciousness*, which is inseparable from thinking and (it seems to me) essential to it. It is impossible for anyone to perceive, without perceiving that he perceives. When we see, hear, smell, taste, feel, meditate, or will anything, we know that we do so. It is always like that with our present sensations and perceptions. And it is through this that everyone is to himself that which he calls 'self', not raising the question of whether the same self is continued in the same substance. Consciousness always accompanies thinking, and makes everyone to be what he calls 'self' and thereby distinguishes himself from all other thinking things; in this alone consists personal identity, i.e. the sameness of a rational being; and as far as this consciousness can be extended backwards to any past action or thought, so far reaches the identity of that person; it is the same self now that it was then; and this present self that now reflects on it is the one by which that action was performed.

10. Given that it is the same *person*, is it the same identical *substance*? Most people would think that it *is* the same substance if these perceptions with their consciousness always remained present in the mind, making the same thinking thing always consciously present and (most people would think) evidently the same to itself. What seems to make the difficulty - 'that is, to make it at least questionable whether the same person must be the same substance' - is the following fact. •Consciousness is often interrupted by forgetfulness, and at no moment of our lives do we have the whole sequence of all our past actions before our eyes in one view; even the best memories lose the sight of one part while they are viewing another. Furthermore, •for the greatest part of our lives we don't reflect on our past selves at all, because we are intent on our present thoughts or (in sound sleep) have no thoughts at all, or at least none with the consciousness that characterizes our waking thoughts. In all these cases our consciousness is interrupted, and we lose the sight of our past selves, and so doubts are raised as to whether or not we are the same thinking thing, i.e. the same substance.

That may be a reasonable question, but it has nothing to do with personal identity. For the latter, the question is about what makes the same *person*, and not whether the same identical *substance* always thinks in the same person. Different substances might all partake in a single consciousness and thereby be united into one person, just as different bodies can enter into the same life and thereby be united into one animal, whose identity is preserved throughout that change of substances by the unity of the single continued life. What makes a man be himself *to*

himself is sameness of consciousness, so personal identity depends entirely on that - whether the consciousness is tied to one substance throughout or rather is continued in a series of different substances. For as far as any thinking being can repeat the idea of any past action with the same consciousness that he had of it at first, and with the same consciousness he has of his present actions, so far is he the same personal self. For it is by the consciousness he has of his present thoughts and actions that he is *self to himself* now, and so will be the same self as far as the same consciousness can extend to actions past or to come. Distance of time doesn't make him two or more persons, and nor does change of substance; any more than a man is made to be two men by having a long or short sleep or by changing his clothes.

11. Our own bodies give us some kind of evidence for this. All the particles of your body, while they are vitally united to a single thinking conscious self - so that you feel when they are touched, and are affected by and conscious of good or harm that happens to them - are a part of yourself, i.e. of your thinking conscious self. Thus the limbs of his body are to everyone a part of himself; he feels for them and is concerned for them. Cut off a hand and thereby separate it from that consciousness the person had of its heat, cold, and other states, and it is then no longer a part of himself, any more than is the remotest material thing. Thus we see the substance of which the personal self consisted at one time may be varied at another without change of personal identity; for there is no doubt that it is the same person, even though one of its limbs has been cut off.

12. But it is asked: *Can it be the same person if the substance changes?* and *Can it be different persons if the same substance does the thinking throughout?*

·Before I address these questions in sections 13 and 14 respectively, there's a preliminary point I want to make. It is that· neither question is alive for those who hold that thought is a property of a purely material animal constitution, with no immaterial substance being involved. Whether or not they are right about that, it is plain that they conceive personal identity as being preserved in something other than identity of substance; just as animal identity is preserved in identity of life, not of substance. ·This pair of questions does present a challenge to· •those who hold that only immaterial substances can think, and that sameness of person requires sameness of immaterial substance. Before •they can confront their materialist opponents, they· have to show why personal identity can't be preserved through a change of immaterial substances, just as animal identity is preserved through a change of material substances. Unless they say that what makes the same life ·and thus the animal identity· in lower animals is one immaterial spirit, just as (according to them) one immaterial spirit makes the same person in men - and Cartesians at least won't take that way out, for fear of making the lower animals thinking things too.

13. As to the first question, *If the thinking substance is changed, can it be the same person?*, I answer that this can be settled only by those who know •what kind of substances they are that think, and •whether the consciousness of past actions can be transferred from one such substance to another. Admittedly, if the same consciousness were •the same individual action, it couldn't be transferred ·because in that case bringing a past headache (say) into one's consciousness would be bringing back *that very headache*, and *that* is tied to the substance to which it occurred·. But ·a present consciousness of a past event isn't like that. Rather·, it is •a present *representation of* a past action, and we have still to be shown why something can't be represented to the mind as having happened though really it did not. How far the consciousness of past actions is tied to one individual agent, so that another can't possibly have it, will be hard for us to determine until we know

- what kind of action it is that can't be done without a reflex act of perception accompanying it, and
- how such an action is performed by thinking substances who can't think without being conscious of it.

In our present state of knowledge it is hard to see how it can be impossible, in the nature of things, for an intellectual substance to have represented to it as done by itself something that it never did, and was perhaps done by some other agent. . . . Until we have a clearer view of the nature of thinking substances, we had better assume that such changes of substance within a single person never do *in fact* happen, basing this on the goodness of God. Having a concern for the happiness or misery of his creatures, he won't transfer from one substance to another the consciousness that draws reward or punishment with it. . . .

14. The second question, *Can it be different persons if the same substance does the thinking throughout?*, seems to me to arise out of the question of whether the following is possible:

An immaterial being that has been conscious of the events in its past is wholly stripped of all that consciousness, losing it beyond the power of ever retrieving it again; so that now it (as it were) opens a new account, with a new starting date, having a consciousness that can't reach back beyond this new state.

Really, the question is whether if this happened it could be the same *person* who had first one consciousness and then another, with no possibility of communication between them. [Locke says that this must be regarded as possible by 'those who hold pre-existence', that is, who believe in reincarnation. He attacks them, thereby attacking the separation of 'same person' from 'same consciousness', and proposes a thought-experiment:] Reflect on yourself, and conclude that you have in yourself an immaterial spirit that is what thinks in you, keeps you the same throughout the constant change of your body, and is what you call 'myself'. Now try to suppose also that it is the same soul that was in Nestor or Thersites at the siege of Troy. This isn't obviously absurd; for souls, as far as we know anything of their nature, can go with any portion of matter as well as with any other; so the soul or thinking substance that is now *yourself* may once really have been the soul of someone else, such as Thersites or Nestor. But you don't now have any consciousness of any of the actions either of those two; so can you conceive yourself as being the same *person* with either of them? Can their actions have anything to do with you? Can you attribute those actions to yourself, or think of them as yours more than the actions of any other men that ever existed? Of course you can't. . . .

15. So we can easily conceive of being the same person at the resurrection, though in a body with partly different parts or structure from what one has now, as long as the same consciousness stays with the soul that inhabits the body. But the soul alone, in the change of bodies, would not be accounted enough to make the same man - except by someone who identifies the soul with the man. If the soul of a prince, carrying with it the consciousness of the prince's past life, were to enter and inform the body of a cobbler who has been deserted by his own soul, everyone sees that he would be the same person as the prince, accountable only for the prince's actions; but who would say it was the same man? The body contributes to making the man, and in this case I should think everyone would let the body settle the 'same man' question, not dissuaded from this by the soul, with all its princely thoughts. To everyone but himself he would be the same cobbler, the same man. I know that in common parlance 'same person' and 'same man' stand for the same thing; and of course everyone will always be free to speak as he pleases, giving words what

meanings he thinks fit, and changing them as often as he likes. Still, when we want to explore what makes the same spirit, man, or person, we must fix the ideas of spirit, man, or person in our minds; and when we have become clear about what we mean by them, we shan't find it hard to settle, for each of them, when it is 'the same' and when not.

16. But although the same •immaterial substance or soul does not by itself, in all circumstances, make the same man, it is clear that •consciousness unites actions - whether from long ago or from the immediately preceding moment - into the same person. Whatever has the consciousness of present and past actions is the same person to whom they both belong. If my present consciousness that I am now writing were also a consciousness that •I saw an overflowing of the Thames last winter and that •I saw Noah's ark and the flood, I couldn't doubt that I who write this now am the same self that saw the Thames overflowed last winter and viewed the flood at the general deluge - place that self in what substance you please. I could no more doubt this than I can doubt that I who write this am the same *myself* now while I write as I was yesterday, whether or not I consist of all the same substance, material or immaterial. For sameness of substance is irrelevant to sameness of self: I am as much involved in - and as justly accountable for - •an action that was done a thousand years ago and is appropriated to me now by this self-consciousness as I am for •what I did a moment ago.

17. *Self* is that conscious thinking thing that feels or is conscious of pleasure and pain and capable of happiness or misery, and so is concerned for itself as far as that consciousness extends. (This holds true whatever substance the thinking thing is made up of; it doesn't matter whether it is spiritual or material, simple or compounded.) You must find that while your little finger is brought under your consciousness it is as much a part of yourself as is your head or your heart. If the finger were amputated and this consciousness went along with it, deserting the rest of the body, it is evident that the little finger would then be the person, the same person; and 'this' self would then would have nothing to do with the rest of the body. As with spatial separation so also with temporal: something with which the consciousness of this present thinking thing can join itself makes the same person, and is one self with it, as everyone who reflects will perceive.

18. Personal identity is the basis for all the right and justice of reward and punishment. What everyone is concerned for, for himself, is happiness and misery - with no concern for what becomes of any substance that isn't connected with that consciousness. [Locke goes on to apply that to his 'finger' example, supposing that the finger takes the original consciousness with it, and that the rest of the body acquires a new consciousness.]

19. This illustrates my thesis that personal identity consists not in the identity of substance but in the identity of consciousness. If Socrates and the present mayor of Queenborough agree in *that*, they are the same person; if Socrates awake doesn't partake of the same consciousness as Socrates sleeping, they aren't the same person. And to punish Socrates awake for something done by sleeping Socrates without Socrates awake ever being conscious of it would be as unjust as to punish someone for an action of his twin brother's merely because their outsides were so alike that they couldn't be distinguished.

