

# An Essay Concerning Human Understanding

Book I, Chapters I and II  
Book II, Chapters II and VII  
Book IV, Chapter XI

John Locke

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## Introduction

John Locke was the pivotal proponent of British Empiricism [The theory that claims that all human knowledge is derived from the senses, which implies that humans neither possess inborn knowledge nor are able to generate knowledge by the use of reason alone.] (Locke, Berkeley, & Hume), which contrasted with "continental" Rationalism [The philosophical view which appeals to reason rather than to sense impressions as the source of knowledge. Descartes's philosophy, built on his cogito, ergo sum, is a fine example of rationalism.] (Descartes, Leibniz, & Spinoza). In one of his most famous texts *An Essay Concerning Human Understanding* (1689/1690), Locke attacks the Rationalist's notion that we are born with certain ideas already implanted in our mind (innate ideas [Ideas with which, according to Descartes and others, one is born. Such ideas are considered to be a priori and possessed by all rational humans.]), and presents the alternative empiricist view that all significant knowledge comes from observation. He states in an opening Epistle that the ideas original developed based on conversations with friends in 1671. It seems, therefore, that it took him almost 20 years to write. This is not surprising, given the length and complexity of the text.

## Commentary

The book is very analytically laid out. It begins with two tables of contents, one broken down simply by chapters and books, and the second further breaks down the chapters into sections. The order is as follows: first, he argues against the notion that we are born with certain innate ideas in Book I. Then in Book II he puts forth his alternative view of the origin of ideas and knowledge. Following this, in Book III he examines our use of words and how they sometimes get us in trouble. Finally, in Book IV Locke gives an

important account of the distinction between knowledge and belief.

Briefly, the arguments in Book I chapter II are against the rationalist claim that we are born with innate ideas. First, even if everyone agrees about some ideas, that would not prove they were born with these ideas. Locke provides several interpretations, including that we only recognize innate ideas when we use them, or that we recognize them upon first hearing them... In each case, Locke examines the implications of such claims. He suggests that the view will either imply some ideas are innate, which the rationalist would not accept; or that the claim is just plain false. Second, he often points out that neither children nor idiots have the so-called innate ideas. He argues that observation of the development of children will show that they gain these alleged innate ideas are only grasped by degrees; this suggests that they are not innate, but are in fact abstracted from observation. Perhaps Locke's most famous claim is that we are born with a tabula rasa [The notion that the mind is a blank state (or tabula rasa) that experience then writes upon. All knowledge is thought to be a result of his influence of experience.], a "white paper" or blank slate, starts in Book II, Chapter I. (Locke spends a majority of this chapter arguing against the claim that the soul always thinks.) All ideas are derived from either sensation or reflection [Impressions of Reflection The secondary sort of impression, a complex experience comprised of several impressions of sensation.] (i.e., empiricism). When we have an experience, each sense gives us "simple ideas [An analogue to Hume's Ideas of Memory derived from Impressions of Sensation. Simple ideas are ideas like "sweet" and "red".]," such as sweet and red. These are then combined in any way we choose—though experience often puts multiple simple ideas together, such as sweet and red making the idea of apple. Simple ideas from experience are said to represent the qualities in an object. In most cases, ideas we have "represent" the objects; for example, our idea of a table "represents" the table. Although not the first to elaborate in it, Locke is known for his explanation of the distinction between primary and secondary (and tertiary) qualities in Book II chapter VIII. Roughly the division is as follows: if an object's qualities are just like the ideas in our experience—such as solid, extension, motion—then those are "Primary Qualities [The qualities or characteristics believed to be inherent in bodies, such as extension, figure, motion, rest, solidity, and number. Such qualities are seen as constant within objects and inseparable from them, in contrast to secondary qualities, such as color, which are variable and thought not to exist in objects in the same way. (John Locke)]." In contrast, there are some simple ideas we have that do not directly represent qualities of the object. For example, colors, sounds, and such are not, strictly speaking, in the object. In these cases, the simple idea in our experience is a result of the object and our being there to experience it. "Sweet" is not a quality of an apple; rather, it is the result of the secondary property in the apple plus our eating it. Finally, although not talked about as much, Locke does also categorize some further, tertiary qualities, that have the power

to change primary qualities in another object. The example he uses is the ability of fire to melt a candle.

The significance of the primary/secondary quality distinction is the claim that secondary (and tertiary) qualities do not "inhere" in the object. This is the mechanist world view wherein the world is really only made of "matter and motion." Notice, that these two qualities are primary qualities. Apples are literally not red and sweet; rather, they are made of a certain size and shape of matter that is in motion. Once these qualities are placed in front of someone's open eyes with light, then the primary qualities make it appear red (a secondary quality). And similarly, when the primary qualities are placed on a tongue, they make it taste sweet (a secondary quality).

In Book III Locke builds on Book II, by examining how we use words and language. Some words we use concern simple and complex ideas. But, these words, he argues do not necessarily refer to actual qualities of the object. We use words to connect with other words, for example, if I say, "the apple is red and sweet," the word "and" does not refer to any simple idea from experience. Further, we use the word "table" to refer to a variety of objects; but, he argues, there are no "essential" properties (as held by Aristotle). It is here where people, including scientists, can make mistakes. In the final chapters of Book III, Locke discusses several problems with words (or our use of them). Among these problems are using words inconsistently, or misusing words, or using vague terms.

Having laid out a system of knowledge, Locke proceeds in Book IV with what some take to be his primary purpose: to show the appropriate and inappropriate limits of knowledge. He does so by first delineating a spectrum of "justification [The reasons for which one can be reasonably said to know some proposition.]" Under what conditions can we say we "know" something is true? We can know we exist (Descartes), moral and mathematical truths with a high degree of confidence. We similarly can be confident that God exists. With less confidence we have probable knowledge, which depend on proofs or demonstrations; for example, facts and observation.

In Book IV Chapter XI Locke addresses how it is that we know something exists. The primary claim here is that we know something exists because we experience it. He acknowledges that this does not provide absolute certainty; but, it does provide enough certainty. That there is an "external" world, we know for several reasons. Primarily, we know we are not merely dreaming of such an external world because we have no ability to will that these things exist or not. Our body provides us with the best sensations that are needed for our purpose; this is enough for the "ordinary affairs of life."

In the last few chapters of the Essay, Locke addresses the limits of

knowledge in relationship to religious faith. In this area, he argues, we cannot have knowledge—rather, it must be relegated to faith. He devotes an entire section to the notion of divine revelation. Referring to the etymological use of "enthusiasm [Literally, to be inspired or to have God come into one. Enthusiasm refers to the notion of divine revelation.]," Locke denies any epistemic merit to trusting "direct revelation," in lieu of reason. This is like "a Man to put out his eyes, the better to receive the remote Light of an invisible Star by a Telescope." (Book IV chapter xix)

Reading

## BOOK I: OF INNATE NOTIONS CHAPTER I

### Introduction

An inquiry into the understanding, pleasant and useful

§1. Since it is the understanding that sets man above the rest of sensible beings, and gives him all the advantage and dominion, which he has over them; it is certainly a subject, even for its nobleness, worth our labour to inquire into. The understanding, like the eye, whilst it makes us see, and perceive all other things, takes no notice of itself: and it requires art and pains to set it at a distance, and make it its own object. But whatever be the difficulties, that lie in the way of this inquiry; whatever it be, that keeps us so much in the dark to ourselves; sure I am, that all the light we can let in upon our own minds; all the acquaintance we can make with our own understandings, will not only be very pleasant, but bring us great advantage, in directing our thoughts in the search of other things.

Design

§2. This, therefore, being my purpose to inquire into the original, certainty, and extent of human knowledge; together, with the grounds and degrees of belief, opinion, and assent; I shall not at present meddle with the physical consideration of the mind; or trouble myself to examine, wherein its essence consists, or by what motions of our spirits, or alterations of our bodies, we come to have any sensation by our organs, or any ideas in our understandings; and whether those ideas do in their formation, any, or all of them, depend on matter or no. These are speculations, which, however curious and entertaining, I shall decline, as lying out of my way, in the design I am now upon. It shall suffice to my present purpose, to consider the discerning faculties of a man, as they are employed about the objects, which they have to do with: and I shall imagine I have not wholly misemployed myself in the thoughts I shall have on this occasion, if, in this historical, plain method, I can give any account of the ways, whereby our understandings come to attain those notions of things we have, and can set down any measures of the certainty of our knowledge, or the grounds of

those persuasions, which are to be found amongst men, so various, different, and wholly contradictory; and yet asserted somewhere or other with such assurance, and confidence, that he that shall take a view of the opinions of mankind, observe their opposition, and at the same time, consider the fondness, and devotion wherewith they are embraced; the resolution and eagerness, wherewith they are maintained, may perhaps have reason to suspect, that either there is no such thing as truth at all; or that mankind hath no sufficient means to attain a certain knowledge of it.

#### Method

§3. It is therefore worthwhile, to search out the bounds between opinion and knowledge; and examine by what measures, in things, whereof we have no certain knowledge, we ought to regulate our assent, and moderate our persuasions. In order whereunto, I shall pursue this following method.

First, I shall inquire into the original of those ideas, notions, or whatever else you please to call them, which a man observes, and is conscious to himself he has in his mind; and the ways whereby the understanding comes to be furnished with them.

Secondly, I shall endeavour to show, what knowledge the understanding hath by those ideas; and the certainty, evidence, and extent of it.

Thirdly, I shall make some inquiry into the nature and grounds of faith, or opinion; whereby I mean that assent, which we give to any proposition as true, of whose truth yet we have no certain knowledge: and here we shall have occasion to examine the reasons and degrees of assent.

Useful to know the extent of our comprehension

§4. If by this inquiry into the nature of the understanding, I can discover the powers thereof, how far they reach; to what things they are in any degree proportionate; and where they fail us, I suppose it may be of use, to prevail with the busy mind of man to be more cautious in meddling with things exceeding its comprehension; to stop, when it is at the utmost extent of its tether; and to sit down in a quiet ignorance of those things, which, upon examination, are found to be beyond the reach of our capacities. We should not then perhaps be so forward, out of an affectation of an universal knowledge, to raise questions, and perplex ourselves and others with disputes about things, to which our understandings are not suited; and of which we cannot frame in our minds any clear or distinct perceptions, or whereof (as it has perhaps too often happened) we have not any notions at all. If we can find out, how far the understanding can extend its view; how far it has faculties to attain certainty; and in what cases it can only judge and guess, we may learn to content ourselves with what is attainable by us in this state.

Our capacity suited to our state and concerns

§5. For though the comprehension of our understandings, comes exceeding short of the vast extent of things; yet, we shall have cause enough to magnify the bountiful Author of our being, for that portion and

degree of knowledge, he has bestowed on us, so far above all the rest of the inhabitants of this our mansion. Men have reason to be well satisfied with what God hath thought fit for them, since he has given them (as St Peter says,) [Greek text], whatsoever is necessary for the conveniencies of life, and information of virtue; and has put within the reach of their discovery the comfortable provision for this life and the way that leads to a better. How short soever their knowledge may come of an universal, or perfect comprehension of whatsoever is, it yet secures their great concernments that they have light enough to lead them to the knowledge of their maker, and the sight of their own duties. Men may find matter sufficient to busy their heads, and employ their hands with variety, delight, and satisfaction; if they will not boldly quarrel with their own constitution, and throw away the blessings their hands are filled with, because they are not big enough to grasp everything. We shall not have much reason to complain of the narrowness of our minds, if we will but employ them about what may be of use to us; for of that they are very capable: And it will be an unpardonable, as well as childish peevishness, if we undervalue the advantages of our knowledge, and neglect to improve it to the ends for which it was given us, because there are some things that are set out of the reach of it. It will be no excuse to an idle and untoward servant, who would not attend his business by candlelight, to plead that he had not broad sunshine. The candle, that is set up in us, shines bright enough for all our purposes. The discoveries we can make with this, ought to satisfy us: and we shall then use our understandings right, when we entertain all objects in that way and proportion, that they are suited to our faculties; and upon those grounds, they are capable of being proposed to us; and not peremptorily, or intemperately require demonstration, and demand certainty, where probability only is to be had, and which is sufficient to govern all our concernments. If we will disbelieve everything, because we cannot certainly know all things; we shall do much what as wisely as he, who would not use his legs, but sit still and perish, because he had no wings to fly.

