An Essay Concerning Human Understanding

by John Locke

BOOK I – INNATE NOTIONS

Chapter i: Introduction

1. Since it is the understanding that sets man above all other animals and enables him to use and dominate them, it is certainly worth our while to enquire into it. The understanding is like the eye in this respect: it makes us see and perceive all other things but doesn’t look in on itself. To stand back from it and treat it as an object of study requires skill and hard work. Still, whatever difficulties there may be in doing this, whatever it is that keeps us so much in the dark to ourselves, it will be

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worthwhile to let as much light as possible in upon our minds, and to
learn as much as we can about our own understandings. As well as
being enjoyable, this will help us to think well about other topics.

2. My purpose, therefore, is to enquire into the origin, certainty, and
extent of human knowledge, and also into the grounds and degrees of
belief, opinion, and assent. I shan’t involve myself with the biological
aspects of the mind. For example, I shan’t wrestle with the question of
what alterations of our bodies lead to our having sensation through our
sense-organs, or to our having any ideas in our understandings.
Challenging and entertaining as these questions may be, I shall by-pass
them because they are not relevant to my project. All we need for my
purposes is to consider the human ability to think. My time will be well
spent if by this plain, factual method I can explain how our
understandings come to have those notions of things that we have, and
can establish ways of measuring how certainly we can know things, and
of evaluating the grounds we have for our opinions. Although our
opinions are various, different, and often wholly contradictory, we
express them with great assurance and confidence. Someone observing
human opinions from the outside - seeing how they conflict with one
another, and yet how fondly they are embraced and how stubbornly
they are maintained - might have reason to suspect that either there isn’t
any such thing as truth or that mankind isn’t equipped to come to know
it.

3. So it will be worth our while to find where the line falls between
opinion and knowledge, and to learn more about the ‘opinion’ side of the
line. What I want to know is this: When we are concerned with
something about which we have no certain knowledge, what rules or
standards should guide how confident we allow ourselves to be that our
opinions are right? Here is the method I shall follow in trying to answer
that question. First, I shall enquire into the origin of those ideas or
notions - call them what you will - that a man observes and is conscious of
having in his mind. How does the understanding come to be equipped
with them? Secondly, I shall try to show what knowledge the
understanding has by means of those ideas - how much of it there is,
how secure it is, and how self-evident it is. I shall also enquire a little
into the nature and grounds of faith or opinion - that is, acceptance of
something as true when we don’t know for certain that it is true.

4. I hope that this enquiry into the nature of the understanding will
enable me to discover what its powers are - how far they reach, what
things they are adequate to deal with, and where they fail us. If I
succeed, that may have the effect of persuading the busy mind of man to be more cautious in meddling with things that are beyond its powers to understand; to stop when it is at the extreme end of its tether; and to be peacefully reconciled to ignorance of things that turn out to be beyond the reach of our capacities. Perhaps then we shall stop pretending that we know everything, and shall not be so bold in raising questions and getting into confusing disputes with others about things to which our understandings are not suited - things of which we can’t form any clear or distinct perceptions in our minds, or, as happens all too often, things of which we have no notions at all. If we can find out what the scope of the understanding is, how far it is able to achieve certitude, and in what cases it can only judge and guess, that may teach us to accept our limitations and to rest content with knowing only what our human condition enables us to know.

[...]

BOOK II – IDEAS

Chapter i: Ideas in general and their origin

1. Everyone is conscious to himself that he thinks; and when thinking is going on the mind is engaged with ideas that it contains. So it is past doubt that men have in their minds various ideas, such as are those expressed by the words ‘whiteness’, ‘hardness’, ‘sweetness’, ‘thinking’, motion’, ‘man’, ‘elephant’, ‘army’, ‘drunkenness’, and others. Our first question, then, is How does he acquire these ideas? [...]

2. Let us then suppose the mind to have no ideas in it, to be like white paper with nothing written on it. How then does it come to be written on? From where does it get that vast store which the busy and boundless imagination of man has painted on it – all the materials of reason and knowledge? To this I answer, in one word, from experience. Our understandings derive all the materials of thinking from observations that we make of external objects that can be perceived through the senses, and of the internal operations of our minds, which we perceive by looking in at ourselves. These two are the fountains of knowledge, from which arise all the ideas we have or can naturally have.
3. First, our senses when applied to particular perceptible objects convey into the mind many distinct perceptions of things, according to the different ways in which the objects affect them. That is how we come by those ideas we have of yellow, white, heat, cold, soft, hard, bitter, sweet, and all those that we call sensible qualities. When I say the senses convey these ideas into the mind, I don’t mean that strictly and literally, because I don’t mean to say that an idea actually travels across from the perceived object to the person’s mind. Rather, I mean that through the senses external objects convey into the mind something that produces there those perceptions [= ‘ideas’]. This great source of most of the ideas we have I call SENSATION.