20. It may be objected: 'Suppose I wholly lose the memory of some parts of my life beyond any possibility of retrieving them, so that I shall never be conscious of them again; aren't I still the same person who did those actions, had those thoughts that I once was conscious of, even though I have now forgotten them?' To this I answer that we must be careful about what the word 'I' is

applied to. This objector is thinking of sameness of the *man*, and calls it ‘I’ because he assumes that the same man is the same *person*. But ‘the assumption isn’t necessarily correct’. If one man could have distinct disconnected consciousnesses at different times, that *same man* would certainly make different *persons* at different times. That this is the sense of mankind can be seen in the most solemn declaration of their opinions: human laws don’t punish the madman for the sane man’s actions, or the sane man for what the madman did, because they treat them as two persons. This is reflected in common speech when we say that someone is ‘not himself’ or is ‘beside himself’. Those phrases insinuate that the speaker thinks - or that those who coined the phrases thought - that the self was changed, the self-same person was no longer in that man.

21. ‘It is still hard to conceive that Socrates, the same individual man, might be two persons.’ To help us with this we must consider what is meant by ‘Socrates’, or ‘the same individual man’. There are three options: The same man may be:

- (1) the same individual, immaterial, thinking substance; in short, the numerically-same soul and nothing else, or
- (2) the same animal, without any regard to an immaterial soul, or
- (3) the same immaterial spirit united to the same animal.

Help yourself! On any of these accounts of ‘same man’, it is impossible for personal identity to consist in anything but consciousness, or reach any further than that does.

According to (1), a man born of different women, and in distant times, might still be the same man. Anyone who allows *this* must also allow that the same man could be two distinct persons. . . .

According to (2) and (3), •Socrates in this life cannot be the same man as •anyone in the after-life. The only way to do this - allowing for the possibility that •Socrates in Athens and •Socrates in Limbo are the same man - is through an appeal to sameness of consciousness; and that amounts to equating human identity - ‘same man’ - with personal identity. But that equation is problematic, because it makes it hard to see how the •infant Socrates can be the same man as •Socrates after the resurrection. There seems to be little agreement about what makes a man, and thus about what makes the same individual man; but whatever we think about that, if we are not to fall into great absurdities we must agree that sameness of person resides in consciousness.

22. You may want to object: ‘But isn’t a man drunk and sober the same person? Why else is he punished for what he does when drunk, even if he is never afterwards conscious of it? He is just as much a single person as a man who walks in his sleep and is answerable, while awake, for any harm he did in his sleep.’ Here is my reply to that: Human laws punish both, with a justice suitable to the state of knowledge of those who administer the law: in these cases they can’t distinguish for sure what is real from what is counterfeit; and so they don’t allow the ignorance in drunkenness or sleep as a plea. Granted: punishment is tied to personhood, which is tied to consciousness, and the drunkard may not be conscious of what he did; but the courts justly punish him, because •his bad actions are proved *against* him, and •his lack of consciousness of them can’t be proved *for* him. It may be reasonable to think that on the great day when the secrets of all hearts are laid open, nobody will be held accountable for actions of which he knows nothing; everybody will receive his sentence with his conscience agreeing with God’s judgment by accusing or excusing him.

23. Nothing but consciousness can unite remote existences into the same person. The identity of substance won't do it. For whatever substance there is, and whatever it is like, without consciousness there is no person. A substance without consciousness can no more be a person than a carcass can. [In the remainder of this section, and in section **24**, Locke discusses possible cases: two persons who take turns in animating one animal body ('the night man and the day man'); and one person who alternately animates two different animal bodies. The central emphasis throughout is on the uselessness in these questions of the concept of the same immaterial substance.]

25. I agree that on the question of contingent fact the more probable opinion is that this consciousness is tied to, and is a state of, a single immaterial substance. Please yourself about that. However, every thinking being that can experience happiness or misery must grant that there is something, *himself*, that he is concerned for and wants to be happy; and that this self has existed continuously for a period of time and therefore may exist for months and years to come, with no set limit to its duration, and thus may be the same self carried by consciousness into the future.

It is through this consciousness that he finds himself to be the same self that acted thus and so some years ago and through which he is happy or miserable now. In all these thoughts we place sameness of *self* in sameness not of *substance* but of *consciousness*. Substances might come and go through the duration of such a consciousness; and *for as long as a substance is in a vital union with the thing containing this consciousness* it is a part of that same self. Thus, any part of my body, while vitally united to that which is conscious in me, is a part of myself (for example my little finger, while it relates to me in such a way that if it is damaged I feel pain); but when the vital union is broken, that which was a part of myself a moment ago is now not so, any more than a part of another man's self is a part of me. [The remainder of the section illustrates and repeats this line of thought.]

26. 'Person', I take it, is the name for this *self*. Wherever you find what you call 'myself', anyone else may say there is 'the same person'. 'Person' is a forensic term [= 'a term designed for use in legal proceedings'], having to do with actions and their merit; and so it applies only to active thinking beings that are capable of a law, and of happiness and misery. It is only through consciousness that this personality [Locke's word] extends itself beyond present existence to what is past, becoming concerned and accountable; the person owns and attributes *past* actions to itself for the same reason that it does the *present*. All this is founded in a concern for happiness, which unavoidably accompanies consciousness - something that is conscious of pleasure and pain desires that the self that is conscious should be happy. As for past actions that the self cannot through consciousness square with or join to the present self - it can no more be concerned with them than if they had never been done. To •receive pleasure or pain, i.e. reward or punishment, on account of any such action is all of a piece with •being born happy or miserable, without any •merit or •demerit at all. Suppose a man were punished now for what he had done in another life of which he cannot have any consciousness, how does that •so-called• punishment differ from simply being created miserable? . . .

27. In treating this subject I have considered as perhaps-possible some states of affairs - e.g. the one about the prince and the cobbler - that will look strange to some readers, and perhaps *are* strange. But I think they are permissible, given our ignorance about the nature of the thinking thing in us which we look on as *ourselves*. If we knew with regard to this thinking thing

•what it is, or

- how it is tied to a certain system of fleeting animal spirits [see note in viii.12], or
- whether or not it can perform its operations of thinking and memory outside of a body organized as ours is, and
- whether God has decided that every such spirit ·or thinking thing· shall be united to only one such body, with its memory depending on the health of that body's organs,

we might see the absurdity of some of the cases I considered. But as we are in the dark about these matters, we ordinarily think of the ·thinking thing or· soul of a man as an immaterial substance, owing nothing to matter and compatible with any kind of matter; and on that basis there cannot from the nature of things be any absurdity in supposing that the same soul might at different times be united to different bodies, making *one man* with each of them for as long as they were united. . . .

28. To conclude: •any substance that begins to exist must during its existence necessarily be the same; •any complex of substances that begins to exist must during the existence of its component parts be the same; •any mode that begins to exist is throughout its existence the same. . . . It appears from this that the difficulty or obscurity that people have found in this matter has arisen from the poor use of words rather than from any obscurity in things themselves. For whatever makes the specific idea to which the name is applied, if we steadily keep to that idea it will be easy for us to distinguish same and different, with no doubts arising. ·I defend this in the next, final section·.

29. •Suppose we take a man to be *a rational spirit*, then it is easy to know what is the same man, namely the same spirit - whether or not it is embodied. •Suppose our idea of a man is *a rational spirit vitally united to a body with a certain structure*; then such a rational spirit will be the same man as long as it is united to such a body, though it needn't be the same body throughout. •If anyone's idea of a man is that of the vital union of parts in a certain shape [here = 'structure'], as long as that vital union and shape remain in a compound body, remaining the same except for a turnover in its constituent particles, it will be the same man. For the complex idea we use when classifying a thing as being of a certain kind also determines what it is for a thing of that kind to continue in existence.

Chapter xxviii: Other relations

1. We can compare [= 'relate'] or refer things one to another in respect of time, place, and causality, all of which I have discussed. We can also do so in countless other respects, of which I shall mention some.

First, a simple idea [here = 'quality'] that is capable of *parts* or *degrees* enables us to compare the things that have it to one another in respect of that simple idea - for example whiter, sweeter, equally white; more ·sweet·, etc. These relations depend on the equality and excess of the same simple idea in several subjects, and may be called *proportional*. . . .

2. Secondly, we can also relate things, or think of one thing in a way that brings in the thought of another, in respect of the circumstances of their origin or beginning. Such relations can't change through time, so they are as lasting as are the things related. Examples include father and son, brothers, first cousins, etc. - all the blood relationships, close and distant; and countrymen, i.e. those who were born in the same country, or region. I call these *natural relations*. We can see here how mankind have fitted their notions and words to daily needs and not to the truth and extent of things. For the relation of begetter to begotten is exactly the same in other species as in

men; yet we don't ordinarily say 'This bull is the grandfather of that calf' or 'Those two pigeons are first cousins'. [Locke develops this point, remarking that some of our human-relational terms are needed in the law, and notes that cultures differ in this respect. He concludes:] This makes it easy to guess why in some countries they don't even have a word meaning what 'horse' does for us, while in others, where they care more about the pedigrees of their horses than about their own, they have not only names for particular horses but also words for their various blood-relationships to one another.

3. Thirdly, sometimes things are brought together in a single thought on the basis of moral rights, powers, or obligations. Thus a *general* is one who has power to command an army; and an *army* under a general is a collection of armed men obliged to obey one man. A *citizen* is one who has a right to certain privileges in a given place. Such relations depend on men's wills, or on agreement in society, so I call them 'instituted' or 'voluntary'. Unlike the natural relations, most (if not all) of these are in some way alterable; two people related in such a way may cease to be so, while they both continue in existence. These relations, like all the others, involve relating two things to one another; but in many cases the relative nature of the term is overlooked because we have no standard relative name for one of the two subjects of the relation. For example, 'patron' and 'client' are easily recognized as relational because they come as a pair - if x is y's patron then y is x's client - but 'constable' and 'dictator' are not, because there is no special name for those who are under the command of a dictator or of a constable. . . .