Knowledge of our capacity a cure of scepticism and idleness

§6. When we know our own strength, we shall the better know what to undertake with hopes of success: and when we have well surveyed the powers of our own minds, and made some estimate what we may expect from them, we shall not be inclined either to sit still, and not set our thoughts on work at all, in despair of knowing anything; nor on the other side, question everything, and disclaim all knowledge, because some things are not to be understood. 'Tis of great use to the sailor to know the length of his line, though he cannot with it fathom all the depths of the ocean. 'Tis well he knows, that it is long enough to reach the bottom, at such places, as are necessary to direct his voyage, and caution him against running upon shoals, that may ruin him. Our business here is not to know all things, but those which concern our conduct. If we can find out those measures, whereby a rational creature put in that state, which man is in, in this world, may, and ought to govern his opinions and actions depending thereon, we

need not be troubled, that some other things escape our knowledge.  
Occasion of this essay

§7. This was that which gave the first rise to this essay concerning the understanding. For I thought that the first step towards satisfying several inquiries, the mind of man was very apt to run into, was, to take a survey of our own understandings, examine our own powers, and see to what things they were adapted. Till that was done, I suspected we began at the wrong end, and in vain sought for satisfaction in a quiet and sure possession of truths, that most concerned us, while we let loose our thoughts into the vast ocean of being, as if all that boundless extent, were the natural and undoubted possession of our understandings, wherein there was nothing exempt from its decisions, or that escaped its comprehension. Thus men, extending their inquiries beyond their capacities, and letting their thoughts wander into those depths, where they can find no sure footing; 'tis no wonder, that they raise questions, and multiply disputes, which never coming to any clear resolution, are proper only to continue and increase their doubts, and to confirm them at last in perfect scepticism. Whereas were the capacities of our understandings well considered, the extent of our knowledge once discovered, and the horizon found, which sets the bounds between the enlightened and dark parts of things; between what is, and what is not comprehensible by us, men would perhaps with less scruple acquiesce in the avowed ignorance of the one, and employ their thoughts and discourse, with more advantage and satisfaction in the other.

What idea stands for

§8. Thus much I thought necessary to say concerning the occasion of this inquiry into human understanding. But, before I proceed on to what I have thought on this subject, I must here in the entrance beg pardon of my reader, for the frequent use of the word idea, which he will find in the following treatise. It being that term, which, I think, serves best to stand for whatsoever is the object of the understanding, when a man thinks, I have used it to express whatever is meant by phantasm, notion, species, or whatever it is, which the mind can be employed about in thinking; and I could not avoid frequently using it.

I presume it will be easily granted me, that there are such ideas in men minds; everyone is conscious of them in himself, and men's words and actions will satisfy him, that they are in others.

Our first inquiry then shall be, how they come into the mind.

## BOOK I: OF INNATE NOTIONS CHAPTER II

### No Innate Principles in the Mind

The way shown how we come by any knowledge, sufficient to prove it not innate §1. It is an established opinion amongst some men, That there are in the understanding certain innate principles; some primary notions, [Greek text], characters, as it were stamped upon the mind of man, which the soul

receives in its very first being; and brings into the world with it. It would be sufficient to convince unprejudiced readers of the falseness of this supposition, if I should only show (as I hope I shall in the following parts of this discourse) how men, barely by the use of their natural faculties, may attain to all the knowledge they have, without the help of any innate impressions; and may arrive at certainty, without any such original notions or principles. For I imagine anyone will easily grant, that it would be impertinent to suppose, the ideas of colours innate in a creature, to whom God hath given sight, and a power to receive them by the eyes, from external objects: and no less unreasonable would it be to attribute several truths, to the impressions of nature, and innate characters, when we may observe in ourselves faculties, fit to attain as easy and certain knowledge of them, as if they were originally imprinted on the mind.

But because a man is not permitted without censure to follow his own thoughts in the search of truth, when they lead him ever so little out of the common road: I shall set down the reasons, that made me doubt of the truth of that opinion, as an excuse for my mistake, if I be in one; which I leave to be considered by those, who, with me, dispose themselves to embrace truth, wherever they find it.

General assent the great argument

§2. There is nothing more commonly taken for granted, than that there are certain principles both speculative and practical (for they speak of both) universally agreed upon by all mankind; which therefore they argue, must needs be constant impressions, which the souls of men receive in their first beings, and which they bring into the world with them, as necessarily and really as they do any of their inherent faculties.

Universal consent proves nothing innate

§3. This argument, drawn from universal consent, has this misfortune in it, that if it were true in matter of fact, that there were certain truths, wherein all mankind agreed, it would not prove them innate, if there can be any other way shown, how men may come to that universal agreement, in the things they do consent in; which I presume may be done.

'What is, is'; and ''Tis impossible for the same thing to be, and not to be' not universally assented to

§4. But, which is worse, this argument of universal consent, which is made use of, to prove innate principles, seems to me a demonstration that there are none such; because there are none to which all mankind give an universal assent. I shall begin with the speculative, and instance in those magnified principles of demonstration: 'Whatsoever is, is'; and ''Tis impossible for the same thing to be, and not to be', which of all others, I think have the most allowed title to innate. These have so settled a reputation of maxims universally received, that 'twill, no doubt, be thought strange, if anyone should seem to question it. But yet I take liberty to say, That these propositions are so far from having an universal assent, that there are a great part of mankind, to whom they are not so much as known.

Not on the mind naturally imprinted, because not known to children, idiots, etc.

§5. For, first 'tis evident, that all children and idiots, have not the least apprehension or thought of them: and the want of that is enough to destroy that universal assent, which must needs be the necessary concomitant of all innate truths: it seeming to me near a contradiction, to say, that there are truths imprinted on the soul, which it perceives or understands not: Imprinting, if it signify anything, being nothing else, but the making certain truths to be perceived. For to imprint anything on the mind, without the mind's perceiving it, seems to me hardly intelligible. If therefore children and idiots have souls, have minds, with those impressions upon them, they must unavoidably perceive them, and necessarily know and assent to these truths, which since they do not, it is evident that there are no such impressions. For if they are not notions naturally imprinted, how can they be innate? And if they are notions imprinted, how can they be unknown? To say a notion is imprinted on the mind, and yet at the same time to say, that the mind is ignorant of it, and never yet took notice of it, is to make this impression nothing. No proposition can be said to be in the mind, which it never yet knew, which it was never yet conscious of. For if any one may; then by the same reason, all propositions that are true, and the mind is capable ever of assenting to, may be said to be in the mind, and to be imprinted: since if any one can be said to be in the mind, which it never yet knew, it must be only because it is capable of knowing it; and so the mind is of all truths it ever shall know. Nay, thus truths may be imprinted on the mind, which it never did, nor ever shall know: for a man may live long, and die at last in ignorance of many truths, which his mind was capable of knowing, and that with certainty. So that if the capacity of knowing, be the natural impression contended for, all the truths a man ever comes to know, will, by this account, be every one of them, innate; and this great point will amount to no more, but only to a very improper way of speaking; which whilst it pretends to assert the contrary, says nothing different from those, who deny innate principles. For nobody, I think, ever denied, that the mind was capable of knowing several truths. The capacity they say, is innate, the knowledge acquired. But then to what end such contest for certain innate maxims? If truths can be imprinted on the understanding without being perceived, I can see no difference there can be, between any truths the mind is capable of knowing, in respect of their original: they must all be innate, or all adventitious: in vain shall a man go about to distinguish them. He therefore that talks of innate notions in the understanding, cannot (if he intend thereby any distinct sort of truths) mean such truths to be in the understanding, as it never perceived, and is yet wholly ignorant of. For if these words (to be in the understanding) have any propriety, they signify to be understood. So that, to be in the understanding, and, not to be understood; to be in the mind, and, never to be perceived, is all one, as to say, anything is, and is not, in the mind or understanding. If therefore these

two propositions, 'whatsoever is, is'; and, 'it is impossible for the same thing to be, and not to be', are by nature imprinted, children cannot be ignorant of them: infants, and all that have souls, must necessarily have them in their understandings, know the truth of them, and assent to it.

That men know them when they come to the use of reason, answered

§6. To avoid this, 'tis usually answered, that all men know and assent to them, when they come to the use of reason, and this is enough to prove them innate. I answer,

§7. Doubtful expressions, that have scarce any signification, go for clear reasons, to those, who being prepossessed, take not the pains to examine even what they themselves say. For to apply this answer with any tolerable sense to our present purpose, it must signify one of these two things; either, that as soon as men come to the use of reason, these supposed native inscriptions come to be known, and observed by them: or else, that the use and exercise of men's reasons assists them in the discovery of these principles, and certainly makes them known to them. If reason discovered them, that would not prove them innate

§8. If they mean that by the use of reason men may discover these principles; and that this is sufficient to prove them innate; their way of arguing will stand thus, viz, that whatever truths reason can certainly discover to us, and make us firmly assent to, those are all naturally imprinted on the mind; since that universal assent, which is made the mark of them, amounts to no more but this; that by the use of reason, we are capable to come to a certain knowledge of, and assent to them; and by this means there will be no difference between the maxims of the mathematicians, and theorems they deduce from them: all must be equally allowed innate, they being all discoveries made by the use of reason, and truths that a rational creature may certainly come to know, if he apply his thoughts rightly that way.

'Tis false that reason discovers them

§9. But how can these men think the use of reason necessary to discover principles that are supposed innate, when reason (if we may believe them) is nothing else, but the faculty of deducing unknown truths from principles or propositions, that are already known? That certainly can never be thought innate, which we have need of reason to discover, unless as I have said, we will have all the certain truths, that reason ever teaches us, to be innate. We may as well think the use of reason necessary to make our eyes discover visible objects, as that there should be need of reason, or the exercise thereof, to make the understanding see, what is originally engraven in it, and cannot be in the understanding, before it be perceived by it. So that to make reason discover those truths thus imprinted, is to say, that the use of reason discovers to a man, what he knew before; and if men have those innate, impressed truths originally, and before the use of reason, and yet are always ignorant of them, till they come to the use of reason, 'tis in effect to say, that men know, and know them not at the same time.

§10. 'Twill here perhaps be said, that mathematical demonstrations, and other truths, that are not innate, are not assented to, as soon as proposed, wherein they are distinguished from these maxims, and other innate truths. I shall have occasion to speak of assent upon the first proposing, more particularly by and by. I shall here only, and that very readily, allow, that these maxims, and mathematical demonstrations are in this different; that the one has need of reason, using of proofs, to make them out, and to gain our assent; but the other, as soon as understood, are, without any the least reasoning, embraced and assented to. But I withal beg leave to observe, that it lays open the weakness of this subterfuge, which requires the use of reason for the discovery of these general truths: since it must be confessed, that in their discovery, there is no use made of reasoning at all. And I think those who give this answer, will not be forward to affirm, that the knowledge of this maxim, 'that it is impossible for the same thing to be, and not to be', is a deduction of our reason. For this would be to destroy that bounty of nature, they seem so fond of, whilst they make the knowledge of those principles to depend on the labour of our thoughts. For all reasoning is search, and casting about, and requires pains and application. And how can it with any tolerable sense be supposed, that what was imprinted by nature, as the foundation and guide of our reason, should need the use of reason to discover it?

§11. Those who will take the pains to reflect with a little attention on the operations of the understanding, will find that this ready assent of the mind to some truths, depends not, either on native inscription, or the use of reason; but on a faculty of the mind quite distinct from both of them, as we shall see hereafter. Reason therefore, having nothing to do in procuring our assent to these maxims, if by saying, that men know and assent to them, when they come to the use of reason, be meant, that the use of reason assists us in the knowledge of these maxims, it is utterly false; and were it true, would prove them not to be innate. The coming to the use of reason, not the time we come to know these maxims

§12. If by knowing and assenting to them, when we come to the use of reason, be meant, that this is the time, when they come to be taken notice of by the mind; and that as soon as children come to the use of reason, they come also to know and assent to these maxims; this also is false, and frivolous. First, it is false. Because it is evident, these maxims are not in the mind so early as the use of reason: and therefore the coming to the use of reason is falsely assigned, as the time of their discovery. How many instances of the use of reason, may we observe in children, long time before they have any knowledge of this maxim, 'that it is impossible for the same thing to be, and not to be'? And a great part of illiterate people, and savages, pass many years, even of their rational age, without ever thinking on this, and the like general propositions. I grant men come not to the knowledge of these general and more abstract truths, which are thought

innate, till they come to the use of reason; and I add, nor then neither. Which is so, because till after they come to the use of reason, those general abstract ideas are not framed in the mind, about which those general maxims are, which are mistaken for innate principles, but are indeed discoveries made, and verities introduced, and brought into the mind by the same way, and discovered by the same steps, as several other propositions, which nobody was ever so extravagant as to suppose innate. This I hope to make plain in the sequel of this discourse. I allow therefore a necessity, that men should come to the use of reason, before they get the knowledge of those general truths; but deny, that men's coming to the use of reason is the time of their discovery.

By this, they are not distinguished from other knowable truths

§13. In the meantime, it is observable, that this saying, that men know, and assent to these maxims, when they come to the use of reason, amounts in reality of fact, to no more but this, that they are never known, nor taken notice of, before the use of reason, but may possibly be assented to sometime after, during a man's life; but when, is uncertain: and so may all other knowable truths, as well as these which therefore have no advantage, nor distinction from others, by this note of being known when we come to the use of reason; nor are thereby proved to be innate, but quite the contrary.