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

5. When we have taken a full survey of the ideas we get from these sources, and of their various modes, combinations, and relations, we shall find they are our whole stock of ideas; and that we have nothing in our minds that did not come in one of these two ways. [Locke then challenges the reader to ‘search into his understanding’ and see whether he has any ideas other than those of sensation and reflection.]

6. If you look carefully at the state of a new-born child, you will find little reason to think him stored with plenty of ideas that are to be the
matter of his future knowledge. He gets ideas gradually: and though the ideas of obvious and familiar qualities imprint themselves before the memory begins to keep a record of when or how, ideas of unusual qualities are different. […] But I think it will be readily admitted that if a child were kept in a place where he never saw any other but black and white till he was a man, he would have no ideas of scarlet or green - any more than a person has an idea of the taste of oysters or of pineapples if he has never actually tasted either.

[...]

Chapter ii: Simple Ideas

1. To get a better grasp of what our knowledge is, how it comes about, and how far it reaches, we must carefully attend to one fact about our ideas, namely that some of them are simple, and some complex. The qualities that affect our senses are intimately united and blended in the things themselves, but it is obvious that the ideas they produce in the mind enter (via the senses) simple and unmixed. […]

2. These simple ideas, which are the materials of all our knowledge, are suggested and supplied to the mind only by sensation and reflection. Once the understanding has been stocked with these simple ideas, it is able to repeat, compare, and unite them, even to an almost infinite variety, and so can make new complex ideas as it will. But no-one, however quick and clever, can invent one new simple idea that was not taken in by one of those two ways. Nor can any force of the understanding destroy those that are there. Man’s power over this little world of his own understanding is much like his power over the great world of visible things, where he can only compound and divide the materials that he finds available to him, and can do nothing towards the making the least particle of new matter, or destroying one atom of what already exists. . . .

[...]

Chapter viii: Some further considerations concerning our simple ideas

[...]
2. Thus the ideas of heat and cold, light and darkness, white and black, motion and rest, are equally clear and positive ideas in the mind; though perhaps some of the causes producing them are mere privations [= `absences', `negativenesses'] in the things from which our senses derive those ideas. Looking into those causes is an enquiry that belongs not to the idea as it is in the understanding but to the nature of the things existing outside us. These are two very different things, and we should be careful to distinguish them. It is one thing to perceive and know the idea of white or black, and quite another to examine what kind surface texture is needed to make an object appear white or black. [In section 3 Locke develops this point a little further. In section 4 he offers a suggestion about why a negative cause sometimes `produces a positive idea'.]

[...]

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

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

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

10. Secondly, there are qualities that are really nothing in the objects themselves, but powers to produce various sensations in us by their primary qualities, i.e. by the size, shape, texture, and motion of their imperceptible parts. Examples of these are colours, sounds, tastes, and so on. I call these secondary qualities. […]

11. The next question is: How do bodies produce ideas in us? Obviously they do it by impact, which is the only way in which we can conceive bodies to operate.

12. External objects are not united [= ‘directly connected’] to our mind when they produce ideas in it, and yet we do somehow perceive qualities in the objects. Clearly there has to be some motion that goes from the object to our sense-organ, and from there is continued by our nerves or our animal spirits to the brains or the seat of sensation, there to produce in our mind the particular ideas we have of them. [Locke follows Descartes in thinking that human physiology involves ‘animal spirits’. These constitute the body’s hydraulic system (Bernard Williams’s phrase) - an extremely finely divided fluid that transmits pressures through tiny cracks and tunnels.] […]

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

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

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

16. Flame is called ‘hot’ and ‘light’; snow ‘white’ and ‘cold’; and manna ‘white’ and ‘sweet’ - all from the ideas they produce in us. Those qualities are commonly thought to be the same in those bodies as those ideas are in us, the one perfectly resembling the other; and most people would think it weird to deny this. But think about this: a fire at one distance produces in us the sensation of warmth, and when we come closer it produces in us the very different sensation of pain; what reason can you give for saying that the idea of warmth that was produced in you by the fire is actually in the fire, without also saying that the idea of pain that the same fire produced in you in the same way is not in the fire? Why are whiteness and coldness in snow, and pain not, when it produces each idea in us, and can do so only through the size, shape, number, and motion of its solid parts?