4. Fourthly, another sort of relation has to do with whether or not men's voluntary actions conform to some rule in terms of which they are judged. I think this may be called *moral* relation, because it concerns our morally significant actions. It deserves to be examined thoroughly, for there is no part of knowledge where we should be more careful to get fixed ideas and to do what we can to avoid obscurity and confusion. It will be my topic throughout the rest of this chapter.

When human actions - with their various ends, objects, manners, and circumstances - are brought under distinct complex ideas, these are mixed modes, many of them with associated names. Taking *gratitude* to be a readiness to acknowledge and return kindness received, and *polygamy* to be the having of more than one wife at a time, when we form these notions in our minds we have there a couple of settled ideas of mixed modes. But our concern with our actions isn't merely to know what complex ideas apply to them and thus how they should be classified. We have another, greater, concern which is to know whether the actions thus classified are morally good or bad.

5. Good and evil, as I showed in xx.2 and xxi.42, are nothing but pleasure or pain, or what procures pleasure or pain for us. So *moral* good and evil is only the conformity or disagreement of our voluntary actions to some law, through which good or evil is drawn on us by the will and power of the law-maker. Such •good or evil, •pleasure or pain, that the law-maker decrees to follow from our observance or breach of the law is what we call •reward or punishment.

6. Of these moral rules or laws on the basis of which men generally judge the moral status of their actions, there seem to me to be three sorts, with three different enforcements, or rewards and punishments. Before listing them in section 7 and discussing them in 8-10, I defend my assumption that any kind of law *does* have a system of punishment and reward associated with it. It would be utterly pointless for one thinking being to lay down a rule to govern the actions of another unless he had it in his power to reward compliance and punish deviation from his rule by some good or evil that isn't the natural consequence of the action itself. A *natural* convenience or

inconvenience would operate by itself, without help from a law. This association with reward and punishment is, if I am not mistaken, the true nature of all law, properly so called.

7. The laws that men generally relate their actions to, in judging whether they are right or wrong, seem to me to be these three. 1. The divine law. 2. The civil law. 3. The law of opinion or reputation, if I may so call it. By their relation to the first of these, men judge whether their actions are *sins* or *duties*; by the second, whether *criminal* or *innocent*; and by the third, whether *virtues* or *vices*.

8. First, there is the divine law, by which I mean the law that God has set for the actions of men, whether announced to them by the light of nature or by the voice of revelation. Nobody is so cloddish as to deny that God has given men a rule by which to govern themselves. He has a right to do it, because we are his creatures; he has goodness and wisdom to direct our actions to what is best; and he has power to enforce it by infinitely weighty rewards and punishments in the after-life. For nobody can take us out of his hands. This is the only true touchstone of moral rectitude; and it is by comparing their actions to this law that men judge the most considerable moral good or evil in their actions - that is, judge whether as duties or sins they are likely to procure them happiness or misery from the hands of God.

9. Secondly, there is the civil law, the rule set by a nation to govern the actions of those who belong to it. Men relate their actions to this also, in judging whether or not they are criminal. Nobody ignores civil law, because the rewards and punishments that enforce it are ready at hand and are suitable to the power that makes this law, That is the force of the commonwealth, which is obliged to protect the lives, liberties, and possessions of those who live according to its law, and has the power to take away life, liberty, or goods from anyone who disobeys, that being the punishment of offences against this law.

10. Thirdly, there is the law of opinion or reputation. 'Virtue' and 'vice' are names that are everywhere said and thought to apply to actions on the basis of their being inherently right or wrong; and as far as they really are applied in that way they to that extent coincide with the divine law above-mentioned. But whatever people say, we can see that the names 'virtue' and 'vice', in particular instances of their use throughout the various nations and societies in the world, are constantly attributed only to such actions as are in *approved of* or *disapproved of* in the country or society concerned. It isn't surprising that men everywhere should call 'virtuous' the actions that they judge to be praiseworthy, and call 'vicious' the ones they regard as blameable; for otherwise they would condemn themselves by thinking something right without commending it, or wrong without blaming it. Thus what people say and think about virtue and vice is measured by the approval or dislike, praise or blame, which is silently agreed on in a society or tribe or club. When men unite into political societies they hand over to the public the decisions about how their force is to be used, so that they can't employ it against any fellow-citizens further than the law of the country directs; but they hang onto the power of approving or disapproving of the actions of members of their society; and by this approval and dislike they establish amongst themselves what they call virtue and vice.

11. You will agree that this is the common measure of virtue and vice if you consider the fact that although what passes for vice in one country may be counted a virtue, or at least not a vice, in another; yet everywhere virtue and praise go together, as do vice and blame. Virtue is everywhere what is thought praise-worthy, and nothing *but* what is publicly esteemed is called virtue. . . .

Differences in personal character, education, fashion, interests and so on can bring it about that what is thought praiseworthy in one place is censured in another; and so in different societies virtues and vices may sometimes have exchanged places; but in the main they have kept the same everywhere. ·What has kept standards of virtue and vice pretty much •the same as one another is what has kept them all pretty much •the same as the standards of right and wrong laid down by God. Here is why. •Nothing can be more natural than to encourage with esteem and reputation what everyone finds to his advantage, and to blame and discountenance the contrary; and •nothing so directly and visibly advances the general good of mankind in this world as obedience to the laws that God has set for them, and nothing breeds such mischief and confusion as the neglect of those laws; and so •it is no wonder that esteem and discredit, virtue and vice, should to a large extent coincide with the unchangeable rule of right and wrong that the law of God has established. If people generally went wrong by placing their commendation or blame on the side that didn't really deserve it, they would be renouncing all sense and reason, and also renouncing their own interests, to which they are in fact constantly true. Even men whose *behaviour* is otherwise still bestow their *approval* in the right places; few of them are so depraved that they don't condemn, at least in others, the faults they themselves are guilty of. . . .

12. You might want to object:

When you say that the law by which men judge of virtue and vice is nothing but the consent of private men who haven't enough authority to make a law, you are forgetting your own notion of a law, omitting something that ·according to you· is necessary and essential to a law, namely a power to enforce it.

I reply that if you imagine that commendation and disgrace don't strongly motivate men to accommodate themselves to the opinions and rules of those with whom they have dealings, you can't know much about the nature or history of mankind! Most people *do* govern themselves chiefly, if not solely, by this *law of fashion*; so they do what keeps them in reputation with their peers, having little regard for the laws of God or the law of the land. Some men - perhaps indeed *most* men - seldom reflect seriously on the penalties for breaking God's laws; and amongst those that do, many go ahead and break the law anyway, entertaining thoughts of future reconciliation ·with God·, and making their peace ·with him· for such breaches. As for the punishments due from the laws of the commonwealth, men frequently comfort themselves with hopes of impunity. But no man who offends against the fashion and opinion of the society he belongs to and wants to be accepted by can escape the punishment of their censure and dislike. Not one man in ten thousand is stiff and thick-skinned enough to bear up under the constant dislike and condemnation of his own social circle. Someone who can content himself to live in constant disgrace and disrepute with his own particular society must have a strange and unusual constitution! Many men have sought solitude and been reconciled to it; but nobody who thinks at all - nobody with the least sense of *a man* about him - can live in society under the constant dislike and poor opinion of his associates. That is too heavy a burden for humans to bear. . . .

[Section **13** briefly sums up the three laws.]

14. We test the goodness of an action by relating it to •a rule (like testing the quality of gold by rubbing it against a touchstone); the outcome of that test determines how we name the action, and that name is the sign of what value we attribute to it. Whether we take •the rule from the fashion of the country or from the will of a ·human or divine· law-maker, the mind can easily see how a given action relates to it, and so it has a notion of moral good/evil, which is an action's

conformity/nonconformity to that rule, and therefore is often called moral rectitude. This rule is merely a collection of several simple ideas, so that to judge whether an action conforms to it one has only to organize one's thought of it so as to see whether the simple ideas belonging to it correspond to the ones that the law requires. And so we see how moral notions are founded on, and come down to, the simple ideas we have received from sensation or reflection. For example, consider the complex idea we signify by the word 'murder': when we have dismantled it and examined all its parts we shall find them to be a collection of simple ideas derived from reflection or sensation. •From reflection: the ideas of willing, considering, intending in advance, malice; and also of life, perception, and self-motion. •From sensation: the collection of those simple sensible ideas that are of qualities to be found in *a man*, and of *an action* through which a man no longer has perception or motion - i.e. through which a man becomes dead. All these simple ideas are brought together in the meaning of the word 'murder'. When I find that this collection of simple ideas agrees or disagrees with the esteem of the country I have grown up in, and is regarded by most men there as worthy praise or blame, I call the action •virtuous or vicious accordingly. If I have the will of a supreme invisible law-giver for my rule, then I call the action •good or bad, sin or duty, according to whether I think it has been commanded or forbidden by God. And if I compare the action to the civil law, the rule made by the legislative power of the country, I call it •lawful or unlawful, a crime or not a crime. . . .

15. To conceive moral-ly significant actions correctly, we must look at them in two different ways. (1) First, as they are in themselves, each made up of a certain collection of qualities represented by simple ideas. Thus 'drunkenness' and 'lying' signify certain collections of simple ideas, which I call mixed modes; and understood in this way they are just as much positive absolute ideas with nothing relational, and so nothing moral, about them as are 'the drinking of a horse' and 'the speaking of a parrot'. (2) Secondly, our actions are considered as good, bad, or neither; and this is a relational way of looking at them, because what makes them regular or irregular, good or bad, is their conformity to or disagreement with some rule; and the comparison with a rule puts them into the category of relation. Thus duelling - a positive, non-relational label - is •a sin in relation to the law of God, •valour and virtue according to some laws of fashion, and •a capital crime according to the laws of some lands. In this case the action has one name ('duelling') taken just as a positive mode, and another name ('sin' etc.) as it stands in relation to the law; and the two names make it easy to grasp the difference between the non-relational and relational ways of looking at it; just as with substances we can have one name 'man') to signify the thing and another ('father') to signify the relation.