If coming to the use of reason were the time of their discovery, it would not prove them innate

§14. But secondly, were it true, that the precise time of their being known, and assented to, were, when men come to the use of reason; neither would that prove them innate. This way of arguing is so frivolous, as the supposition of itself is false. For by what kind of logic will it appear, that any notion is originally by nature imprinted in the mind in its first constitution, because it comes first to be observed, and assented to, when a faculty of the mind, which has quite a distinct province, begins to exert itself? And therefore, the coming to the use of speech, if it were supposed the time, that these maxims are first assented to (which it may be with as much truth, as the time when men come to the use of reason) would be as good a proof that they were innate, as to say, they are innate because men assent to them, when they come to the use of reason. I agree then with these men of innate principles, that there is no knowledge of these general and self-evident maxims in the mind, till it comes to the exercise of reason: but I deny that the coming to the use of reason, is the precise time when they are first taken notice of; and, if that were the precise time, I deny that it would prove them innate. All that can with any truth be meant by this proposition, that men assent to them when they come to the use of reason, is no more but this, that the making of general abstract ideas, and the understanding of general names, being a concomitant of the rational faculty, and growing up with it, children commonly get not those general ideas, nor learn the names that stand for them, till having for a good while exercised

their reason about familiar and more particular ideas, they are by their ordinary discourse and actions with others, acknowledged to be capable of rational conversation. If assenting to these maxims, when men come to the use of reason, can be true in any other sense, I desire it may be shown; or at least, how in this, or any other sense it proves them innate.

The steps by which the mind attains several truths

§15. The senses at first let in particular ideas, and furnish the yet empty cabinet: and the mind by degrees growing familiar with some of them, they are lodged in the memory, and names got to them. Afterwards the mind proceeding further, abstracts them, and by degrees learns the use of general names. In this manner the mind comes to be furnished with ideas and language, the materials about which to exercise its discursive faculty: and the use of reason becomes daily more visible, as these materials, that give it employment, increase. But though the having of general ideas, and the use of general words and reason usually grow together: yet, I see not, how this any way proves them innate. The knowledge of some truths, I confess, is very early in the mind; but in a way that shows them not to be innate. For, if we will observe, we shall find it still to be about ideas, not innate, but acquired: it being about those first, which are imprinted by external things, with which infants have earliest to do, which make the most frequent impressions on their senses. In ideas thus got, the mind discovers, that some agree, and others differ, probably as soon as it has any use of memory; as soon as it is able to retain and receive distinct ideas. But whether it be then, or not, this is certain, it does so long before it has the use of words; or comes to that, which we commonly call the use of reason. For a child knows as certainly, before it can speak, the difference between the ideas of sweet and bitter (i.e. that sweet is not bitter) as it knows afterwards (when it comes to speak) that wormwood and sugar-plums, are not the same thing.

§16. A child knows not that three and four are equal to seven, till he comes to be able to count to seven, and has got the name and idea of equality: and then upon explaining those words, he presently assents to, or rather perceives the truth of that proposition. But neither does he then readily assent, because it is an innate truth, nor was his assent wanting till then, because he wanted the use of reason; but the truth of it appears to him as soon as he has settled in his mind the clear and distinct ideas, that these names stand for: and then, he knows the truth of that proposition, upon the same grounds, and by the same means, that he knew before, that a rod and cherry, are not the same thing; and upon the same grounds also, that he may come to know afterwards, 'that it is impossible for the same thing to be, and not to be', as shall be more fully shown hereafter. So that the later it is before anyone comes to have those general ideas, about which those maxims are; or to know the signification of those general terms, that stand for them; or to put together in his mind, the ideas they stand for; the later also will it be, before he comes to assent to those maxims, whose

terms, with the ideas they stand for, being no more innate, than those of a cat or a weasel, he must stay till time and observation have acquainted him with them; and then he will be in a capacity to know the truth of these maxims, upon the first occasion, that shall make him put together those ideas in his mind, and observe, whether they agree or disagree, according as is expressed in those propositions. And therefore it is, that a man knows that eighteen and nineteen, are equal to thirty-seven, by the same self-evidence, that he knows one and two to be equal to three: yet, a child knows this, not so soon as the other; not for want of the use of reason; but because the ideas the words eighteen, nineteen, and thirty-seven stand for, are not so soon got, as those, which are signified by one, two, and three.

Assenting as soon as proposed and understood proves them not innate

§17. This evasion therefore of general assent, when men come to the use of reason, failing as it does, and leaving no difference between those supposed-innate, and other truths, that are afterwards acquired and learnt, men have endeavoured to secure an universal assent to those they call maxims, by saying, they are generally assented to, as soon as proposed, and the terms they are proposed in, understood: seeing all men, even children, as soon as they hear and understand the terms, assent to these propositions, they think it is sufficient to prove them innate. For since men never fail, after they have once understood the words, to acknowledge them for undoubted truths, they would infer, that certainly these propositions were first lodged in the understanding, which, without any teaching, the mind at very first proposal, immediately closes with, and assents to, and after that never doubts again.

If such an assent be a mark of innate, then that one and two are equal to three; that sweetness is no bitterness; and a thousand the like, must be innate

§18. In answer to this, I demand whether ready assent, given to a proposition upon first hearing, and understanding the terms, be a certain mark of an innate principle? If it be not, such a general assent is in vain urged as a proof of them; if it be said, that it is a mark of innate, they must then allow all such propositions to be innate, which are generally assented to, as soon as heard, whereby they will find themselves plentifully stored with innate principles. For upon the same ground viz, of assent at first hearing and understanding the terms, that men would have those maxims pass for innate, they must also admit several propositions about numbers, to be innate: and thus, 'that one and two are equal to three, that two and two are equal to four', and a multitude of other the like propositions in numbers, that everybody assents to, at first hearing, and understanding the terms, must have a place amongst these innate axioms. Nor is this the prerogative of numbers alone, and propositions made about several of them: but even natural philosophy, and all the other sciences afford propositions, which are sure to meet with assent, as soon as they are understood. 'That two bodies cannot be in the same place', is a truth, that nobody any more

sticks at, than at this maxim, 'that it is impossible for the same thing to be, and not to be'; 'that white is not black'; 'that a square is not a circle'; 'that yellowness is not sweetness': these, and a million of other such propositions, as many at least, as we have distinct ideas, every man in his wits, at first hearing, and knowing what the names stand for, must necessarily assent to. If these men will be true to their own rule, and have assent at first hearing and understanding the terms, to be a mark of innate, they must allow, not only as many innate propositions, as men have distinct ideas; but as many as men can make propositions wherein different ideas are denied one of another. Since every proposition, wherein one different idea is denied of another, will as certainly find assent at first hearing and understanding the terms, as this general one, 'it is impossible for the same to be, and not to be'; or that which is the foundation of it, and is the easier understood of the two, 'the same is not different': by which account, they will have legions of innate propositions of this one sort, without mentioning any other. But since no proposition can be innate, unless the ideas, about which it is, be innate, this will be, to suppose all our ideas of colours, sounds, tastes, figure, etc. innate; than which, there cannot be anything more opposite to reason and experience. Universal and ready assent upon hearing and understanding the terms, is (I grant) a mark of self-evidence: but self-evidence, depending not on innate impressions, but on something else (as we shall show hereafter) belongs to several propositions, which nobody was yet so extravagant, as to pretend to be innate.

Such less general propositions known before these universal maxims

§19. Nor let it be said, that those more particular self-evident propositions, which are assented to at first hearing, as, that one and two are equal to three'; 'that green is not red', etc. are received as the consequences of those more universal propositions, which are looked on as innate principles; since anyone, who will but take the pains to observe what passes in the understanding, will certainly find, that these, and the like less general propositions, are certainly known and firmly assented to, by those, who are utterly ignorant of those more general maxims; and so, being earlier in the mind than those (as they are called) first principles, cannot owe to them the assent, wherewith they are received at first hearing.

'One and one, equal to two', etc. not general nor useful, answered

§20. If it be said, that these propositions, viz. 'two and two are equal to four'; 'red is not blue', etc. are not general maxims, nor of any great use. I answer, that makes nothing to the argument of universal assent, upon hearing and understanding. For, if that be the certain mark of innate, whatever proposition can be found, that receives general assent, as soon as heard and understood, that must be admitted for an innate proposition, as well as this maxim, 'that it is impossible for the same thing to be, and not to be', they being upon this ground equal. And as to the difference of being more general, that makes this maxim more remote from being innate; those general and abstract ideas, being more strangers to our first

apprehensions, than those of more particular self-evident propositions; and therefore, 'tis longer before they are admitted and assented to by the growing understanding. And as to the usefulness of these magnified maxims, that perhaps will not be found so great as is generally conceived, when it comes to its due place to be more fully considered.

These maxims not being known sometimes till proposed, proves them not innate

§21. But we have not yet done with assenting to propositions at first hearing and understanding their terms; 'tis fit we first take notice, that this, instead of being a mark, that they are innate, is a proof of the contrary: since it supposes, that several, who understand and know other things, are ignorant of these principles, till they are proposed to them; and that one may be unacquainted with these truths, till he hears them from others. For if they were innate, what need they be proposed, in order to gaining assent; when, by being in the understanding, by a natural and original impression (if there were any such) they could not but be known before? Or doth the proposing them, print them clearer in the mind, than nature did? If so, then the consequence will be, that a man knows them better, after he has been thus taught them, than he did before. Whence it will follow, that these principles may be made more evident to us by others' teaching, than nature has made them by impression; which will ill agree with the opinion of innate principles, and give but little authority to them; but on the contrary, makes them unfit to be the foundations of all our other knowledge, as they are pretended to be. This cannot be denied, that men grow first acquainted with many of these self-evident truths, upon their being proposed: but it is clear, that whosoever does so, finds in himself, that he then begins to know a proposition, which he knew not before; and which from thenceforth he never questions; not because it was innate; but because the consideration of the nature of the things contained in those words, would not suffer him to think otherwise, how, or whensoever he is brought to reflect on them. And if whatever is assented to at first hearing, and understanding the terms, must pass for an innate principle, every well-grounded observation drawn from particulars into a general rule, must be innate. When yet it is certain, that not all, but only sagacious beads light at first on these observations, and reduce them into general propositions, not innate, but collected from a preceding acquaintance, and reflection on particular instances. These, when observing men have made them, unobserving men, when they are proposed to them, cannot refuse their assent to. Implicitly known before proposing, signifies that the mind is capable of understanding them, or else signifies nothing

§22. If it be said, the understanding bath an implicit knowledge of these principles, but not an explicit, before this first hearing, (as they must, who will say, that they are in the understanding before they are known) it will be hard to conceive what is meant by a principle imprinted on the understanding implicitly; unless it be this, that the mind is capable of understanding and

assenting firmly to such propositions. And thus all mathematical demonstrations, as well as first principles, must be received as native impressions on the mind: which I fear they will scarce allow them to be, who find it harder to demonstrate a proposition, than assent to it, when demonstrated. And few mathematicians, will be forward to believe, that all the diagrams they have drawn, were but copies of those innate characters, which nature had engraven upon their minds.

The argument of assenting on first hearing, is upon a false supposition of no precedent teaching

§23. There is, I fear, this further weakness in the foregoing argument, which would persuade us, that therefore those maxims are to be thought innate, which men admit at first hearing, because they assent to propositions, which they are not taught, nor do receive from the force of any argument or demonstration, but a bare explication or understanding of the terms. Under which, there seems to me to lie this fallacy; that men are supposed not to be taught, nor to learn anything de novo when in truth, they are taught, and do learn something they were ignorant of before. For first it is evident, they have learned the terms and their signification; neither of which was born with them. But this is not all the acquired knowledge in the case: the ideas themselves, about which the proposition is, are not born with them, no more than their names, but got afterwards. So that in all propositions that are assented to, at first hearing; the terms of the proposition, their standing for such ideas, and the ideas themselves that they stand for, being neither of them innate, I would fain know what there is remaining in such propositions, that is innate. For I would gladly have anyone name that proposition, whose terms or ideas were either of them innate. We by degrees get ideas and names, and learn their appropriated connexion one with another; and then to propositions, made in such terms, whose signification we have learnt, and wherein the agreement or disagreement we can perceive in our ideas, when put together, is expressed, we at first hearing assent; though to other propositions, in themselves as certain and evident, but which are concerning ideas, not so soon or so easily got, we are at the same time no way capable of assenting. For though a child quickly assent to this proposition, 'that an apple is not fire'; when, by familiar acquaintance, he has got the ideas of those two different things distinctly imprinted on his mind, and has learnt that the names apple and fire stand for them; yet it will be some years after, perhaps, before the same child will assent to this proposition, 'that it is impossible for the same thing to be, and not to be'. Because, that though, perhaps, the words are as easy to be learnt; yet the signification of them, being more large, comprehensive, and abstract, than of the names annexed to those sensible things, the child hath to do with; it is longer before he learns their precise meaning, and it requires more time plainly to form in his mind those general ideas, they stand for. Till that be done, you will in vain endeavour to make any child assent to a proposition, made up of such general terms: but as soon as ever he has got those ideas, and learned their names, he forwardly closes with

the one, as well as the other of the forementioned propositions; and with both for the same reason viz, because he finds the ideas he has in his mind, to agree or disagree, according as the words standing for them, are affirmed, or denied one of another in the proposition. But if propositions be brought to him in words, which stand for ideas he has not yet in his mind; to such propositions, however evidently true or false in themselves, he affords neither assent nor dissent, but is ignorant. For words being but empty sounds, any further than they are signs of our ideas, we cannot but assent to them, as they correspond to those ideas we have, but no further than that. But the showing by what steps and ways knowledge comes into our minds, and grounds of several degrees of assent, being the business of the following discourse, it may suffice to have only touched on it here, as one reason, that made me doubt of those innate principles.