17. The particular size, number, shape, and motion of the parts of fire or snow are really in them, whether or not anyone’s senses perceive them. So they may be called real qualities, because they really exist in those bodies; but light, heat, whiteness or coldness are no more really in them than sickness or pain is in manna. Take away the sensation of them - let the eyes not see light or colours, or the ears hear sounds; let the palate not taste, or the nose smell - and all colours, tastes, odours, and sounds vanish and cease, and are reduced to their causes, i.e. size, shape, and motion of parts.

[...]

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

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

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

[...]
Chapter xi: Our Knowledge of the Existence of Other Things

1. We know of our own existence by intuition, and our certain knowledge that a God exists comes through reason, i.e. by demonstration, as I have shown.

We can know of the existence of other things only by sensation. No idea you have in your mind has any necessary connection with any real existence; and your existence has no necessary connection with the existence of anything except God. Therefore the only way you can know that anything else exists is through its actually operating on you, making itself perceived by you. Merely having the idea of a thing in your mind no more proves its existence than the picture of a man is evidence of his existence in the world, or than the visions of a dream make a true history.

2. The fact that we get ideas from outside ourselves is what informs us of the existence of other things; it tells us that at that time something external to us exists and causes those ideas in us, though we may not know - or even give any thought to - how it does that. The certainty of our senses and of the ideas we receive through them is not lessened by our not knowing how the ideas are produced. For example, while I write these words something produces in my mind - through the effects of the paper on my eyes - an idea of that kind that I call white, whenever I have it and whatever object causes it; and from this I know that on this occasion some object outside me has the quality whose appearance before my eyes always causes that kind of idea. The best assurance I can have, the best my faculties are capable of, is the testimony of my eyes; they are the proper and sole judges of this thing. I have reason to rely on their testimony as being so certain that I can no more doubt that while I write this I see white and black and something really exists that causes that sensation in me, than I can doubt that I write or that I move my hand. This is a certainty as great as human nature is capable of concerning the existence of anything except oneself and God.

3. The information that our senses give us concerning the existence of things outside us, although it is not quite as certain as our intuitive knowledge, or as what we know through deductive reasoning using our own clear abstract ideas, is still secure enough to deserve to be called 'knowledge'. If we convince ourselves that our faculties inform us truthfully about the existence of the objects that affect them, this can’t be regarded as an unjustified confidence. Nobody, I think, can genuinely
be so sceptical as to be uncertain of the existence of the things that he sees and feels; and if anyone can doubt as much as that, he will never have any controversy with me, for he can never be sure I say anything that he disagrees with because he can’t even be sure that I exist. As for myself, I think God has given me assurance enough of the existence of things outside me: I know which ways of relating to them will bring me pleasure and which will bring me pain, and that is a matter of great concern to me here on earth. We certainly can’t have better evidence than we do that our faculties don’t deceive us about the existence of material beings, for we can’t do anything except through our faculties - indeed, we can’t even talk of knowledge except with the help of those faculties that enable us to understand what knowledge is.

Furthermore, besides the assurance we have from our senses themselves that they don’t err in what they tell us about the existence of things outside us when we are affected by them, we have other, confirming reasons for the same conclusion.

4. First, it is obvious that those perceptions that we think are produced by outer things are produced in us by exterior causes affecting our senses, because people who lack the organs of one of the senses can never have the ideas belonging to that sense produced in their minds. This is too obvious to be doubted. So we can be sure that those perceptions reach our minds through the organs of that sense from something external to those organs. Clearly, the organs themselves don’t produce such ideas, for if they did then the eyes of a man in the dark would produce colours and his nose would smell roses in the winter, whereas in fact nobody experiences the taste of a pineapple till he goes to India where it is, and tastes it.

5. Secondly, sometimes I find that I can’t avoid having those ideas produced in my mind. When my eyes are shut, I can choose to recall to my mind the ideas of light or the sun that former sensations have lodged in my memory, or choose to set such ideas aside and instead take into my imaginative view the idea of the smell of a rose or the taste of sugar. But if at noon I turn my eyes towards the sun, I can’t avoid the ideas that the light or sun then produces in me. So there is a clear difference between the ideas stored in my memory (over which, if they were only in my memory, I would have constantly the same power to call them up or set them aside as I choose) and those that force themselves on me and that I can’t avoid having. The latter ideas - the ones I have whether I want them or not - must be produced in my mind by some exterior cause, and the brisk acting of some external objects
whose power I can’t resist. Besides, everybody can see the difference in himself between having a memory of how the sun looks and actually looking at it. His perceptions of these two are so unalike that few of his ideas are easier to tell apart. This gives him certain knowledge that they are not both memory or products purely of his mind, and that actual seeing has an external cause.