16. The positive idea of an action is often expressed in a word that also conveys the action's moral relation, so that a single word expresses both the action itself and its moral rightness or wrongness. [Locke then warns against assuming that an action that falls under the non-moral part of such a word's meaning must also fall under the moral part. He concludes with an example:] Taking a madman's sword away from him without authority, though it is properly called 'stealing', understood as the non-relational name of a mixed mode, is nevertheless not a sin or transgression in relation to the law of God.

[In section 17 Locke says that he thinks he has dealt with 'some of the most considerable' kinds of relation, and that there is no easy way to classify relations in general, because they are so numerous and various. He then announces a final trio of points.]

18. First, it is evident that all relations ultimately come down to the simple ideas we have acquired from sensation or reflection [Locke: ‘all relation terminates in and is ultimately founded on those simple ideas’]. So when we think or meaningfully say anything of a relational kind, all we have in our thoughts are some simple ideas, or collections of simple ideas, compared one with another. Nothing could be more obvious than this in the case of relations of the sort called ‘proportional’: when a man says ‘Honey is sweeter than wax’, it is plain that his thoughts terminate in the simple idea *sweetness*. This is equally true of all the rest of our relational thoughts, though often the simple ideas are not taken notice of because the compounds containing them are so complex. When the word ‘father’ is used, its meaning involves •the particular species or collective idea signified by the word ‘man’, •the sensible simple ideas signified by the word ‘generation’, and •the effects of generation including all the simple ideas signified by the word ‘child’. [Locke gives a second example - a partial analysis of the meaning of ‘friend’, in which the fifth ingredient is] the idea of *good*, which signifies anything that may advance his happiness. This thought terminates at last in particular simple ideas; the word ‘good’ in general can signify any one of these, but if it is entirely removed from all simple ideas it signifies nothing. . . .

19. Secondly, in relations we usually - if not always - have as clear a notion of the relation as we have of the things related. . . . If I know what it is for one man to be born of a woman, I know what it is for another man to be born of the same woman, and so have as clear a notion of *brothers* as of *births*. Perhaps clearer! For if I believed that his mother dug Titus out of the parsley-bed (as they used to tell children) and thereby became his mother, and that afterwards in the same way she dug Caius out of the parsley-bed, I would have as clear a notion of the relation of *brothers* between them as if I had all the skill of a midwife. . . . But though •the ideas of particular relations can be as clear and distinct in the minds of thoughtful people as those of mixed modes, and more determinate than those of substances, •words expressing relations are often as doubtful and uncertain in their meanings as names of substances or mixed modes, and much more than names of simple ideas. That is because a relational word is the mark of a comparison between two things - an upshot of considering them together - and this is something that occurs only in men’s thoughts; it is merely an idea in men’s minds; and it often happens that men apply a single relational word to different comparisons of things, according to their own imaginations, which don’t always correspond with those of others using the same word.

20. Thirdly, in moral relations (as I call them) I get a true relational thought by comparing the action with the rule, whether the rule itself is true or false. Similarly: if I measure something by a yardstick, I know whether the thing I am measuring is longer or shorter than that supposed yard; but whether the yardstick I am using really is exactly a yard long is another question. Even if the rule I am invoking is wrong, and I am mistaken in relying on it, still I may perceive accurately that the action in question does, or that it doesn’t, conform to it.

Chapter xxix: Clear and obscure, distinct and confused ideas

1. I have shown the origin of our ideas, and surveyed their various sorts; and I have considered how the simple ones differ from the complex, and observed how the complex ones are divided into those of modes, substances, and relations. All this, I think, needs to be done by anyone who wants a thorough grasp of how the mind develops in its understanding and knowledge of things. You may think I have spent long enough examining ideas, but I ask your leave to say a little more about them. The first point is that some are clear and others obscure, some distinct and others confused.

2. The perception of the mind is most aptly explained by words relating to eyesight, so we shall best understand what 'clear' and 'obscure' mean as applied to ideas by reflecting on what they mean when applied to the objects of sight. Light is what reveals visible objects to us, so we describe as 'obscure' anything that isn't placed in a good enough light to reveal in detail its shape and colours. Similarly, a simple idea is 'clear' when it is like an idea that one might receive in a well-ordered sensation or perception from an object of the kind that it comes from. While the memory retains them thus, and can produce them to the mind whenever it has occasion to consider them, they are *clear* ideas. In so far as they either lack some of the original exactness, or have lost any of their first freshness and are (so to speak) faded or tarnished by time, to that extent they are obscure. Complex ideas are clear when •their constituent simple ideas are clear and •the number and order of the simple ideas in the complex one is determinate and certain.

3. The causes of obscurity in simple ideas seem to be either •dull sense-organs, or •weak and fleeting impressions made by the objects, or else •a weakness in the memory which can't retain them in the condition in which they were originally received. Think of the sense-organs or perceptual faculties in terms of sealing wax. •Frozen wax is too hard and won't take an impression when the seal is pressed down on it in the usual way; •the wax that is all right won't take an impression because the seal isn't pressed down hard enough; and •very warm wax is too soft to retain the impression the seal gives it. In any of these cases the print left by the seal will be *obscure*. It is presumably clear enough how this applies to the obscurity of ideas.

4. A *clear* idea - 'I repeat' - is one of which the mind has a perception that is as full and evident as it receives from an outward object operating properly on a healthy sense-organ. And a *distinct* idea is one in which the mind perceives a difference from all other ideas, and a confused idea is one that isn't sufficiently distinguishable from another idea from which it ought to be different. 'This rather compressed and difficult account will become clearer in the course of the next two sections'.

5. It may be objected: 'If the only way for an idea to be confused is for it to be inadequately distinguishable from another idea from which it should be different, it is hard to see how there can be any confused ideas. Whatever an idea is like, it can't be different from what the mind perceives it to be; and that very perception sufficiently distinguishes it from all other ideas, for they can't be *other* ideas - that is *different* ideas - without being perceived to be so. So no idea can be indistinguishable from another idea from which it ought to be different, unless you mean that it is different from itself; for from all *other* ideas it is obviously different.'

6. To remove this difficulty, and to help us to conceive correctly what the confusion is that ideas are sometimes accused of, we should note that things brought under different names are supposed to be different enough to be distinguished from one another, that so each sort can be marked off by its own special name and talked about, as need arises, separately from anything else. Quite obviously, most 'pairs of' different names are supposed to stand for 'pairs of' different things. Now, every idea that a man has is visibly what it is, and is distinct from all other ideas; so what makes it *confused* is its being such that it may as well be called by a name other than the one it is expressed by. Some things are supposed to fall under one of those names and others under the other; but in the sort of case just described - where someone has an idea that could go with either name - the difference has been lost.

7. The usual faults that lead to such confusion are, I think, of the following 'four' kinds.

First, ·omission·. A complex idea (for they are the ones most liable to confusion) may be made up of too few simple ideas, containing only ideas ·all of· which are common to other things as well; in which case the idea leaves out the differences that entitle it to a different name. Thus someone who has an idea of merely *a beast with spots* has only a confused idea of a *leopard*, because it isn't distinguished from that of a lynx and other sorts of spotted beasts. . . . You might want to consider how much the custom of defining words by general terms contributes to making the ideas we try to express by them confused and undetermined. This much is obvious: confused ideas bring uncertainty into the use of words, and take away the advantages of having distinct names.

8. Secondly, ·jumbling·. Another fault that makes our ideas confused occurs when, although the particulars that make up a ·complex· idea are numerous enough, they are so jumbled that it isn't easy to see whether the idea belongs more properly to the name that is given it than to some other. The best way to understand this kind of confusion is to attend to a sort of pictures usually shown as surprising pieces of art, in which the colours, as they are laid by the pencil on the page itself, mark out very odd and unusual figures with no discernible order in their layout. This sketch, made up of parts in which no symmetry or order appears, is in itself no more a confused thing than the picture of a cloudy sky. The latter may have as little order of colours or shapes as the former, but nobody thinks it a confused picture. Then what makes it [i.e. the first picture] be thought of as confused, if not its lack of symmetry? (And that lack plainly doesn't make it confused; for a picture that perfectly imitated this one ·would also lack symmetry etc., yet· wouldn't be called confused.) I answer that the picture is thought to be confused when it is given a name that isn't discernibly more appropriate to it than some other name. For example, when it is said to be the picture of a man (or of Caesar), then any reasonable person counts it as confused if it can't be seen to fit 'man' (or 'Caesar') any more than it fits 'baboon' (or 'Pompey'). . . . That is how it is with our ideas, which are as it were the pictures of things. No one of these mental sketches, however its parts are put together, can be called 'confused' until it is classified under some ordinary name that can't be seen to fit it any more than does some other name whose meaning is agreed to be different.

9. Thirdly, ·wavering·. A third defect that frequently qualifies our ideas as 'confused' occurs when one of them is uncertain and undetermined. We sometimes see people who use the ordinary words of their language without waiting to learn their precise meaning, and change the idea they make this or that term stand for, almost as often as they use it. Someone who does this because he isn't sure what to include in, and what to exclude from, his idea of *church* or *idolatry* every time he thinks of either, and doesn't hold steady to any one precise combination of ideas that makes it up, is said to have a 'confused idea' of idolatry or of the church. The reason for saying this is the same as for speaking of 'confusion' where there is jumbling. It is because a changeable idea - if indeed we can call it one idea - can't belong to one name rather than another; and so it loses the distinction that distinct names are designed for.

10. What I have said shows how much names - which are supposed to be steady signs of things, and through their differences to keep different things distinct ·in our minds· - are the occasion for labelling ideas as 'distinct' or 'confused', through the mind's secretly and covertly relating its ideas to such names. This may be more fully understood in the light of my treatment of words in Book III. Without bringing in the relation of ideas to distinct names, as the signs of distinct things, it will be hard to say what a 'confused idea' is. . . .