Not innate, because not universally assented to

§24. To conclude this argument of universal consent, I agree with these defenders of innate principles, that if they are innate, they must needs have universal assent. For that a truth should be innate, and yet not assented to, is to me as unintelligible, as for a man to know a truth, and be ignorant of it at the same time. But then, by these men's own confession, they cannot be innate; since they are not assented to, by those who understand not the terms, nor by a great part of those who do understand them, but have yet never heard, nor thought of those propositions; which, I think, is at least one half of mankind. But were the number far less, it would be enough to destroy universal assent, and thereby show these propositions not to be innate, if children alone were ignorant of them.

These maxims not the first known

§25. But that I may not be accused, to argue from the thoughts of infants, which are unknown to us, and to conclude, from what passes in their understandings, before they express it; I say next, that these two general propositions are not the truths, that first possess the minds of children; nor are antecedent to all acquired, and adventitious notions: which if they were innate, they must needs be. Whether we can determine it or no, it matters not, there is certainly a time, when children begin to think, and their words and actions do assure us, that they do so. When therefore they are capable of thought, of knowledge, of assent, can it rationally be supposed, they can be ignorant of those notions that nature has imprinted, were there any such? Can it be imagined, with any appearance of reason, that they perceive the impressions from things without; and be at the same time ignorant of those characters, which nature, itself has taken care to stamp within? Can they receive and assent to adventitious notions, and be ignorant of those, which are supposed woven into the very principles of their being, and imprinted there in indelible characters, to be the foundation and guide of all their acquired knowledge, and future reasonings? This would be, to make nature take pains to no purpose; or, at least, to write very ill; since its characters could not be read by those eyes, which saw other things very

well; and those are very ill supposed the clearest parts of truth, and the foundations of all our knowledge, which are not first known, and without which, the undoubted knowledge of several other things may be had. The child certainly knows, that the nurse that feeds it, is neither the cat it plays with, nor the blackamoor it is afraid of, that the wormseed or mustard it refuses, is not the apple or sugar it cries for; this it is certainly and undoubtedly assured of: but will anyone say, it is by virtue of this principle, 'that it is impossible for the same thing to be, and not to be', that it so firmly assents to these, and other parts of its knowledge? Or that the child has any notion or apprehension of that proposition at an age, wherein yet 'tis plain, it knows a great many other truths? He that will say, children join these general abstract speculations with their sucking-bottles, and their rattles, may, perhaps, with justice be thought to have more passion and zeal for his opinion; but less sincerity and truth, than one of that age.

And so not innate

§26. Though therefore there be several general propositions, that meet with constant and ready assent, as soon as proposed to men grown up, who have attained the use of more general and abstract ideas, and names standing for them; yet they not being to be found in those of tender years, who nevertheless know other things, they cannot pretend to universal assent of intelligent persons, and so by no means can be supposed innate: it being impossible, that any truth which is innate (if there were any such) should be unknown, at least to anyone, who knows anything else. Since, if they are innate truths, they must be innate thoughts; there being nothing a truth in the mind, that it has never thought on. Whereby it is evident, if there be any innate truths, they must necessarily be the first of any thought on; the first that appear there.

Not innate, because they appear least, where what is innate shows itself clearest

§27. That the general maxims, we are discoursing of, are not known to children, idiots, and a great part of mankind, we have already sufficiently proved; whereby it is evident, they have not an universal assent, nor are general impressions. But there is this further argument in it, against their being innate: that these characters, if they were native and original impressions, should appear fairest and clearest in those persons, in whom yet we find no footsteps of them: and 'tis, in my opinion, a strong presumption, that they are not innate; since they are least known to those, in whom, if they were innate, they must needs exert themselves with most force and vigour. For children, idiots, savages, and illiterate people, being of all others the least corrupted by custom, or borrowed opinions; learning, and education, having not cast their native thoughts into new moulds; nor by superinducing foreign and studied doctrines confounded those fair characters nature had written there; one might reasonably imagine, that in their minds these innate notions should lie open fairly to everyone's view, as 'tis certain the thoughts of children do. It might very well be expected, that

these principles should be perfectly known to naturals; which being stamped immediately on the soul (as these men suppose) can have no dependence on the constitutions, or organs of the body, the only confessed difference between them and others. One would think, according to these men's principles, that all these native beams of light (were there any such) should in those, who have no reserves, no arts of concealment, shine out in their full lustre, and leave us in no more doubt of their being there, than we are of their love of pleasure, and abhorrence of pain. But alas, amongst children, idiots, savages, and the grossly illiterate, what general maxims are to be found? What universal principles of knowledge? Their notions are few and narrow, borrowed only from~ those objects, they have had most to do with, and which have made upon their senses the frequentest and strongest impressions. A child knows his nurse and his cradle, and by degrees the playthings of a little more advanced age: and a young savage has, perhaps, his head filled with love and hunting, according to the fashion of his tribe. But he that from a child untaught, or a wild inhabitant of the woods, will expect these abstract maxims and reputed principles of sciences, will I fear, find himself mistaken. Such kind of general propositions, are seldom mentioned in the huts of Indians; much less are they to be found in the thoughts of children, or any impressions of them on the minds of naturals. They are the language and business of the schools, and academies of learned nations, accustomed to that sort of conversation, or learning, where disputes are frequent: these maxims being suited to artificial argumentation, and useful for conviction; but not much conducing to the discovery of truth, or advancement of knowledge. But of their small use for the improvement of knowledge, I shall have occasion to speak more at large, 1. 4. c. 7.

### Recapitulation

§28. I know not how absurd this may seem to the masters of demonstration: and probably, it will hardly down with anybody at first hearing. I must therefore beg a little truce with prejudice, and the forbearance of censure, till I have been heard out in the sequel of this discourse, being very willing to submit to better judgements. And since I impartially search after truth, I shall not be sorry to be convinced that I have been too fond of my own notions; which I confess we are all apt to be, when application and study have warmed our heads with them.

Upon the whole matter, I cannot see any ground, to think these two famed speculative maxims innate: since they are not universally assented to; and the assent they so generally find, is no other, than what several propositions, not allowed to be innate, equally partake in with them: and since the assent that is given them, is produced another way, and comes not from natural inscription, as I doubt not but to make appear in the following discourse. And if these first principles of knowledge and science, are found not to be innate, no other speculative maxims can (I suppose) with better right pretend to be so.

## BOOK II: OF IDEAS CHAPTER I

### Of Ideas in General, and their Original

Idea is the object of thinking

§1. Every man being conscious to himself, that he thinks, and that which his mind is applied about, whilst thinking, being the ideas, that are there, 'tis past doubt, that men have in their minds several ideas, such as are those expressed by the words, whiteness, hardness, sweetness, thinking, motion, man, elephant, army, drunkenness, and others: it is in the first place then to be inquired, how he comes by them? I know it is a received doctrine, that men have native ideas, and original characters stamped upon their minds, in their very first being. This opinion I have at large examined already; and, I suppose, what I have said in the foregoing book, will be much more easily admitted, when I have shown, whence the understanding may get all the ideas it has, and by what ways and degrees they may come into the mind; for which I shall appeal to everyone's own observation and experience.

All ideas come from sensation or reflection

§2. Let us then suppose the mind to be, as we say, white paper, void of all characters, without any ideas; how comes it to be furnished? Whence comes it by that vast store, which the busy and boundless fancy of man has painted on it, with an almost endless variety? Whence has it all the materials of reason and knowledge? To this I answer, in one word, from experience: in that, all our knowledge is founded; and from that it ultimately derives itself. Our observation employed either about external sensible objects; or about the internal operations of our minds, perceived and reflected on by ourselves, is that, which supplies our understandings with all the materials of thinking. These two are the fountains of knowledge, from whence all the ideas we have, or can naturally have, do spring.

The objects of sensation one source of ideas

§3. First, our senses, conversant about particular sensible objects, do convey into the mind, several distinct perceptions of things, according to those various ways, wherein those objects do affect them: and thus we come by those ideas, we have of yellow, white, heat, cold, soft, hard, bitter, sweet, and all those which we call sensible qualities, which when I say the senses convey into the mind, I mean, they from external objects convey into the mind what produces there those perceptions. This great source, of most of the ideas we have, depending wholly upon our senses, and derived by them to the understanding, I call sensation.

The operations of our minds, the other source of them

§4. Secondly, the other fountain, from which experience furnisheth the understanding with ideas, is the perception of the operations of our own minds within us, as it is employed about the ideas it has got; which operations, when the soul comes to reflect on, and consider, do furnish the understanding with another set of ideas, which could not be had from things

without; and such are, perception, thinking, doubting, believing, reasoning, knowing, willing, and all the different actings of our own minds; which we being conscious of and observing in ourselves, do from these receive into our understandings, as distinct ideas, as we do from bodies affecting our senses. This source of ideas, every man has wholly in himself: and though it be not sense, as having nothing to do with external objects; yet it is very like it, and might properly enough be called internal sense. But as I call the other sensation, so I call this reflection, the ideas it affords being such only, as the mind gets by reflecting on its own operations within itself. By reflection then, in the following part of this discourse, I would be understood to mean, that notice which the mind takes of its own operations, and the manner of them, by reason whereof there come to be ideas of these operations in the understanding. These two, I say, viz, external, material things, as the objects of sensation; and the operations of our own minds within, as the objects of reflection, are, to me, the only originals, from whence all our ideas take their beginnings. The term operations here, I use in a large sense, as comprehending not barely the actions of the mind about its ideas, but some sort of passions arising sometimes from them, such as is the satisfaction or uneasiness arising from any thought.

All our ideas are of the one or the other of these

§5. The understanding seems to me, not to have the least glimmering of any ideas, which it doth not receive from one of these two. External objects furnish the mind with the ideas of sensible qualities, which are all those different perceptions they produce in us: and the mind furnishes the understanding with ideas of its own operations.

These, when we have taken a full survey of them, and their several modes, combinations, and relations, we shall find to contain all our whole stock of ideas; and that we have nothing in our minds, which did not come in, one of these two ways. Let anyone examine his own thoughts, and thoroughly search into his understanding, and then let him tell me, whether all the original ideas he has there, are any other than of the objects of his senses; or of the operations of his mind, considered as objects of his reflection: and how great a mass of knowledge soever he imagines to be lodged there, he will, upon taking a strict view, see, that he has not any idea on his mind but what one of these two have imprinted; though, perhaps, with infinite variety compounded and enlarged by the understanding, as we shall see hereafter.

Observable in children

§6. He that attentively considers the state of a child, at his first coming into the world, will have little reason to think him stored with plenty of ideas, that are to be the matter of his future knowledge. 'Tis by degrees he comes to be furnished with them: and though the ideas of obvious and familiar qualities, imprint themselves, before the memory begins to keep a register of time and order, yet 'tis often so late, before some unusual qualities come in the way, that there are few men that cannot recollect the beginning of their acquaintance with them: and if it were worthwhile, no

doubt a child might be so ordered, as to have but a very few, even of the ordinary ideas, till he were grown up to a man. But all that are born into the world being surrounded with bodies, that perpetually and diversely affect them, variety of ideas, whether care be taken about it or no, are imprinted on the minds of children. Light, and colours, are busy at hand everywhere, when the eye is but open; sounds, and some tangible qualities fail not to solicit their proper senses, and force an entrance to the mind; but yet, I think, it will be granted easily, that if a child were kept in a place, where he never saw any other but black and white, till he were a man, he would have no more ideas of scarlet or green, than he that from his childhood never tasted an oyster, or a pineapple, has of those particular relishes. Men are differently furnished with these, according to the different objects they converse with

§7. Men then come to be furnished with fewer or more simple ideas from without, according as the objects, they converse with, afford greater or less variety; and from the operation of their minds within, according as they more or less reflect on them. For, though he that contemplates the operations of his mind, cannot but have plain and clear ideas of them; yet unless he turn his thoughts that way, and considers them attentively, he will no more have clear and distinct ideas of all the operations of his mind, and all that may be observed therein, than he will have all the particular ideas of any landscape, or of the parts and motions of a clock, who will not turn his eyes to it, and with attention heed all the parts of it. The picture, or clock may be so placed, that they may come in his way every day; but yet he will have but a confused idea of all the parts they are made up of, till he applies himself with attention, to consider them each in particular.

Ideas of reflection later, because their need attention

§8. And hence we see the reason, why 'tis pretty late, before most children get ideas of the operations of their own minds; and some have not any very clear, or perfect ideas of the greatest part of them all their lives. Because, though they pass there continually; yet like floating visions, they make not deep impressions enough, to leave in the mind clear distinct lasting ideas, till the understanding turns inwards upon itself, reflects on its own operations, and makes them the object of its own contemplation. Children, when they come first into it, are surrounded with a world of new things, which, by a constant solicitation of their senses, draw the mind constantly to them, forward to take notice of new, and apt to be delighted with the variety of changing objects. Thus the first years are usually employed and diverted in looking abroad. Men's business in them is to acquaint themselves with what is to be found without; and so growing up in a constant attention to outward sensations, seldom make any considerable reflection on what passes within them, till they come to be of riper years; and some scarce ever at all.