6. Thirdly, many ideas that are painful to have in the first instance can be remembered afterwards without the least distress. Thus the pain of heat or cold doesn’t upset us when the idea of it is revived in our minds in memory, although it was very troublesome when we originally felt it, and troubles us again when it is actually repeated through the disorder that the external object causes in our bodies when it acts on them. Again, we remember the pains of hunger, thirst, or headache without any pain at all: if these were nothing but ideas floating in our minds, without the real existence of things affecting us from outside ourselves, we would either never suffer from them or else constantly do so as often as we thought of them. The same holds for the pleasure that accompanies many of our actual sensations.

7. Fourthly, our senses often confirm each other’s reports concerning the existence of perceptible things outside us. If you see a fire, you may doubt whether it is anything but a mere fancy; but then you can feel it too, and be convinced by putting your hand into it. Your hand certainly could never be given such agonizing pain by a mere idea or imagined fancy, unless the pain is a fancy too! When your burn has healed, you cannot make the pain of it return merely by raising the idea of it in your memory or imagination. […]

8. After all this, will anyone 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 lifetime is nothing but a long dream with no reality in it? If so, I ask such a person - who questions the existence of all things or our knowledge of anything - to consider that if everything is a dream then he is only dreaming that he is raising this question, so that it doesn’t matter much that he should be answered by someone who is awake. However, he may if he likes dream that I answer him as follows. The testimony of our senses that there are things existing in nature gives us as much assurance of this as we are capable of, and as much as we need. Our faculties are not suited to the entire range of what is the case, or to a perfect, clear, comprehensive knowledge of things, free from all doubts and worries. But they are suited to the preservation of us whose faculties they are; they are serviceable enough for everyday purposes,
because they let us know for sure which things can help and which can hurt us. Someone who sees a candle burning and has experienced the force of its flame by putting his finger in it will have little doubt that this is something existing outside him which harms and greatly hurts him; and that is assurance enough, for no man requires greater certainty to govern his actions by than what is as certain as his actions themselves. If I can be as sure that if I move thus and so I will feel pain as I can be that I shall move thus and so. We can’t need more certainty about what our actions will lead to than we have about what our actions will be. If our dreamer wonders whether the glowing heat of a glass furnace is merely a wandering imagination in a drowsy man’s fancy, he can test this by putting his hand into it. If he does, he will be wakened into a certainty - a greater than he could wish! - that it is something more than mere imagination. So we have all the assurance that we can want - enough to enable us to steer our course in relation to pleasure and pain, i.e. happiness and misery; and these are all we need be concerned about in theory or in practice. Such an assurance of the existence of things outside us is sufficient to direct us in the attaining the good and avoiding the evil that is caused by them; and this is what really matters to us in our acquaintance with them.

9. In brief, when our senses bring an idea into our understandings, we can’t help being confident that at that time something really exists outside us - something that affects our senses, and through them alerts us to its existence by producing the idea that we perceive. We cannot distrust the testimony of our senses so far as to doubt that such collections of simple ideas as we have observed to be united together really do exist together. But this knowledge doesn’t extend beyond the present testimony of our senses regarding particular objects that are affecting them now. If one minute ago I saw a collection of simple ideas of the sort usually called ‘a man’ existing together, and if I am now alone, I can’t be certain that the same man exists now, since his existence a minute ago doesn’t necessitate his existing now. In any of a thousand ways he could have ceased to exist since I had the testimony of my senses for his existence. And if I can’t be certain that the man I last saw earlier today still exists, still less can I be certain of the present existence of one I haven’t seen since yesterday or since last year - let alone one that I never saw. I conclude that although it is highly probable that millions of men now exist, yet while I am alone in my study writing this I am not certain enough of this to say that I know it to be so. It is so likely to be the case that I have no doubt of it, and I can reasonably act upon my confidence that there are men in the world (and indeed some whom I know, and with whom I have various relations); but still this is only
probability, not knowledge.

10. This shows how foolish and pointless it is for a man who does not know much, but who has been given the faculty of reason to judge how probable things are and to be swayed accordingly, to expect demonstration and certainty in things that are not capable of it, and to refuse assent to very reasonable propositions and act contrary to very plain and clear truths, simply because they cannot be made so evident as to surmount every the least (I won’t say reason, but) pretence of doubting. If anyone brought that attitude to the ordinary affairs of life, accepting nothing that had not been plainly demonstrated, would be sure of nothing in this world except an early death. The wholesomeness of his meat or drink would not give him reason to risk it. What indeed could he do on grounds that were capable of no doubt, no objection?

[…]