12. I think that this is the kind of confusion that is special to *ideas*, though even it involves a secret reference to *names*. Even if there is some other way for ideas to be confused, the one I have described is what mostly disorders men's thoughts and discourses (for what men have in their minds whenever they converse with one another, and usually even when they are silently thinking, are *ideas ranked under names*). . . . The way to prevent this is to unite into one complex idea, as precisely as possible, all those ingredients that differentiate a given idea from others; and always to apply the same name to that complex. But this exactness is rather to be wished for than to be expected, because it is laborious and requires self-criticism, and it doesn't serve any purpose except the discovery of naked truth - which isn't everyone's goal! And since the loose application of names to *undetermined, variable*, and almost *no* ideas, serves both to cover our own ignorance and to perplex and confound others - which counts as learning and superiority in knowledge! - it is no wonder that most men should engage in such faults themselves while complaining of it in others. But although I think that much of the confusion to be found in the notions of men could be avoided through care and ingenuity, I am far from concluding that it is all wilful. Some ideas are so rich and complex that (a) the memory doesn't easily retain the very same precise combination of simple ideas under one name; (b) much less are we able constantly to guess what precise complex idea such a name stands for in another man's use of it. From (a) follows confusion in a man's own reasonings and opinions within himself; from (b) confusion in talking and arguing with others. I shall return to words, their defects and misuses, in Book III.

13. A complex idea is made up of a collection of different simple ones, so that it can be very clear and distinct in one part yet obscure and confused in another. When someone speaks of a chiliahedron, or a body with a thousand sides, the ideas of the shape may be confused though that of the number is distinct. He can talk about and do proofs concerning that part of his complex idea that depends on the number 1000, which may lead him to think that he has a distinct idea of a chiliahedron; yet he plainly doesn't have a precise idea of its shape that would enable him to distinguish a chiliahedron by its shape from a figure that has only 999 sides. Unawareness of this problem causes no small error in men's thoughts and confusion in their talk.

[Section 14 develops this point, contrasting two pairs of physical things: (a) a 1000-sided one and a 999-sided one, and (b) a cubic one and a five-sided one. We can distinguish the members of (a) through the different numbers (by counting the sides) but not by their different shapes, whereas we can distinguish the members of (b) in either way.]

15. We often use the word 'eternity', and think we have a positive comprehensive idea of it, which means that every part of that duration is clearly contained in our idea. Someone who thinks this may indeed have

- a very clear idea of duration,
- a clear idea of a very great length of duration, and
- a clear idea of the comparison of the latter with a still greater duration.

But he can't possibly include in his idea of any duration, however great, the *whole extent* of a duration in which he supposes no end; so the part of his idea that reaches beyond the bounds of that large duration he represents to his own thoughts - that is, beyond the largest duration that he represents clearly - is very obscure and undetermined. That is why, in disputes and reasonings concerning eternity or any other infinite, we are apt to blunder and to involve ourselves in obvious absurdities.

[In the long section 16 Locke discusses the attempts one might make to think clearly and positively about infinity. This discussion doesn't add any doctrine to what has been said in xvii. All our attempts to think of infinite duration, or of infinitely extended or infinitely divisible space, he says, end up as attempts to think of infinite *number*. 'When we talk about infinite divisibility of body, or about infinite extension, our distinct and clear ideas are only of *numbers*; and after some progress of division the clear distinct ideas of *extension* are quite lost.' As for the idea of infinite number, Locke dramatizes the inaccessibility (he thinks) of that by remarking that the attempt to reach it by successive additions of 400,000,000 is *no better* than trying to reach it by successive additions of 4.]

Chapter xxx: Real and fantastical ideas

1. There are other ways in which ideas can be thought of in relation to things from which they are taken, or things they are supposed to represent. These, I think, yield a trio of distinctions. Ideas may be

real or fantastical,
adequate or inadequate,
true or false.

I shall treat the first pair in this chapter, the second in xxxi, and the third in xxxii. By *real* ideas I mean ones that have a foundation in nature, and conform to the real being and existence of things, or to their archetypes [= 'patterns or models from which they are copied']. *Fantastical* or chimerical ideas are ones that have no foundation in nature, and don't conform to that objective reality to which they are tacitly referred as to their archetypes. Let us apply this distinction to the sorts of ideas that I have distinguished.

2. First, our *simple ideas* are all real, all agree to the reality of things. That isn't to say that they are all images [= 'likenesses'] or representations of what exists, for I have shown that this isn't so except with the primary qualities of bodies. But though whiteness and coldness are no more in snow than pain is, yet the ideas of whiteness and coldness, as well as of pain, are effects in us of powers in things outside us; they are *real* ideas in us, through which we distinguish the qualities that are really in things themselves. These various appearances were designed by God to be signs enabling us to know and distinguish things that we have to deal with; and our ideas can serve that purpose for us by being *constant effects* rather than *exact resemblances* of outer things. Their status as 'real' comes from how they dependably *correspond* with the constitutions of real beings; and it doesn't matter whether they correspond as *effects* or as *likenesses*. So our simple ideas are all real and true, because they answer and agree to the powers of things that produce them in our minds; that being all it takes to make them real. . . .

3. Though the mind is wholly passive in respect of its simple ideas, it isn't so in respect of its complex ideas. They are combinations of simple ideas that have been assembled and united under one general name, and clearly the human mind has a certain freedom in forming them. How can it happen that one man's idea of gold, or of justice, is different from another's? It can only be because one has included or omitted from his complex idea some simple idea that the other has not. Well, then: which of these voluntarily constructed complex ideas are real, and which merely imaginary combinations? What collections agree to the reality of things, and what not? My answer to that comes in two parts, one section each:

4. Second: •*mixed modes* and *relations* have no reality except what they have in the minds of men, so all that is required for any such idea to be ‘real’ is that it be such that there *could* be something real to which it conformed. These ideas are themselves archetypes - their own archetypes - and so there can be no question of their differing from their archetypes and thus from themselves! So the only way such an idea can be chimerical is by its containing a jumble of inconsistent ideas.

Even when a complex idea isn’t inconsistent, it may be ‘fantastical’ in a certain sense because someone uses it as a meaning of a word that doesn’t ordinarily have that meaning - like using ‘justice’ to mean what is commonly meant by ‘liberality’. But this fantasticalness relates more to propriety of speech than reality of ideas. Consider these two ideas:

- being undisturbed in danger, calmly considering what it is best to do, and steadily doing it, and
- being undisturbed in danger, without thinking or doing anything.

Each of these is a mixed mode, a complex idea of a state of being that could exist. The former of them fits the word ‘courage’ better than the other, which has no commonly accepted name in any known language; but there is nothing at all wrong with the latter considered just in itself.

5. Third: our •*complex ideas of substances* are all made in reference to things existing outside us, and are intended to represent substances as they really are. So such an idea is real only to the extent that it is a compound of simple ideas of qualities that are really united in things without us. On the other side, those are fantastical that are made up of collections of simple ideas of qualities that were never really united, never found together in any substance - such as

- a rational creature, consisting of a horse’s head, joined to a body of human shape, or
- a body that is yellow, malleable, fusible, and fixed [= not easily volatilized], but lighter than common water, or
- a uniform, unstructured body that is capable of perception and voluntary motion.

Whether such substances *can* exist we don’t know; but we should count the ideas of them as merely imaginary because they don’t conform to any pattern existing that we know, and consist of collections of ideas of qualities that no substance has ever shown us united together. But they are not *as* imaginary as the complex ideas that contain in them some inconsistency or contradiction among their parts.

Chapter xxxi: Adequate and inadequate ideas

1. Of our real ideas, some are adequate and some inadequate. I call ‘adequate’ the ones that •perfectly represent the archetypes that the mind supposes them to have been copied from, which it intends them to stand for, and to which it refers them. ‘Inadequate’ ideas are ones that •only partly or incompletely represent those archetypes to which they are referred. Let us now apply this distinction to each of our three big categories of ideas:

2. First: all our •*simple ideas* are adequate. They are nothing but the effects of certain powers in things that are fit, and ordained by God, to produce such sensations in us; so they must correspond to and be adequate to those powers, and we are sure they agree with the reality of things. If sugar produce in us the ideas of whiteness and sweetness, we are sure there is a power in sugar to produce those ideas in our minds, or else they couldn’t have been produced by it. Thus, because each sensation corresponds to the power that operates on our senses, the idea so

produced is a real idea, (and not a fiction of the mind, which has no power to produce any simple idea); and it cannot but be adequate since it ought only to correspond to that power. So all simple ideas are adequate.

It is true that we often talk inaccurately about the causes of these simple ideas of ours, using expressions that suggest that those ideas are real beings in the causally operative things. The fire's power of producing in us the idea of pain we correctly report by saying that the fire •'is painful to the touch'; but we handle differently its power to cause in us ideas of light and heat, saying that the fire itself •'is bright' and •'is hot', as though light and heat were not merely ideas in us but qualities in, or of, the fire. When I speak of things as having secondary *qualities*, please understand me as talking only about those powers. (I need to call them 'qualities' in order to fit in with common ways of talking, for otherwise I wouldn't be well understood.) If there were no organs fit to receive the impressions fire makes on the sight and touch, or no mind joined to those organs to receive the ideas of light and heat through those impressions from the fire or sun, there would be no light or heat in the world (any more than there would be pain if there were no creature to feel it), even though Mount Aetna flamed higher than ever. In contrast, solidity, extension, shape, and motion and rest would still be really in the world if there were no sentient being to perceive them. . . .

3. Second: our •*complex ideas of modes*, being voluntary collections of simple ideas that the mind puts together, without reference to any real archetypes or standing patterns existing anywhere, have to be adequate ideas. They aren't intended to be copies of things really existing; we have them only as archetypes made by the mind to serve as standards for classifying and naming things; so they can't lack anything. Each of them has the combination of ideas, and thus the perfection, that the mind intended it to have. Thus by having the idea of *a figure with three sides meeting at three angles* I have a complete idea that needs nothing more to make it perfect. That the mind is satisfied with the perfection of this one of its ideas is plain in that it has no thought of how there can be a *more* complete or perfect idea of *triangle* than that.