The soul begins to have ideas, when it begins to perceive

§9. To ask, at what time a man has first any ideas, is to ask, when he

begins to perceive; having ideas, and perception, being the same thing. I know it is an opinion, that the soul always thinks,' and that it has the actual perception of ideas in itself constantly, as long as it exists; and that actual thinking is as inseparable from the soul, as actual extension is from the body; which if true, to inquire after the beginning of a man's ideas, is the same, as to inquire after the beginning of his soul. For by this account, soul and its ideas, as body and its extension, will begin to exist both at the same time.

The soul thinks not always; for this wants proofs

§10. But whether the soul be supposed to exist antecedent to, or coeval with, or some time after the first rudiments of organisation, or the beginnings of life in the body, I leave to be disputed by those, who have better thought of that matter. I confess myself, to have one of those dull souls, that doth not perceive itself always to contemplate ideas, nor can conceive it any more necessary for the soul always to think, than for the body always to move; the perception of ideas being (as I conceive) to the soul, what motion is to the body, not its essence, but one of its operations: and therefore, though thinking be supposed never so much the proper action of the soul; yet it is not necessary, to suppose, that it should be always thinking, always in action. That, perhaps, is the privilege of the infinite Author and Preserver of things, 'who never slumbers nor sleeps'; but is not competent to any finite being, at least not to the soul of man. We know certainly by experience, that we sometimes think, and thence draw this infallible consequence, that, there is something in us, that has a power to think: but whether that substance perpetually thinks, or no, we can be no further assured, than experience informs us. For to say, that actual thinking is essential to the soul, and inseparable from it, is to beg, what is in question, and not to prove it by reason; which is necessary to be done, if it be not a self-evident proposition. But whether this, 'that the soul always thinks', be a self-evident proposition, that everybody assents to at first hearing, I appeal to mankind. 'Tis doubted whether I thought all last night, or no; the question being about a matter of fact, 'tis begging it, to bring as a proof for it, an hypothesis, which is the very thing in dispute; by which way one may prove anything, and 'tis but supposing that all watches, whilst the balance beats, think, and 'tis sufficiently proved, and past doubt, that my watch thought all last night. But he, that would not deceive himself, ought to build his hypothesis on matter of fact, and make it out by sensible experience, and not presume on matter of fact, because of his hypothesis, that is, because he supposes it to be so; which way of proving, amounts to this, that I must necessarily think all last night, because another supposes I always think, though I myself cannot perceive, that I always do so.

But men in love with their opinions, may not only suppose what is in question, but allege wrong matter of fact. How else could anyone make it an inference of mine, that a thing is not, because we are not sensible of it in our sleep? I do not say there is no soul in a man, because he is not sensible

of it in his sleep: but I do say, he cannot think at any time waking or sleeping, without being sensible of it. Our being sensible of it, is not necessary to anything, but to our thoughts; and to them it is, and to them it will always be necessary, till we can think without being conscious of it. It is not always conscious of it

§11. I grant that the soul in a waking man, is never without thought because it is the condition of being awake: but whether sleeping without dreaming be not an affection of the whole man, mind as well as body, may be worth a waking man's consideration; it being hard to conceive, that anything should think, and not be conscious of it. If the soul doth think in a sleeping man, without being conscious of it, I ask, whether, during such thinking, it has any pleasure or pain, or be capable of happiness or misery? I am sure the man is not, no more than the bed or earth he lies on. For to be happy or miserable without being conscious of it, seems to me utterly inconsistent and impossible. Or if it be possible, that the soul can, whilst the body is sleeping, have its thinking, enjoyments, and concerns, its pleasure or pain apart, which the man is not conscious of, nor partakes in: it is certain, that Socrates asleep, and Socrates awake, is not the same person: but his soul when he sleeps, and Socrates the man consisting of body and soul when he is waking, are two persons; since waking Socrates, has no knowledge of or concernment for that happiness, or misery of his soul, which it enjoys alone by itself whilst he sleeps, without perceiving anything of it; no more than he has for the happiness, or misery of a man in the Indies, whom he knows not. For if we take wholly away all consciousness of our actions and sensations, especially of pleasure and pain, and the concernment that accompanies it, it will be hard to know wherein to place personal identity. If a sleeping man thinks without knowing it, the sleeping and waking man are two persons

§12. The soul, during sound sleep, thinks, say these men. Whilst it thinks and perceives, it is capable certainly of those of delight or trouble, as well as any other perceptions; and it must necessarily be conscious of its own perceptions. But it has all this apart: the sleeping man, 'tis plain, is conscious of nothing of all this. Let us suppose then the soul of Castor, whilst he is sleeping, retired from his body, which is no impossible supposition for the men I have here to do with, who so liberally allow life, without a thinking soul to all other animals. These men cannot then judge it impossible, or a contradiction, that the body should live without the soul; nor that the soul should subsist and think, or have perception, even perception of happiness or misery, without the body. Let us then, as I say, suppose the soul of Castor separated, during his sleep, from his body, to think apart. Let us suppose too, that it chooses for its scene of thinking, the body of another man, v.g. Pollux, who is sleeping without a soul: for if Castor's soul can think whilst Castor is asleep, what Castor is never conscious of, 'tis no matter what place it chooses to think in. We have here then, the bodies of two men with only one soul between them, which we will suppose to sleep and

wake by turns; and the soul still thinking in the waking man, whereof the sleeping man is never conscious, has never the least perception. I ask then, whether Castor and Pollux, thus, with only one soul between them, which thinks and perceives in one, what the other is never conscious of, nor is concerned for, are not two as distinct persons, as Castor and Hercules; or, as Socrates and Plato were? And whether one of them might not be very happy, and the other very miserable? Just by the same reason, they make the soul and the man two persons, who make the soul think apart, what the man is not conscious of. For, I suppose, nobody will make identity of persons, to consist in the soul's being united to the very same numerical particles of matter: for if that be necessary to identity, 'twill be impossible, in that constant flux of the particles of our bodies, that any man should be the same person, two days, or two moments together.

Impossible to convince those that sleep without dreaming, that they think

§13. Thus, methinks, every drowsy nod shakes their doctrine, who teach, that the soul is always thinking. Those, at least, who do at any time sleep without dreaming, can never be convinced, that their thoughts are sometimes for four hours busy without their knowing of it; and if they are taken in the very act, waked in the middle of that sleeping contemplation, can give no manner of account of it.

That men dream without remembering it, in vain urged

§14. 'Twill perhaps be said, that the soul thinks, even in the soundest sleep, but the memory retains it not. That the soul in a sleeping man should be this moment busy a thinking, and the next moment in a waking man, not remember, nor be able to recollect one jot of all those thoughts, is very hard to be conceived, and would need some better proof than bare assertion, to make it be believed. For who can without any more ado, but being barely told so, imagine, that the greatest part of men, do, during all their lives, for several hours every day, think of something, which if they were asked, even in the middle of these thoughts, they could remember nothing at all of? Most men, I think, pass a great part of their sleep without dreaming. I once knew a man, that was bred a scholar, and had no bad memory, who told me, he had never dreamed in his life, till he had that fever, he was then newly recovered of, which was about the five or six and twentieth year of his age. I suppose the world affords more such instances: at least everyone's acquaintance will furnish him with examples enough of such, as pass most of their nights without dreaming.

Upon this hypothesis, the thoughts of a sleeping man ought to be most rational

§15. To think often, and never to retain it so much as one moment, is a very useless sort of thinking: and the soul in such a state of does very little if at all, excel that of a looking-glass, thinking, which constantly receives variety of images, or ideas, but retains none; they disappear and vanish, and there remain no footsteps of them; the looking-glass is never the better for such ideas, nor the soul for such thoughts. Perhaps it will be said, that in a

waking man, the materials of the body are employed, and made use of, in thinking; and that the memory of thoughts, is retained by the impressions that are made on the brain, and the traces there left after such thinking; but that in the thinking of the soul, which is not perceived in a sleeping man, there the soul thinks apart, and making no use of the organs of the body, leaves no impressions on it, and consequently no memory of such thoughts. Not to mention again the absurdity of two distinct persons, which follows from this supposition, I answer further, that whatever ideas the mind can receive, and contemplate without the help of the body, it is reasonable to conclude, it can retain without the help of the body too, or else the soul, or any separate spirit will have but little advantage by thinking. If it has no memory of its own thoughts; if it cannot lay up them for its use, and be able to recall them upon occasion; if it cannot reflect upon what is past, and make use of its former experiences, reasonings, and contemplations, to what purpose does it think? They, who make the soul a thinking thing, at this rate, will not make it a much more noble being, than those do, whom they condemn, for allowing it to be nothing but the subtlest parts of matter. Characters drawn on dust, that the first breath of wind effaces; or impressions made on a heap of atoms, or animal spirits, are altogether as useful, and render the subject as noble, as the thoughts of a soul that perish in thinking; that once out of sight, are gone forever, and leave no memory of themselves behind them. Nature never makes excellent things, for mean or no uses: and it is hardly to be conceived, that our infinitely wise Creator, should make so admirable a faculty, as the power of thinking, that faculty which comes nearest the excellency of his own incomprehensible being, to be so idly and uselessly employed, at least a fourth part of its time here, as to think 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 we will examine it, we shall not find, I suppose, the motion of dull and senseless matter, anywhere in the universe, made so little use of, and so wholly thrown away.

On this hypothesis the soul must have ideas not derived from sensation or reflection, of which there is no appearance

§16. 'Tis true, we have sometimes instances of perception, whilst we are asleep, and retain the memory of those thoughts: but how extravagant and incoherent for the most part they are; how little conformable to the perfection and order of a rational being, those who are acquainted with dreams, need not be told. This I would willingly be satisfied in, whether the soul, when it thinks thus apart, and as it were separate from the body, acts less rationally than when conjointly with it, or no: if its separate thoughts be less rational, then these men must say, that the soul owes the perfection of rational thinking to the body: if it does not, 'tis a wonder that our dreams should be, for the most part, so frivolous and irrational; and that the soul should retain none of its more rational soliloquies and meditations.

If I think when I know it not, nobody else can know it

§17. Those who so confidently tell us, that the soul always actually thinks, I would they would also tell us, what those ideas are, that are in the soul of a child, before, or just at the union with the body, before it hath received any by sensation. The dreams of sleeping men, are, as I take it, all made up of the waking man's ideas, though, for the most part, oddly put together. 'Tis strange, if the soul has ideas of its own, that it derived not from sensation or reflection, (as it must have, if it thought before it received any impressions from the body) that it should never, in its private thinking, (so private, that the man himself perceives it not) retain any of them, the very moment it wakes out of them, and then make the man glad with new discoveries. Who can find it reasonable, that the soul should, in its retirement, during sleep, have so many hours thoughts, and yet never light on any of those ideas it borrowed not from sensation or reflection; or at least preserve the memory of none, but such, which being occasioned from the body, must needs be less natural to a spirit? 'Tis strange, the soul should never once in a man's whole life, recall over any of its pure, native thoughts, and those ideas it had before it borrowed anything from the body; never bring into the waking man's view, any other ideas, but what have a tinge of the cask, and manifestly derive their original from that union. If it always thinks, and so had ideas before it was united, or before it received any from the body, 'tis not to be supposed, but that during sleep, it recollects its native ideas, and during that retirement from communicating with the body, whilst it thinks by itself the ideas, it is busied about, should be, sometimes at least, those more natural and congenial ones which it had in itself underived from the body, or its own operations about them: which since the waking man never remembers, we must from this hypothesis conclude, either that the soul remembers something that the man does not; or else that memory belongs only to such ideas, as are derived from the body, or the mind's operations about them. How knows anyone that the soul always thinks? For if it be not a self-evident proposition, it needs proof

§18. I would be glad also to learn from these men, who so confidently pronounce, that the human soul, or which is all one, that a man always thinks, how they come to know it; nay, how they come to know that they themselves think, when they themselves do not perceive it. This I am afraid, is to be sure, without proofs; and to know, without perceiving: 'tis, I suspect, a confused notion, taken up to serve an hypothesis; and none of those clear truths, that either their own evidence forces us to admit, or common experience makes it impudence to deny. For the most that can be said of it, is, that 'tis possible the soul may always think, but not always retain it in memory: and, I say, it is as possible, that the soul may not always think; and much more probable, that it should sometimes not think, than that it should often think, and that a long while together, and not be conscious to itself the next moment after, that it had thought.