Contrast this with our ideas of substances: we want *them* to copy things as they really are, and to represent to us that constitution on which all the substances' properties depend; and we see that our ideas don't reach the intended level of perfection. We find that they still lack something that we would like them to contain, and so they are all inadequate. But mixed modes and relations, being archetypes without patterns, and so having nothing to represent but themselves, *must* be adequate because everything is adequate to itself! Whoever first put together the idea of

danger perceived, absence of disorder from fear, calm consideration of what was justly to be done, and doing it without disturbance or being deterred by the danger of it

certainly had in his mind the complex idea made up of that combination; and as he intended it to be nothing but what is, and to contain only the simple ideas that it has, it couldn't fail to be an adequate idea. And by laying this up in his memory with the name 'courage' attached to it, he gave himself a standard by which to measure and describe actions, according to whether they agreed with it. This idea thus made and laid up as a pattern must necessarily be adequate, as it is referred to nothing but itself, and takes its origin purely from the will of him who first made this combination.

[Section 4 makes the point that a second person may intend to use 'courage' with the same meaning - expressing the same idea - as the first, and yet get it wrong, associating the word with some other idea. In that case, *his* idea of courage is inadequate. In 5 the point is developed

further. Locke concludes:] In this way, but in no other, any idea of modes can be wrong, imperfect, or inadequate. And on this account our ideas of mixed modes are more liable to be faulty than any other kind; but this has to do with proper speaking rather than with true knowledge.

6. Third: I have shown above ·in xxiii· what ideas we have of •*substances*. Now, those ideas have in the mind a double reference: (1) Sometimes they are referred to a supposed *real essence* of each species of things. (2) Sometimes they are designed only to be pictures and representations in the mind of existing things, containing ·simple· ideas of the qualities we can discover in those things. In each of these respects, ideas of substances - these copies of those originals and archetypes - are imperfect and inadequate. ·I shall explain why for (1) in this section and the next, and for (2) in sections 8-10·.

Men usually make the names of substances stand for things considered as having certain *real essences*, which are what put them into this or that species. And because *names* stand for nothing but the ideas in men's minds, men must constantly refer their *ideas* to such real essences as though they were what the idea was meant to represent. It is regarded as a commonplace, especially among those who have grown up with the scientific ideas taught in this part of the world, that each individual substance has a specific essence which makes it belong to a certain kind. Almost anyone who calls himself 'a man' takes himself to mean that he has the real essence of *man*. But if you ask what those real essences are, men obviously don't know. It follows, then, that the ideas in their minds, purporting to represent *unknown* real essences, must be so far from being adequate that they can't be supposed to be any representation of them at all. Our complex ideas of substances are certain collections of simple ideas ·of qualities· that have been observed or supposed constantly to exist together. But such a complex idea can't be the real essence of any substance; for then the properties we discover in that body would depend on that complex idea, and be deducible from it, and their necessary connection with it be known; as all the properties of a triangle depend on and (as far as we can discover them) are deducible from the complex idea of *three lines enclosing a space*. But our complex ideas of substances obviously don't contain such ideas on which all the other discoverable qualities of the substance depend. The common idea men have of iron is *a body of a certain colour, weight and hardness*, and they also think of iron as *malleable*; but this property has no necessary connection with that complex idea; and there is no more reason to think that malleableness depends on that colour etc. than to think that colour etc. depends on malleableness. Yet it is *very* common for men to think that what puts things into different *sorts* is their different *real essences*, unknown as they are.

Consider the particular portion of matter that makes the ring I have on my finger: most men will unhesitatingly suppose it to have a real essence that makes it gold, and from which flow the qualities I find in it, namely its special colour, weight, hardness, fusibility, fixedness, and change of colour upon a slight touch of mercury, etc. When I enquire into and search for the essence from which all these properties ·supposedly· flow, it becomes obvious to me that I can't discover it. The furthest I can go is to make this presumption: because the portion of matter is nothing but *body*, its real essence or internal constitution on which its other qualities depend must be *the shapes, sizes, and connection of its solid parts*. I have no distinct perception of any of this, so I can have no idea of that essence.

If anyone says that the real essence and internal constitution on which these properties depend isn't the shape, size, and arrangement or connection of its solid parts, but something else called its particular *form*, this takes me still further away from having any idea of its real essence.

·Before ‘form’ came into the story, I did have *something*. For I have an idea of shape, size, and situation of solid parts *in general*, though I have none of the *particular* shape, size, etc. that produce the qualities that I have mentioned - qualities that I find in the portion of matter circling my finger and not in the different portion of matter with which I trim my pen. But when I am told that something other than shape, size, etc. is its essence, something called ‘substantial form’, I confess to having no idea *at all* of this, but only of the sound of the word ‘form’, which is a good distance from an idea of a real essence or constitution!

I am equally ignorant of the details of the real essence of this particular substance and of the real essences of all other natural kinds of substance. I think that other people, when they examine their own knowledge, will find themselves to be ignorant in the same way.

7. When men apply the word ‘gold’ to this particular portion of matter on my finger, don’t they usually mean the word to imply the matter’s belonging to a particular species of bodies by virtue of its having a real internal essence? Yes, they do. So for them the word ‘gold’ must be referred primarily to that essence, and so the idea that goes with it must also be referred to that essence and be intended to represent it. ·But an idea *can’t* represent something of which the idea’s owner knows nothing.· So those who use the word ‘gold’, not knowing the real essence of gold, have an idea of gold that is *inadequate* because it doesn’t contain that real essence that the mind intends it to. The same applies to all other natural kinds of substance.

8. Setting aside the useless supposition of unknown real essences, we can try to copy the substances that exist in the world by putting together the ideas of the *sensible qualities* that are found coexisting in them. This brings us much nearer to a likeness of them than is achieved by those who think in terms of real specific essences; but we still don’t arrive at perfectly adequate ideas of the substances in question; our ideas don’t exactly and fully contain all the qualities that are to be found in their archetypes. That is because those qualities and powers of substances are so many and various that nobody’s complex idea contains them all. Men rarely put into their complex idea of any substance all the simple ideas ·of qualities that· they know to exist in that substance. Wanting to make the meanings of their words as clear and manageable as they can, they usually put into their specific ideas of the sorts of substance only a few of the simple ideas ·of qualities· that are to be found in them. But these have no special claim to be included while others are left out, so that clearly in both these ways - ·that is, in the ideas of sensible qualities that they include, as well as in their secret reference to real essences· - our ideas of substances are deficient and inadequate. ·It isn’t merely that our ideas *do* omit many of the discoverable qualities of the substance; they *must* do so, for the following reason.· Except for shape and size in some cases, the simple ideas out of which we make our complex ideas of substances are all *powers* that are also relations to other substances. ·For example, a loadstone’s magnetic quality is its *power to attract iron*; a flower’s yellowness is its *power to affect our eyesight* in a certain way.· So we can never be sure that we know all the powers of a body until we have tried out how it can change or be changed by other substances when related to them in various ways. It is impossible to try all of that for any one body, much less for all bodies, so we can’t possibly bring any substance under an adequate idea made up of a collection of *all* its properties.

[In sections 9-10 Locke develops this line of thought, emphasizing how numerous the qualities of any kind of substance are, and how relatively accidental it is which subset of them get into the meaning of the common name for a kind of substance. He concludes section 10 with this remark about numerousness:] This won’t appear so much a paradox to anyone who thinks about that

fairly simple figure *the triangle* - how much mathematicians have learned about it, and how far they still are from knowing all its properties.

11. So all our complex ideas of substances are imperfect and inadequate. The same would hold for mathematical figures if our complex ideas of them had to collect - one by one - their properties in reference to other figures. In that case, how uncertain and imperfect our idea of an *ellipse* would be, containing only a few of its properties! In fact, though, we have in our plain [Locke's word] idea the whole essence of that figure, from which we discover its other properties and demonstratively see how they flow from it.

12. Thus the mind has three sorts of abstract ideas. First, *simple ideas*, which are copies, and are certainly adequate. That is because such an idea is intended to express nothing but the power in things to produce in the mind such a sensation or idea, so that when that sensation is produced it must be the effect of that power. . . .

13. Secondly, the *complex ideas of substances* are copies too, but not perfect ones, not adequate. This is very evident to the mind, which plainly perceives that whatever collection of simple ideas it makes of any real kind of substance, it can't be sure that it matches all the qualities that are in that substance. . . . Furthermore, even if we had in our complex idea an exact collection of all the secondary qualities or powers of any substance, that wouldn't give us an idea of the essence of that thing. The powers or qualities that are observable by us are not the real essence of that substance; they depend on it, and flow from it. Besides, a man has no idea of substance in general, nor knows what substance is in itself. See xxiii.1-2.

14. Thirdly, *complex ideas of modes and relations* are originals, and archetypes; they aren't copies, aren't made after the pattern of any real existence that the mind intends them to fit and exactly to correspond to. Each of these collections of simple ideas that the mind itself puts together contains in it precisely all that the mind intends that it should. . . . The ideas of modes and relations, therefore, have to be adequate.

Chapter xxxii: True and false ideas

1. Though 'true' and 'false' are strictly applicable only to propositions, *ideas* are also often described as true or false. (What words are *not* used with great latitude, and with some deviation from their strict and proper meanings?) I think, though, that when ideas are termed 'true' or 'false' there is still some secret or tacit proposition on which that description is based. Look at particular occasions where ideas are called true or false, and you'll find some kind of affirmation or negation at work. Ideas, being nothing but bare appearances or perceptions in our minds, can't properly and simply in themselves be said to be true or false, any more than a single name can be said to be true or false.

2. Indeed both ideas and words may be called 'true' in a metaphysical sense of the word according to which anything that exists is 'true' - that is, really is such as it is. Even when something is called 'true' in that sense, though, there is perhaps a secret reference to our ideas, looked on as the standards of that truth. That amounts to a mental proposition, though it is usually not taken notice of.