That a man should be busy in thinking, and yet not retain it the next moment

very improbable

§19. To suppose the soul to think, and the man not to perceive it, is, as has been said, to make two persons in one man: and if one considers well these men's way of speaking, one should be led into a suspicion, that they do so. For they who tell us, that the soul always thinks, do never, that I remember, say, that a man always thinks. Can the soul think, and not the man? Or a man think, and not be conscious of it? This perhaps, would be suspected of jargon in others. If they say, the man thinks always, but is not always conscious of it; they may as well say, his body is extended, without having parts. For 'tis altogether as intelligible to say, that a body is extended without parts, as that anything thinks without being conscious of it, or perceiving, that it does so. They who talk thus, may, with as much reason, if it be necessary to their hypothesis, say, that a man is always hungry, but that he does not always feel it: whereas hunger consists in that very sensation, as thinking consists in being conscious that one thinks. If they say, that a man is always conscious to himself of thinking; I ask, how they know it? Consciousness is the perception of what passes in a man's own mind. Can another man perceive, that I am conscious of anything, when I perceive it not myself? No man's knowledge here, can go beyond his experience. Wake a man out of a sound sleep, and ask him, what he was that moment thinking on? If he himself be conscious of nothing he then thought on, he must be a notable diviner of thoughts, that can assure him, that he was thinking: may he not with more reason assure him, he was not asleep? This is something beyond philosophy; and it cannot be less than revelation, that discovers to another, thoughts in my mind, when I can find none there myself: and they must needs have a penetrating sight, who can certainly see, that I think, when I cannot perceive it myself, and when I declare, that I do not; and yet can see, that dogs or elephants do not think, when they give all the demonstration of it imaginable, except only telling us, that they do so. This some may suspect to be a step beyond the Rosecrucians; it seeming easier to make oneself invisible to others, than to make another's thoughts visible to me, which are not visible to himself. But 'tis but defining the soul to be a substance, that always thinks, and the business is done. If such definition be of any authority, I know not what it can serve for, but to make many men suspect, that they have no souls at all, since they find a good part of their lives pass away without thinking. For no definitions, that I know, no suppositions of any sect, are of force enough to destroy constant experience; and perhaps, 'tis the affectation of knowing beyond what we perceive, that makes so much useless dispute, and noise, in the world.

No ideas but from sensation or reflection, evident, if we observe children

§20. I see no reason therefore to believe, that the soul thinks before the senses have furnished it with ideas to think on; and as those are increased, and retained; so it comes, by exercise, to improve its faculty of thinking, in the several parts of it, as well as afterwards, by compounding those ideas, and reflecting on its own operations, it increases its stock as well as facility, in remembering, imagining, reasoning, and other modes of

thinking.

§21. He that will suffer himself, to be informed by observation and experience, and not make his own hypothesis the rule of nature, will find few signs of a soul accustomed to much thinking in a new-born child, and much fewer of any reasoning at all. And yet it is hard to imagine, that the rational soul should think so much, and not reason at all. And he that will consider, that infants, newly come into the world, spend the greatest part of their time in sleep, and are seldom awake, but when either hunger calls for the teat, or some pain, (the most importunate of all sensations) or some other violent impression on the body, forces the mind to perceive, and attend to it. He, I say, who considers this, will, perhaps, find reason to imagine, that a foetus in the mother's womb, differs not much from the state of a vegetable; but passes the greatest part of its time without perception or thought, doing very little, but sleep in a place, where it needs not seek for food, and is surrounded with liquor, always equally soft, and near of the same temper; where the eyes have no light, and the ears, so shut up, are not very susceptible of sounds; and where there is little or no variety, or change of objects, to move the senses.

§22. Follow a child from its birth, and observe the alterations that time makes, and you shall find, as the mind by the senses comes more and more to be furnished with ideas, it comes to be more and more awake; thinks more, the more it has matter to think on. After some time, it begins to know the objects, which being most familiar with it, have made lasting impressions. Thus it comes, by degrees, to know the persons it daily converses with, and distinguish them from strangers; which are instances and effects of its coming to retain and distinguish the ideas the senses convey to it: and so we may observe, how the mind, by degrees, improves in these, and advances to the exercise of those other faculties of enlarging, compounding, and abstracting its ideas, and of reasoning about them, and reflecting upon all these, of which, I shall have occasion to speak more hereafter.

§23. If it shall be demanded then, when a man begins to have any ideas? I think, the true answer is, when he first has any sensation. For since there appear not to be any ideas in the mind, before the senses have conveyed any in, I conceive that ideas in the understanding, are coeval with sensation; which is such an impression or motion, made in some part of the body, as produces some perception in the understanding. 'Tis 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.

The original of all our knowledge

§24. In time, the mind comes to reflect on its own operations, about the ideas got by sensation, and thereby stores itself with a new set of ideas, which I call ideas of reflection. These are the impressions that are

made on our senses by outward objects, that are extrinsical to the mind; and its own operations, proceeding from powers intrinsical and proper to itself, which when reflected on by itself, become also objects of its contemplation, are, as I have said, the original of all knowledge. Thus 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 groundwork, whereon to build all those notions, which ever he shall have naturally in this world. All those sublime thoughts, which tower above the clouds, and reach as high as heaven itself, take their rise and footing here: in all that great extent wherein the mind wanders, in those remote speculations, it may seem to be elevated with, it stirs not one jot beyond those ideas, which sense or reflection, have offered for its contemplation.

In the reception of simple ideas, the understanding is for the most part passive

§25. In this part, the understanding is merely passive; and whether or no, it will have these beginnings, and as it were materials of knowledge, is not in its own power. For the objects of our senses, do, many of them, obtrude their particular ideas upon our minds, whether we will or no: and the operations of our minds, will not let us be without, at least some obscure notions of them. No man can be wholly ignorant of what he does, when he thinks. These simple ideas, when offered to the mind, the understanding can no more refuse to have, nor alter, when they are imprinted, nor blot them out, and make new ones itself, than a mirror can refuse, alter, or obliterate the images or ideas, which, the objects set before it, do therein produce. As the bodies that surround us, do diversely affect our organs, the mind is forced to receive the impressions; and cannot avoid the perception of those ideas that are annexed to them.

## BOOK II: OF IDEAS CHAPTER VIII

### Some further Considerations concerning our Simple Ideas

#### Positive ideas from privative causes

§1. Concerning the simple ideas of sensation 'tis to be considered, that whatsoever is so constituted in nature, as to be able, by affecting our senses, to cause any perception in the mind, doth thereby produce in the understanding a simple idea; which, whatever be the external cause of it, when it comes to be taken notice of, by our discerning faculty, it is by the mind looked on and considered there, to be a real positive idea in the understanding, as much as any other whatsoever; though perhaps, the cause of it be but a privation in the subject.

§2. Thus the idea 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 which produce them, are barely privations in those subjects, from whence our senses derive those ideas. These the understanding, in its view of them, considers all as distinct positive ideas, without taking notice of the causes that produce them; which is an inquiry not belonging to the idea, as it is in the understanding; but to the nature of the things existing without us. These are two very different things, and carefully to be distinguished; it being one thing to perceive, and know the idea of white or black, and quite another to examine what kind of particles they must be, and how ranged in the superficies,' to make any object appear white or black.

§3. A painter or dyer, who never inquired into their causes, bath the ideas of white and black, and other colours, as clearly, perfectly, and distinctly in his understanding, and perhaps more distinctly, than the philosopher, who hath busied himself in considering their natures, and thinks he knows how far either of them is in its cause positive or privative; and the idea of black is no less positive in his mind, than that of white, however the cause of that colour in the external object, may be only a privation.

§4. If it were the design of my present undertaking, to inquire into the natural causes and manner of perception, I should offer this as a reason why a privative cause might, in some cases at least, produce a positive idea, viz, that all sensation being produced in us, only by different degrees and modes of motion in our animal spirits, variously agitated by external objects, the abatement of any former motion, must as necessarily produce a new sensation, as the variation or increase of it; and so introduce a new idea, which depends only on a different motion of the animal spirits in that organ.

§5. But whether this be so, or no, I will not here determine, but appeal to everyone's own experience, whether the shadow of a man, though it consists of nothing but the absence of light (and the more the absence of light is, the more discernible is the shadow) does not, when a man looks on it, cause as clear and positive an idea in his mind, as a man himself, though covered over with clear Sunshine? And the picture of a shadow, is a positive thing. Indeed, we have negative names, which stand not directly for positive ideas, but for their absence, such as insipid, silence, nihil, etc. which words denote positive ideas; v.g. taste, sound, being, with a signification of their absence.

§6. And thus one may truly be said to see darkness. For supposing a hole perfectly dark, from whence no light is reflected, 'tis certain one may see the figure of it, or it may be painted; or whether the ink, I write with, makes any other idea, is a question. The privative causes I have here assigned of positive ideas, are according to the common opinion; but in truth, it will be hard to determine, whether there be really any ideas from a privative cause, till it be determined, whether rest be any more a privation than motion.

Ideas in the mind, qualities in bodies

§7. To discover the nature of our ideas the better, and to discourse of them intelligibly, it will be convenient to distinguish them, as they are ideas

or perceptions in our minds; and as they are modifications of matter in the bodies that cause such perceptions in us; that so we may not think (as perhaps usually is done) that they are exactly the images and resemblances of something inherent in the subject; most of those of sensation being in the mind no more the likeness of something existing without us, than the names, that stand for them are the likeness of our ideas, which yet upon hearing, they are apt to excite in us.

§8. Whatsoever the mind perceives in itself, or is the immediate object of perception, thought, or understanding, that I call idea; and the power to produce any idea in our mind, I call quality of the subject wherein that power is. Thus a snowball 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 snowball, I call qualities; and as they are sensations, or perceptions, in our understandings, I call them ideas; which ideas, if I speak of sometimes, as in the things themselves, I would be understood to mean those qualities in the objects which produce them in us.

Primary qualities

§9. Qualities thus considered in bodies are, first such as are utterly inseparable from the body, in what estate soever it be; such as in all the alterations and changes it suffers, all the force can be used upon it, it constantly keeps; and such as sense constantly finds in every particle of matter, which has bulk enough to be perceived, and the mind finds inseparable from every particle of matter, though less than to make itself singly be perceived by our senses. v.g. take a grain of wheat, divide it into two parts, each part has still solidity, extension, figure, and mobility; divide it again, and it retains still the same qualities: and so divide it on, till the parts become insensible, they must retain still each of them all those qualities. For division (which is all that a mill, or pestle, or any other body, does upon another, in reducing it to insensible parts) can never take away either solidity, extension, figure, or mobility from any body, but only makes two, or more distinct separate masses of matter, of that which was but one before; all which distinct masses, reckoned as so many distinct bodies, after division make a certain number. These I call original or primary qualities of body, which I think we may observe to produce simple ideas in us, viz, solidity, extension, figure, motion, or rest, and number.

§10. Secondly, such qualities, which in truth are nothing in the objects themselves, but powers to produce various sensations in us by their primary qualities, i.e. by the bulk, figure, texture, and motion of their insensible parts, as colours, sounds, tastes, etc. These I call secondary qualities [Those sensible qualities, such as colors, sounds, tastes, smells, which do not exist in objects but are generated in us through the impact of the primary qualities (which do exist in objects) on our sense organs. (John Locke)]. To these might be added a third sort which are allowed to be barely powers, though they are as much real qualities in the subject, as those which I, to comply with the common way of speaking, call qualities, but for

distinction secondary qualities. For the power in fire to produce a new colour, or consistency in wax or clay by its primary qualities, is as much a quality in fire, as the power it has to produce in me a new idea or sensation of warmth or burning, which I felt not before, by the same primary qualities, viz, the bulk, texture and motion of its insensible parts.

How primary qualities produce their ideas

§11. The next thing to be considered, is how bodies produce ideas in us, and that is manifestly by impulse, the only way which we can conceive bodies operate in.

§12. If then external objects be not united to our minds, when they produce ideas in it; and yet we perceive these original qualities in such of them as singly fall under our senses, 'tis evident, that some motion must be thence continued by our nerves, or animal spirits, by some parts of our bodies, to the brains, or the seat of sensation, there to produce in our minds the particular ideas we have of them. And since the extension, figure, number, and motion of bodies of an observable bigness, may be perceived at a distance by the sight, 'tis evident some singly imperceptible bodies must come from them to the eyes, and thereby convey to the brain some motion, which produces these ideas, which we have of them in us.

How secondary

§13. After the same manner, that the ideas of these original qualities are produced in us, we may conceive, that the ideas of secondary qualities are also produced, viz, by the operation of insensible particles on our senses. For it being manifest, that there are bodies, and good store of bodies, each whereof are so small, that we cannot, by any of our senses, discover either their bulk, figure, or motion, as is evident in the particles of the air and water, and other extremely smaller than those, perhaps, as much smaller than the particles of air, or water, as the particles of air or water, are smaller than peas or hail-stones. Let us suppose at present, that the different motions and figures, bulk and number of such particles, affecting the several organs of our senses, produce in us those different sensations, which we have from the colours and smells of bodies, v.g. that a violet, by the impulse of such insensible particles of matter of peculiar figures, and bulks, and in different degrees and modifications of their motions, causes the ideas of the blue colour, and sweet scent of that flower to be produced in our minds. It being no more impossible, to conceive, that God should annex such ideas to such motions, with which they have no similitude; than that he should annex the idea of pain to the motion of a piece of steel dividing our flesh, with which that idea hath no resemblance.

§14. What I have said concerning colours and smells, may be understood also of tastes, and sounds, and other the like sensible qualities; which, whatever reality we by mistake, attribute to them, are in truth nothing in the objects themselves, but powers to produce various sensations in us, and depend on those primary qualities, viz, bulk, figure, texture, and motion of parts; as I have said.

Ideas of primary qualities are resemblances; of secondary, not

§15. From whence I think it is easy to draw this observation, That the ideas of primary qualities of bodies, are resemblances of them, and their patterns do really exist in the bodies themselves; but the ideas, produced in us by these secondary qualities, have no resemblance of them at all. There is nothing like our ideas, existing in the bodies themselves. They are in the bodies, we denominate from them, only a power to produce those sensations in us: and what is sweet, blue, or warm in idea, is but the certain bulk, figure, and motion of the insensible parts in the bodies themselves, which we call so.

§16. Flame is denominated hot and light; snow, white and cold; and manna, white and sweet, from the ideas they produce in us. Which qualities are commonly thought to be the same in those bodies, that those ideas are in us, the one the perfect resemblance of the other, as they are in a mirror; and it would by most men be judged very extravagant, if one should say otherwise. And yet he, that will consider, that the same fire, that at one distance produces in us the sensation of warmth, does at a nearer approach, produce in us the far different sensation of pain, ought to bethink himself, what reason he has to say, that his idea of warmth, which was produced in him by the fire, is actually in the fire; and his idea of pain, which the same fire produced in him the same way, is not in the fire. Why is whiteness and coldness in snow, and pain not, when it produces the one and the other idea in us; and can do neither, but by the bulk, figure, number, and motion of its solid parts?

§17. The particular bulk, number, figure, and motion of the parts of fire, or snow, are really in them, whether anyone's senses perceive them or no: and therefore 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 not the eyes see light, or colours, nor the ears hear sounds; let the palate not taste, nor the nose smell, and all colours, tastes, odours, and sounds, as they are such particular ideas, vanish and cease, and are reduced to their causes, i.e. bulk, figure, and motion of parts.

§18. A piece of manna of a sensible bulk, is able to produce in us the idea of a round or square figure; and, by being removed from one place to another, the idea of motion. This idea of motion represents it, as it really is in the manna moving: a circle or square are the same, whether in idea or existence; in the mind, or in the manna: and this, both motion and figure are really in the manna, whether we take notice of them or no: this everybody is ready to agree to. Besides, manna by the bulk, figure, texture, and motion of its parts, has a power to produce the sensations of sickness, and sometimes of acute pains, or gripings in us. That these ideas of sickness and pain are not in the manna, but effects of its operations on us, and are nowhere when we feel them not: this also everyone readily agrees to. And yet men are hardly to be brought to think, that sweetness and whiteness

are not really in manna; which are but the effects of the operations of manna, by the motion, size, and figure of its particles on the eyes and palate; as the pain and sickness caused by manna, are confessedly nothing, but the effects of its operations on the stomach and guts, by the size, motion, and figure of its insensible parts; (for by nothing else can a body operate, as has been proved:) as if it could not operate on the eyes and palate, and thereby produce in the mind particular distinct ideas, which in itself it has not, as well as we allow it can operate on the guts and stomach, and thereby produce distinct ideas, which in itself it has not. These ideas being all effects of the operations of manna, on several parts of our bodies, by the size, figure, number, and motion of its parts, why those produced by the eyes and palate, should rather be thought to be really in the manna, than those produced by the stomach and guts; or why the pain and sickness, ideas that are the effects of manna, should be thought to be nowhere, when they are not felt; and yet the sweetness and whiteness, effects of the same manna on other parts of the body, by ways equally as unknown, should be thought to exist in the manna, when they are not seen nor tasted, would need some reason to explain.

§19. Let us consider the red and white colours in porphyry: hinder light but from striking on it, and its colours vanish; it no longer produces any such ideas in us: upon the return of light, it produces these appearances on us again. Can anyone think 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 'tis plain it has no colour in the dark? It has, indeed, such a configuration of particles, both night and day, as are apt by the rays of light rebounding from some parts of that hard stone, to produce in us the idea of redness, and from others the idea of whiteness: but whiteness or redness are not in it at any time, but such a texture, that hath the power to produce such a sensation in us.

§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, but an alteration of the texture of it?

§21. Ideas being thus distinguished and understood, we may be able to give an account, how the same water, at the same time, may produce the idea of cold by one hand, and of heat by the other: whereas it is impossible, that the same water, if those ideas were really in it, should at the same time be both hot and cold. For if we imagine warmth, as it is 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 may understand, how it is possible, that the same water may at the same time produce the sensation of heat in one hand, and cold in the other; which yet figure never does, that never producing the idea of a square by one hand, which has produced the idea of a globe by another. But if the sensation of heat and cold, be nothing but the increase or diminution of the motion of the minute parts of our bodies,

caused by the corpuscles of any other body, it is easy to be understood, that if that motion be greater in one hand, than in the other; if a body be applied to the two hands, which has in its minute particles a greater motion, than in those of one of the hands, and a less, than in those of the other, it will increase the motion of the one hand, and lessen it in the other, and so cause the different sensations of heat and cold, that depend thereon.

§22. I have in what just goes before, been engaged in physical inquiries a little further than perhaps I intended. But it being necessary, to make the nature of sensation a little understood, and to make the difference between the qualities in bodies, and the ideas produced by them in the mind, to be distinctly conceived, without which it were impossible to discourse intelligibly of them; I hope, I shall be pardoned this little excursion into natural philosophy, it being necessary in our present inquiry, to distinguish the primary, and real qualities of bodies, which are always in them, (viz, solidity, extension, figure, number, and motion, or rest; and are sometimes perceived by us, viz, when the bodies they are in, are big enough singly to be discerned) from those secondary and imputed qualities, which are but the powers of several combinations of those primary ones, when they operate, without being distinctly discerned; whereby we also may come to know what ideas are, and what are not resemblances of something really existing in the bodies, we denominate from them.

Three sorts of qualities in bodies

§23. The qualities then that are in bodies rightly considered, are of three sorts.

First, the bulk, figure, number, situation, and motion, or rest of their solid parts; those are in them, whether we perceive them or no; and when they are of that size, that we can discover them, we have by these an idea of the thing, as it is in itself, as is plain in artificial things. These I call primary qualities.

Secondly, the power that is in any body, by reason of its insensible primary qualities, to operate after a peculiar manner on any of our senses, and thereby produce in us the different ideas of several colours, sounds, smells, tastes, etc. These are usually called sensible qualities.

Thirdly, the power that is in anybody, by reason of the particular constitution of its primary qualities, to make such a change in the bulk, figure, texture, and motion of another body, as to make it operate on our senses, differently from what 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, as has been said, I think, may be properly called real original, or primary qualities, because they are in the things themselves, whether they are perceived or no; and upon their different modifications it is, that the secondary qualities depend.

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

The 1st. are resemblances. The 2nd. thought resemblances, but are not. The 3rd. neither are, nor are thought so

§24. But though these two later sorts of qualities are powers barely, and nothing but powers, relating to several other bodies, and resulting from the different modifications of the original qualities; yet they are generally otherwise thought of. For the second sort, viz, the powers to produce several ideas in us by our senses, are looked upon as real qualities, in the things thus affecting us: but the third sort are called, and esteemed barely powers, v.g. the idea of heat, or light, which we receive by our eyes, or touch from the Sun, are commonly thought real qualities, existing in the Sun, and something more than mere powers in it. But when we consider the Sun, in reference to wax, which it melts or blanches, we look upon the whiteness and softness produced in the wax, not as qualities in the Sun, but effects produced by powers in it: whereas, if rightly considered, these qualities of light and warmth, which are perceptions in me when I am warmed, or enlightened by the Sun, are no otherwise in the Sun, than the changes made in the wax, when it is blanched or melted, are in the Sun. They are all of them equally powers in the Sun, depending on its primary qualities; whereby it is able in the one case, so to alter the bulk, figure, texture, or motion of some of the insensible parts of my eyes, or hands, as thereby to produce in me the idea of light or heat; and in the other, it is able so to alter the bulk, figure, texture, or motion of the insensible parts of the wax, as to make them fit to produce in me the distinct ideas of white and fluid.

§25. The reason, why the one are ordinarily taken for real qualities, and the other only for bare powers, seems to be, because the ideas we have of distinct colours, sounds, etc. containing nothing at all in them, of bulk, figure, or motion, we are not apt to think them the effects of these primary qualities, which appear not to our senses, to operate in their production; and with which, they have not any apparent congruity, or conceivable connexion. Hence it is, that we are so forward to imagine, that those ideas are the resemblances of something really existing in the objects themselves: since sensation discovers nothing of bulk, figure, or motion of parts in their production; nor can reason show, how bodies by their bulk, figure, and motion, should produce in the mind the ideas of blue, or yellow, etc. But in the other case, in the operations of bodies, changing the qualities one of another, we plainly discover, that the quality produced, hath commonly no resemblance with anything in the thing producing it; wherefore we look on it as a bare effect of power. For though receiving the idea of heat, or light, from the Sun, we are apt to think, 'tis a perception and resemblance of such a quality in the Sun: yet when we see wax, or a fair face, receive change of colour from the Sun, we cannot imagine, that to be the reception or resemblance of anything in the Sun, because we find not those different colours in the Sun itself. For our senses, being able to observe a likeness, or unlikeness of sensible qualities in two different external objects, we forwardly enough conclude the production of any sensible quality in any

subject, to be an effect of bare power, and not the communication of any quality, which was really in the efficient, when we find no such sensible quality in the thing that produced it. But our senses, not being able to discover any unlikeness between the idea produced in us, and the quality of the object producing it, we are apt to imagine, that our ideas are resemblances of something in the objects, and not the effects of certain powers, placed in the modification of their primary qualities, with which primary qualities the ideas produced in us have no resemblance. Secondary qualities two-fold; first, immediately perceivable; secondly, mediately perceivable

§26. To conclude, beside those before-mentioned primary qualities in bodies, viz, bulk, figure, extension, number, and motion of their solid parts; all the rest whereby we take notice of bodies, and distinguish them one from another, are nothing else, but several powers in them, depending on those primary qualities; whereby they are fitted, either by immediately operating on our bodies, to produce several different ideas in us; or else by operating on other bodies, so to change their primary qualities, as to render them capable of producing ideas in us, different from what before they did. The former of these, I think, may be called secondary qualities, immediately perceivable: the latter, secondary qualities, mediately perceivable.

### BOOK III: OF OUR KNOWLEDGE OF THE EXISTENCE OF OTHER THINGS CHAPTER XI

#### Of our Knowledge of the Existence of other Things

Is to be had only by sensation

§1. The knowledge of our own being, we have by intuition. The existence of a GOD, reason Clearly makes known to us, as has been shown.

The knowledge of the existence of any other thing we can have only by sensation: for there being no necessary connexion of real existence, with any idea a man hath in his memory, nor of any other existence but that of GOD, with the existence of any particular man; no particular man can know the existence of any other being, but only when by actual operating upon him, it makes itself perceived by him. For the having the idea of anything in our mind, no more proves the existence of that thing, than the picture of a man evidences his being in the world, or the visions of a dream make thereby a true history.

Instance whiteness of this paper

§2. 'Tis therefore the actual receiving of ideas from without, that gives us notice of the existence of other things, and make us know, that something doth exist at that time without us, which causes that idea in us, though perhaps we neither know nor consider how it does it: for it takes not from the certainty of our senses, and the ideas we receive by them, that we know not the manner wherein they are produced: v.g. whilst I write this, I have, by the paper affecting my eyes, that idea produced in my mind, which whatever object causes, I call white; by which I know that that quality or

accident (i.e. whose appearance before my eyes, always causes that idea) doth really exist, and hath a being without me. And of this, the greatest assurance I can possibly have, and to which my faculties can attain, is the testimony of my eyes, which are the proper and sole judges of this thing, whose testimony I have reason to rely on, as so certain, that I can no more doubt, whilst I write this, that I see white and black, and that something really exists, that causes that sensation in me, than that I write or move my hand; which is a certainty as great, as human nature is capable of, concerning the existence of anything, but a man's self alone, and of GOD. This though not so certain as demonstration, yet may be called knowledge and proves the existence of things without us

§3. The notice we have by our senses, of the existing of things without us, though it be not altogether so certain, as our intuitive knowledge, or the deductions of our reason, employed about the clear abstract ideas of our own minds; yet it is an assurance that deserves the name of knowledge. If we persuade ourselves, that our faculties act and inform us right, concerning the existence of those objects that affect them, it cannot pass for an ill-grounded confidence: for I think nobody can, in earnest, be so sceptical, as to be uncertain of the existence of those things which he sees and feels. At least, he that can doubt so far, (whatever he may have with his own thoughts) will never have any controversy with me; since he can never be sure I say anything contrary to his opinion. As to myself, I think GOD has given me assurance enough of the existence of things without me: since by their different application, I can produce in myself both pleasure and pain, which is one great concernment of my present state. This is certain, the confidence that our faculties do not herein deceive us, is the greatest assurance we are capable of, concerning the existence of material beings. For we can not act anything, but by our faculties; nor talk of knowledge itself, but by the help of those faculties, which are fitted to apprehend even what knowledge is. But besides the assurance we have from our senses themselves, that they do not err in the information they give us, of the existence of things without us, when they are affected by them, we are further confirmed in this assurance, by other concurrent reasons.