3. But our present topic is not that metaphysical sense of 'true', but rather the more ordinary meanings of 'true' and 'false'. In the ordinary sense, then: the ideas in our minds are only so many perceptions or appearances there, so none of *them* are false. The idea of a centaur has no more

falsehood in it when it appears in our minds than the name ‘centaur’ has falsehood in it when someone speaks or writes it. Truth or falsehood resides always in some *affirmation or negation*, mental or verbal; none of our ideas can be false until the mind passes some judgment on it, that is, affirms or denies something of it.

4. Whenever the mind refers one of its ideas to something extraneous to it, the idea becomes a candidate for being true or false, because in such a reference the mind tacitly assumes that the idea *fits* the external thing. According to whether that assumption is true or false, so can the idea itself be described. The most usual cases of this are the following ‘three’.

5. First, when the mind assumes that one of its ideas matches the idea in other men’s minds called by the same common name; for example, when the mind intends or judges its ideas of *justice*, *temperance*, *religion* to be the same as what other men give those names to.

Secondly, when the mind supposes that one of its ideas fits some real existence. Thus the ideas of *man* and *centaur*, supposed to be the ideas of real substances, are true and false respectively, one having a conformity to what has really existed, the other not.

Thirdly, when the mind refers an idea to the *real constitution and essence* of a thing on which all the thing’s properties depend. In this way most if not all our ideas of substances are false.

6. . . . It is chiefly, if not only, concerning its *abstract* complex ideas that the mind makes such assumptions. Its natural tendency is towards knowledge; and it finds that if it dwelt only on particular things its progress would be very slow and its work endless; so it shortens its route to knowledge, and makes each perception [here = ‘idea’] more comprehensive, by binding things into bundles and grouping into *sorts*, so that what knowledge it gets of any of them it may confidently extend to all of that *sort*. This enables it to advance by longer strides towards knowledge, which is its great business. . . .

7. . . . When the mind has acquired an idea that it thinks it may be useful in thought or in talk, the first thing it does is to abstract it, and then get •a name for it; and so tuck it away in its storehouse, the memory, as containing the essence of a sort of things of which •that name is always to be the mark. When someone sees a new thing and asks ‘What is it?’, he is only asking what its •name is, as though the name carried with it the knowledge of the species, or of its essence

8. •This abstract idea is something in the mind between •the thing that exists and •the name that is given to it. (•The •idea is what connects the •name with the •thing; for example, what makes ‘ring’ the right word for the thing around my finger is that (1) word ‘ring’ is associated with a certain abstract idea, and (2) that idea fits or conforms to the thing encircling my finger.) So the rightness of our knowledge and the propriety and intelligibility of our speaking both rely on our ideas. That is why men so freely suppose that the abstract ideas they have in their minds •agree to the outer things to which they are referred, and •are also the ones that commonly go with the names with which they associate them. Without this double conformity of their ideas, they would •think wrongly about things in themselves, and •talk unintelligibly about them to others. •I shall discuss •talk in sections 9-12 and •thought in 13-18.

9. First, when the truth of our ideas is judged by whether they match the ideas other men have and commonly signify by the same name, any of them *can* be false. But simple ideas are least liable to be mistaken in this way, because your senses and daily experience easily satisfy you regarding what the simple ideas are that various common words stand for. There aren’t many of them, and if

you do suspect you are wrong about one of them you can easily correct that by going to the objects that involve them. So it seldom happens that anyone goes wrong in his names of simple ideas, applying the name 'red' to the idea *green*, for example, or the name 'sweet' to the idea *bitter*. . . .

10. Complex ideas are much more liable to be false in this manner, and the complex ideas of *mixed modes* much more than those of *substances*. That is because substances (and especially ones that have common names in the language in question) have some conspicuous sensible qualities that ordinarily serve to distinguish one sort of substance from another; and this easily preserves careful users of the language from applying words to sorts of substances to which they don't belong. But with mixed modes we are much more uncertain. It isn't so easy to determine of various actions whether they are to be called 'justice' or 'cruelty', 'generosity' or 'extravagance'. And so by the standard of match with the ideas that other men call by the same name, our idea may be false. The idea in our minds that we call 'justice' ought perhaps to have another name.

11. But whether or not our ideas of mixed modes *are* more liable than any other sort to be different from the idea that other men mark by the same names, it is certain at least that this sort of falsehood is much more commonly *attributed to* our ideas of mixed modes than to any other. When a man is thought to have a false idea of justice (or gratitude, or glory), it is simply because his idea doesn't match the one that is the sign of justice (or gratitude, or glory) in the minds of other men.

12. Here is what I think is the reason for this. An abstract idea of a mixed mode is a precise collection of simple ideas that *someone has chosen to put together*; and so the essence of each sort is a human construct, which means that when we want to know whether a given item belongs to a given sort we have nowhere to look except to the relevant abstract idea. And if I want a *standard* by which to judge what I am saying or thinking about the given item, I can only appeal to the abstract ideas of the people who I think use the relevant name with its most proper meaning. That concludes my discussion of the truth and falsehood of our ideas in relation to their names.

13. Secondly - picking up again from the end of section 8 - as to the truth and falsehood of our ideas in reference not to other people's ideas, but to the real existence of things: when *that* is the standard of their truth, the only ones that can be called 'false' are our complex ideas of substances.

14. Our simple ideas are merely perceptions that God has fitted us to receive, and has enabled external objects to produce in us; and so their •truth consists purely in their being •appearances that are suitable to those powers God has placed in external objects. They *are* thus suitable, for if they were not, the objects wouldn't produce them. So all such ideas are true. Nor do they fall under the charge of falsity if the mind judges (as in most men I believe it does) that these ideas are in the things themselves. God in his wisdom has set them as marks to help us to distinguish one thing from another, and it makes no difference to the nature of our simple idea or to its doing for us what God meant it to do whether we think that the idea of blue is in the violet itself or in our mind only. [Locke goes on to expand this point a little, concluding thus:] The name 'blue' stands for that mark of distinction that is in a violet and that we can discern only through our eyes, whatever it ultimately consists in, that being - perhaps fortunately - beyond our capacities to know in detail.

15. Our simple ideas wouldn't be convicted of falsity if through the different structure of our sense-organs it happened that one object produced in different men's minds different ideas at the same time - for example, if the idea that a violet produced in one man's mind by his eyes were what a marigold produced in another man's, and vice versa. This could never be known, because one man's mind couldn't pass into another man's body to perceive what appearances were produced by his organs; so neither the ideas nor the names would be at all confounded, and there would be no falsehood in either. . . . I am nevertheless inclined to think that the sensible ideas produced by any object in different men's minds are usually pretty exactly alike. Many reasons could be offered for this opinion, but that is besides my present business, so I shan't trouble you with them. Anyway, the contrary supposition, if it could be proved, would be of little use either for the improvement of our knowledge or convenience of life; so we needn't trouble ourselves to examine it.

[In sections **16-18** Locke repeats, with a little more detail, what he has said before. **16:** Our simple ideas can't be 'false' because of a wrong relation to external things. **17:** Nor can complex ideas of modes be 'false' in that way, because they aren't supposed to represent external things, though they can be 'false' in their relation to common language. **18:** Our ideas of substances *can* be 'false' in relation to external things, either by including a secret reference to a real essence, or by aiming to include only ideas of perceptible properties of the substance-kind in question but getting the list of them wrong.]

19. Though in compliance with the ordinary way of speaking I have shown in what sense and for what reason an *idea* may be called 'true' or 'false', if we look more closely we find that in all those cases what is really true or false is some *judgment* that the mind makes or is supposed to make. Truth and falsehood always involve some affirmation or negation, explicit or tacit; they are to be found only where *signs are joined or separated according to the agreement or disagreement of the things they stand for*. The signs we chiefly use are either ideas and words, with which we make mental and verbal propositions respectively. Truth lies in so joining or separating these representatives, according to whether the things they stand for do in themselves agree or disagree; and falsehood in the contrary, as I'll show more fully later on in IV.v.

20. So any idea that we have in our minds, however it relates to external things or to ideas in the minds of other men, can't properly be called false because of such a relation. Mistake and falsehood enter the picture in four ways.

21. First, there is falsehood when the mind has an idea that it mistakenly *judges* to be the same as what other men have in their minds and signify by the same name, i.e. to conform to the ordinary received meaning or definition of that word. This kind of error usually concerns mixed modes, though other ideas also are liable to it.

22. Secondly, falsehood occurs when the mind, having a complex idea made up of a collection of simple ones such as nature never puts together, *judges* it to fit a species of creatures really existing - for example, joining the weight of tin to the colour, fusibility and fixedness of gold.

23. Thirdly, there is falsehood when the mind makes a complex idea that unites some simple ideas of qualities that do really exist together in some sort of thing, while omitting others that are inseparable from the first lot, and *judges* this to be a perfect complete idea of a sort of things which really it is not. For example, having joined the ideas of substance, yellow, malleable, most heavy, and fusible, the mind takes that to be the complete idea of *gold*, when really gold's

fixedness and solubility in aqua regia are as inseparable from those other ideas or qualities as they are from one another.

24. Fourthly, the mistake is even greater when I *judge* that this complex idea contains in it the real essence of some existing body, when really it contains only a few of the properties that flow from its real essence and constitution. [In the rest of this section Locke defends his saying ‘only a few’. He remarks yet again on how many properties of triangles flow from the seemingly simple real essence of *triangle*, and concludes:] I imagine it is the same with substances: their real essences are quite small, but the properties flowing from that internal constitution are endless.

25. To conclude, a man has no notion of anything external to himself except through the idea he has of it in his mind; he is free to call the idea whatever he pleases, and to make an idea that neither fits the reality of things nor agrees to the idea commonly signified by other people’s words; but he can’t make a wrong or false idea of a thing that is known to him only through his idea of it. For example, when I form an idea of the legs, arms, and body of a man, and join to this a horse’s head and neck, I don’t make a false idea of anything, because it represents nothing external to me. But when I call it ‘the idea of a ‘man’ or a ‘Tatar’ and imagine it to represent some real being without me, or to be the same idea that others call by the same name, *then* I may err. That leads to the idea’s being called ‘false’, though really the falsehood lies not in the idea but in the tacit mental proposition attributing to it a fit and a resemblance that it doesn’t have. . . .

[In section 26 Locke suggests that the true/false dichotomy, as applied to ideas on the basis of their fitting/not-fitting the ‘patterns to which they are referred’, might be better expressed in the language of ‘right’ and ‘wrong’. The point is purely verbal.]

Chapter xxxiii: The association of ideas

1. Almost anyone who observes the opinions, reasonings, and actions of other men will have noticed something that struck him as odd and that really is in itself wild. Everyone is quick-sighted enough to spot the least flaw of this kind in someone else and to condemn it as unreasonable - as long as the flaw is different from his own version of it. His own beliefs and conduct may show him to be guilty of something worse of the same general kind, but he doesn’t see it in himself and he’ll probably never be convinced that it is there.

2. This flaw doesn’t come wholly from self-love, though that often has a lot to do with it. Men of fair minds, not prone to extravagant self-flattery, are frequently guilty of it; and in many cases one hears the arguments of such a man with amazement, astonished at the obstinacy of a worthy man who doesn’t yield to the evidence of reason even when it is laid before him as clear as daylight.

3. This sort of unreasonableness is usually blamed on education and prejudice, and for the most part truly enough; but that doesn’t get to the bottom of the disease, or show distinctly enough what its ultimate source is or where it is located. *Upbringing* is often rightly assigned as the cause, and ‘prejudice’ is a good general name for the thing itself; but you need to dig deeper if you want to trace this sort of madness to the root from which it comes, explaining it in a way that will show how this flaw originates in sober and rational minds, and what it consists in.

4. You will pardon my calling it by so harsh a name as ‘madness’ when you reflect that *opposition to reason* deserves that name, and really is madness; and almost everyone has it severely enough to act or argue in some kinds of cases in ways which, if they spread throughout his life, would make him a candidate for a mad-house rather than for polite society. I don’t mean when he is

overpowered by an unruly passion, but in the steady calm course of his life. In further defence of this harsh name, and the unpleasant accusation that it carries against most of mankind, I remark that when in xi.13 I enquired a little, in an aside, into the nature of madness, I found it to have very same cause as the flaw I am now speaking of. This struck me as right when I was thinking just about madness, without any thought of our present topic.

·One final point in defence of the label ‘madness’ is this·. If this flaw is a weakness to which all men are liable - a taint that so universally infects mankind - the greater should be our care to expose it under its right name, motivating people to give greater care to its prevention and cure.

5. Some of our ideas have a •natural correspondence and connection with one another, and it is reason’s business to trace these and to hold the ideas together in the union and correspondence that is based on *their individual natures*. There is also *another* connection of ideas, arising wholly from •*chance or custom*: ideas that have no kinship in themselves come to be so strongly linked in some men’s minds that it is very hard to separate them; as soon as one comes into the understanding its associate appears too, and if more than two are thus united the whole inseparable group show themselves together.

6. This strong tie between ideas that are not allied by nature is created by the mind either by choice or by chance, which is why there are different ties in men with different inclinations, education, interests, etc. Custom creates habits of •thinking in the understanding, as well as of •deciding in the will, and of •movement of the body. The habitual bodily movements ·at the most basic level· seem to be movements of the animal spirits: once these are started up, they continue in the ways they have been used to; and when these have been trodden for long enough they are worn into smooth paths, along which the motion becomes easy and seemingly natural. As far as we can understand thinking, ideas seem to be produced thus in our minds - ·that is, produced through the movements of the animal spirits, so that the smoothing of paths (so to speak) explains intellectual as well as behavioural habits·. Even if ideas aren’t produced in that way, the notion of a worn path may nevertheless serve to explain their following one another in an habitual sequence once it has been begun, as well as it does to explain such motions of the body. A musician who is used to a particular tune will find that as soon as it begins in his head the ideas of its notes will follow on in due order in his understanding without any care or attention on his part, as regularly as his fingers move in the right order over the keys of the organ to play the tune he has begun, while his mind is on something else. This example suggests that the motion of the organist’s animal spirits really is the natural cause of his sequence of ideas of the notes, as well as of the regular dancing of his fingers; but I shan’t go into that. In any case, this comparison may help us a little to conceive of *intellectual habits*, and of the *tying together of ideas*.

7. That there are such *associations of ideas made by custom* in the minds of most men won’t, I think, be questioned by anyone who has attended thoroughly to himself or to others. Most of the sympathies and antipathies that can be seen in men might reasonably be assigned to this cause. The sympathies etc. work as strongly and produce effects in as regular a manner as if they were *natural*; and that leads people to think they *are* natural, though really they arose from an accidental connection of two ideas which - either because the first impression was so strong, or because the person subsequently *allowed* the two ideas to occur together in his mind - came to be so united that they always afterwards kept company together in that man’s mind, as if they were a single idea. I say ‘most of the antipathies’, not ‘all’, because some of them are truly natural, depend on our original constitution, and are born with us. But many others are counted natural

which would, if they had been observed with enough care, have been known to arise from unheeded early impressions or from wanton fancies. An adult has a surfeit of honey, after which he reacts badly - with nausea etc. - to any mention or thought of honey. He knows when this weakness of his began, and what caused it. But if it had come from an over-dose of honey *when he was a child*, all the same effects would have followed but he wouldn't have recognized its cause and would have regarded the antipathy as natural.

8. My present purposes in this book don't require me to distinguish accurately between natural and acquired antipathies; but I have a different reason for mentioning that distinction. It is to issue a warning: those who have children, or have charge of their upbringing, should think it worth their while to watch carefully to prevent the undue connection of ideas in the minds of young people. Early childhood is the time most susceptible to lasting impressions; and although discreet people attend to impressions that could harm the health of the body, and protect the young against them, those that could harm the mind, and have their effects in the understanding or the passions, have been much less heeded than they deserve. Indeed, those relating purely to the understanding have, I suspect, been wholly overlooked by nearly everyone..

[In sections **9-10** Locke develops this theme a little.]

11. A man is harmed by another, and thinks about •that man and •his action over and over; and by brooding over them strongly or frequently, he cements •those two ideas together so as to make them almost one. Whenever he thinks of the man, the pain and distress he suffered from him comes into his mind as well, so that he hardly distinguishes them, and has as much an aversion to the one as to the other. This is how hatreds often spring from slight and innocent occasions, and quarrels are propagated and continued in the world.

[Section **12** presents another example.]

13. When this combination of ideas is settled, and for as long as it lasts, reason is powerless to help us and relieve us from the effects of it. For once an idea is in our minds, it will operate according to its nature and circumstances and cannot be swerved or dislodged by reason. This lets us see how the following can happen:

Someone has a recurring emotional pattern that his reason can't overthrow, though it *is* unreasonable, and this person listens to his reason in other cases. This disorder is, however, cured by *the passing of time*.

The death of a child who was the daily delight of his mother's eyes and the joy of her soul rips from her heart the whole comfort of her life and utterly torments her. To use the consolations of *reason* in this case is as useless as to preach *ease* to someone on the rack in the hope that rational discourses will allay the pain of his joints being torn apart. There is no way of reasoning the woman out of her tie between the thought of the child and the thought of her loss of pleasure, but the two thoughts may be separated by the passing of *time*, through which the tie is weakened by disuse. In some such people the union between these ideas is never dissolved, and they spend their lives in mourning, and carry an incurable sorrow to their graves.

[Sections **14-16** add anecdotes - some of them quite extraordinary - concerning associations of ideas.]

17. *Intellectual* habits and defects that come about in this way are just as frequent and as powerful as habits of behaviour and feeling, though less notice is taken of them. Let the ideas of •being and of •matter be strongly joined either by education or by prolonged thought, and while they are

tied together in a person's mind, what thoughts and arguments will he put up concerning unembodied Spirits? Because in this person's thought the idea of something *real* always brings with it the idea of something *material*, he will regard the notion of *unembodied Spirit* - something real and immaterial - as weird and almost contradictory.

Let someone from early childhood associate the idea of •God with the idea of •shape, and what absurdities will he be liable to believe concerning the Deity?

Let the idea of •infallibility be inseparably joined in someone's mind to the idea of •some person, and the man whose mind has this association will swallow any absurdity that is affirmed by the supposedly infallible person - for example that a single body can be in two places at once.

18. Some such wrong and unnatural combinations of ideas will be found at the root of the irreconcilable opposition between different sects of philosophy and religion; for we can't imagine that every follower of a sect *deliberately sets himself to* reject, knowingly, truth that is offered by plain reason. Self-interest is at work here, but even *it* can't bring a whole society of men to such a universal perversity, with every single one of them maintaining something that he knows to be false. We must allow that at least some of them *do* what they all *claim to do*, namely to pursue truth sincerely; so there must be something that blinds the understandings of these sectarians, not letting them see the falsehood of what they embrace as real truth. What thus puts their reasons in chains and leads men blindfolded away from common sense turns out to be my present topic:

Some •ideas that are not naturally allied to one another, are - by upbringing, custom, and the constant din of the sect - so joined in the sectarians' minds that •they always appear there together; and the sectarians can no more separate •them in their thoughts than if they were only a single idea - which is what they treat •them as being.

This gives sense to jargon, demonstration to absurdities, and consistency to nonsense! It is the foundation of the greatest errors in the world. I almost wrote 'of all the errors in the world'; and if it isn't quite as bad as that, it does produce the most dangerous errors because when it operates it hinders men from seeing and examining. [Locke adds some fine rhetorical flourishes.]

19. I have now given an account of the origin, sorts, and extent of our *ideas*, with several other points concerning these *instruments or materials of our knowledge* (may I call them that?). The project on which I embarked requires me now to go on immediately to show how the understanding uses ideas and what *knowledge* we have through them. In my first general view of the topic, I thought that this was all that would remain to be done at this point. But now that I have reached it, I find that *ideas* are so closely connected with *words*, and in particular that *abstract ideas* are so regularly related to *general words*, that it is impossible to speak clearly and distinctly of our knowledge (which all consists in propositions) without considering first the nature, use, and meanings of language. That, therefore, is the business of the next Book.