First, because we cannot have them but by the inlet of the senses

§4. First, 'tis plain, those perceptions are produced in us by exterior causes affecting our senses: because those that want the organs of any sense, never can have the ideas belonging to that sense produced in their minds. This is too evident to be doubted: and therefore we cannot but be assured, that they come in by the organs of that sense, and no other way. The organs themselves, 'tis plain, do not produce them: for then the eyes of a man in the dark, would produce colours, and his nose smell roses in the winter: but we see nobody gets the relish of a pineapple, till he goes to the Indies, where it is, and tastes it.

Because an idea from actual sensation, and another from memory, are very distinct perceptions

§5. Secondly, because sometimes I find, that I cannot avoid the having those ideas produced in my mind. For though when my eyes are shut, or windows fast, I can at pleasure recall to my mind the ideas of light, or the Sun, which former sensations had lodged in my memory; so I can at pleasure lay by that idea, and take into my view that of the smell of a rose, or taste of sugar. But if I turn my eyes at noon towards the Sun, I cannot avoid the ideas, which the light, or Sun, then produces in me. So that there is a manifest difference, between the ideas laid up in my memory; (over which, if they were there only, I should have constantly the same power to dispose of them, and lay them by at pleasure) and those which force themselves upon me, and I cannot avoid having. And therefore it must needs be some exterior cause, and the brisk acting of some objects without me, whose efficacy I cannot resist, that produces those ideas in my mind, whether I will, or no. Besides, there is nobody who doth not perceive the difference in himself, between contemplating the Sun, as he hath the idea of it in his memory, and actually looking upon it: of which two, his perception is so distinct, that few of his ideas are more distinguishable one from another: and therefore he hath certain knowledge, that they are not both memory, or the actions of his mind, and fancies only within him; but that actual seeing hath a cause without.

Thirdly, pleasure or pain, which accompanies actual sensation, accompanies not the returning of those ideas without the external objects

§6. Thirdly, add to this, that many of those ideas are produced in us with pain, which afterwards we remember without the least offence. Thus the pain of heat or cold, when the idea of it is revived in our minds, gives us no disturbance; which, when felt, was very troublesome, and is again, when actually repeated: which is occasioned by the disorder the external object causes in our bodies, when applied to it: and we remember the pain of hunger, thirst, or the headache, without any pain at all; which would either never disturb us, or else constantly do it, as often as we thought of it, were there nothing more but ideas floating in our minds, and appearances entertaining our fancies, without the real existence of things affecting us from abroad. The same may be said of pleasure, accompanying several actual sensations: and though mathematical demonstration depends not upon sense, yet the examining them by diagrams, gives great credit to the evidence of our sight, and seems to give it a certainty approaching to that of the demonstration itself. For it would be very strange, that a man should allow it for an undeniable truth, that two angles of a figure, which he measures by lines and angles of a diagram, should be bigger one than the other; and yet doubt of the existence of those lines and angles, which by looking on, he makes use of to measure that by.

Fourthly, our senses assist one another's testimony of the existence of outward things

§7. Fourthly, our senses, in many cases bear witness to the truth of each other's report, concerning the existence of sensible things without us.

He that sees a fire, may, if he doubt whether it be anything more than a bare fancy, feel it too; and be convinced, by putting his hand in it. Which certainly could never be put into such exquisite pain, by a bare idea or phantom, unless that the pain be a fancy too: which yet he cannot, when the burn is well, by raising the idea of it, bring upon himself again.

Thus I see, whilst I write this, I can change the appearance of the paper; and by designing the letters, tell beforehand what new idea it shall exhibit the very next moment, barely by drawing my pen over it: which will neither appear (let me fancy as much as I will) if my hand stands still; or though I move my pen, if my eyes be shut: nor when those characters are once made on the paper, can I choose afterwards but see them as they are; that is, have the ideas of such letters as I have made. Whence it is manifest, that they are not barely the sport and play of my own imagination, when I find, that the characters, that were made at the pleasure of my own thoughts, do not obey them; nor yet cease to be, whenever I shall fancy it, but continue to affect my senses constantly and regularly, according to the figures I made them. To which if we will add, that the sight of those shall, from another man, draw such sounds, as I beforehand design they shall stand for, there will be little reason left to doubt, that those words, I write, do really exist without me, when they cause a long series of regular sounds to affect my ears, which could not be the effect of my imagination, nor could my memory retain them in that order.

This certainty is as great as our condition needs

§8. But yet, if after all this, anyone will be so sceptical, as to distrust his senses, and to affirm, that all we see and hear, feel and taste, think and do, during our whole being, is but the series and deluding appearances of a long dream, whereof there is no reality; and therefore will question the existence of all things, or our knowledge of anything: I must desire him to consider, that if all be a dream, then he doth but dream, that he makes the question; and so it is not much matter, that a waking man should answer him. But yet, if he pleases, he may dream that I make him this answer, that the certainty of things existing in rerum natura, when we have the testimony of our senses for it, is not only as great as our frame can attain to, but as our condition needs. For our faculties being suited not to the full extent of being, nor to a perfect, clear, comprehensive knowledge of things free from all doubt and scruple; but to the preservation of us, in whom they are; and accommodated to the use of life: they serve to our purpose well enough, if they will but give us certain notice of those things, which are convenient or inconvenient to us. For he that sees a candle burning, and hath experimented the force of its flame, by putting his finger in it, will little doubt, that this is something existing without him, which does him harm, and puts him to great pain: which is assurance enough, when no man requires greater certainty, to govern his actions by, than what is as certain as his actions themselves. And if our dreamer pleases to try, whether the glowing heat of a glass furnace, be barely a wandering imagination in a drowsy man's fancy, by putting his hand into it, he may perhaps be wakened into a

certainty greater than he could wish, that it is something more than bare imagination. So that this evidence is as great, as we can desire, being as certain to us as our pleasure or pain; i.e. happiness or misery; beyond which we have no concernment, either of knowing or being. Such an assurance of the existence of things without us, is sufficient to direct us in the attaining the good, and avoiding the evil, which is caused by them, which is the important concernment we have of being made acquainted with them.

But reaches no further than actual sensation

§9. In fine then, when our senses do actually convey into our understandings any idea, we cannot but be satisfied, that there doth something at that time really exist without us, which doth affect our senses, and by them give notice of itself to our apprehensive faculties, and actually produce that idea, which we then perceive: and we cannot so far distrust their testimony, as to doubt, that such collections of simple ideas, as we have observed by our senses to be united together, do really exist together. But this knowledge extends as far as the present testimony of our senses, employed about particular objects, that do then affect them, and no further. For if I saw such a collection of simple ideas, as is wont to be called man, existing together one minute since, and am now alone, I cannot be certain, that the same man exists now, since there is no necessary connexion of his existence a minute since, with his existence now: by a thousand ways he may cease to be, since I had the testimony of my senses for his existence. And if I cannot be certain, that the man I saw last today, is now in being, I can less be certain, that he is so, who hath been longer removed from my senses, and I have not seen since yesterday, or since the last year: and much less can I be certain of the existence of men, that I never saw. And therefore though it be highly probable, that millions of men do now exist, yet whilst I am alone writing this, I have not that certainty of it, which we strictly call knowledge; though the great likelihood of it puts me past doubt, and it be reasonable for me to do several things upon the confidence, that there are men (and men also of my acquaintance, with whom I have to do) now in the world: but this is but probability, not knowledge.

Folly to expect demonstration in everything

§10. Whereby yet we may observe, how foolish and vain a thing it is, for a man of a narrow knowledge, who having reason given him to judge of the different evidence and probability of things, and to be swayed accordingly; how vain, I say, it is to expect demonstration and certainty in things not capable of it; and refuse assent to very rational propositions, and act contrary to very plain and clear truths, because they cannot be made out so evident, as to surmount every the least (I will not say reason, but) pretence of doubting. He that in the ordinary affairs of life, would admit of nothing but direct plain demonstration, would be sure of nothing, in this world, but of perishing quickly. The wholesomeness of his meat or drink would not give him

reason to venture on it: and I would fain know, what 'tis he could do upon such grounds, as were capable of no doubt, no objection.

Past existence is known by memory

§11. As when our senses are actually employed about any object, we do know that it does exist; so by our memory we may be assured, that heretofore things, that affected our senses, have existed. And thus we have knowledge of the past existence of several things, whereof our senses having informed us, our memories still retain the ideas; and of this we are past all doubt, so long as we remember well. But this knowledge also reaches no further than our senses have formerly assured us. Thus seeing water at this instant, 'tis an unquestionable truth to me, that water, doth exist: and remembering that I saw it yesterday, it will also be always true; and as long as my memory retains it, always an undoubted proposition to me, that water did exist 10th. July, 1688. as it will also be equally true, that a certain number of very fine colours did exist, which, at the same time, I saw upon a bubble of that water: but being now quite out of the sight both of the water and bubbles too, it is no more certainly known to me, that the water doth now exist, than that the bubbles or colours therein do so; it being no more necessary that water should exist today, because it existed yesterday, than that the colours or bubbles exist today, because they existed yesterday, though it be exceedingly much more probable, because water hath been observed to continue long in existence, but bubbles, and the colours on them quickly cease to be.

The existence of spirits not knowable

§12. What ideas we have of spirits, and how we come by them, I have already shown. But though we have those ideas in our minds, and know we have them there, the having the ideas of spirits does not make us know, that any such things do exist without us, or that there are any finite spirits, or any other spiritual beings, but the eternal GOD. We have ground from revelation, and several other reasons, to believe with assurance, that there are such creatures: but our senses not being able to discover them, we want the means of knowing their particular existences. For we can no more know, that there are finite spirits really existing, by the idea we have of such beings in our minds, than by the ideas anyone has of fairies, or centaurs, he can come to know, that things answering those ideas, do really exist.

And therefore concerning the existence of finite spirits, as well as several other things, we must content ourselves with the evidence of faith; but universal certain propositions concerning this matter are beyond our reach. For however true it may be, v.g. that all the intelligent spirits that GOD ever created, do still exist; yet it can never make a part of our certain knowledge. These and the like propositions, we may assent to, as highly probable, but are not, I fear, in this state, capable of knowing. We are not then to put others upon demonstrating, nor ourselves upon search of universal certainty in all those matters, wherein we are not capable of any

other knowledge, but what our senses give us in this or that particular. Particular propositions concerning existence are knowable

§13. By which it appears, that there are two sorts of propositions. 1. There is one sort of propositions concerning the existence of anything answerable to such an idea: as having the idea of an elephant, phoenix, motion, or an angel, in my mind, the first and natural inquiry is, whether such a thing does anywhere exist? And this knowledge is only of particulars. No existence of anything without us, but only of GOD, can certainly be known further than our senses inform us. 2. There is another sort of propositions, wherein is expressed the agreement or disagreement of our abstract ideas, and their dependence one on another. Such propositions may be universal and certain. So having the idea of GOD and myself, of fear and obedience, I cannot but be sure that GOD is to be feared and obeyed by me: and this proposition will be certain, concerning man in general, if I have made an abstract idea of such a species, whereof I am one particular. But yet this proposition, how certain soever, that men ought to fear and obey GOD, proves not to me the existence of men in the world, but will be true of all such creatures, whenever they do exist: which certainty of such general propositions, depends on the agreement or disagreement is to be discovered in those abstract ideas.

And general propositions concerning abstract ideas

§14. In the former case, our knowledge is the consequence of the existence of things producing ideas in our minds by our senses: in the latter, knowledge is the consequence of the ideas (be they what they will) that are in our minds producing there general certain propositions. Many of these are called *aeternae veritates*, and all of them indeed are so; not from being written all or any of them in the minds of all men, or that they were any of them propositions in anyone's mind, till he, having got the abstract ideas, joined or separated them by affirmation or negation. But wheresoever we can suppose such a creature as man is, endowed with such faculties, and thereby furnished with such ideas, as we have, we must conclude, he must needs, when he applies his thoughts to the consideration of his ideas, know the truth of certain propositions, that will arise from the agreement or disagreement, which he will perceive in his own ideas. Such propositions are therefore called eternal truths, not because they are eternal propositions actually formed, and antecedent to the understanding, that at any time makes them; not because they are imprinted on the mind from any patterns, that are anywhere of them out of the mind, and existed before: but because being once made, about abstract ideas, so as to be true, they will, whenever they can be supposed to be made again at any time past or to come, by a mind having those ideas, always actually be true. For names being supposed to stand perpetually for the same ideas; and the same ideas having immutably the same habitudes one to another, propositions, concerning any abstract ideas, that are once true, must needs be eternal verities.