

John Locke, from *Essay Concerning Human Understanding*
Abridged by Russell Marcus

Book I: Neither Principles nor Ideas Are Innate

Chapter I: No Innate Speculative Principles

1. The way shown how we come by any knowledge, sufficient to prove it not innate. It is an established opinion amongst some men, that there are in the understanding certain innate principles; some primary notions, *koinai ennoiai*, 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 any one 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...

15. The steps by which the mind attains several truths. 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 perceive distinct ideas. But whether it be then or no, 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 sugarplums are not the same thing...

Book II: Of Ideas

Chapter I: Of Ideas in General, and Their Original

2. All ideas come from sensation or reflection. 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.

3. The objects of sensation one source of ideas. 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...

Book II: Of Ideas

Chapter VIII: Some Further Considerations Concerning Our Simple Ideas of Sensation

7. Ideas in the mind, qualities in bodies. 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. Our ideas and the qualities of bodies. 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 power 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.

9. Primary qualities of bodies. Qualities thus considered in bodies are, First, such as are utterly inseparable from the body, in what state soever it be; and 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. Secondary qualities of bodies. Secondly, such qualities which in truth are nothing in the objects themselves but power 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, &c. These I call secondary qualities. 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.

11. How bodies produce ideas in us. 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 to operate in.

12. By motions, external, and in our organism. If then external objects be not united to our minds when they produce ideas therein; and yet we perceive these original qualities in such of them as singly fall under our senses, it is 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, it is 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.

13. How secondary qualities produce their ideas. 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 others extremely smaller than those; perhaps as much smaller than the particles of air and water, as the particles of air and 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. They depend on the primary qualities. 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.

15. Ideas of primary qualities are resemblances; of secondary, not. From whence I think it 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. Examples. 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 this 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 are 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 ideas of the primary alone really exist. The particular bulk, number, figure, and motion of the parts of fire or snow are really in them,- whether any one'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. The secondary exist in things only as modes of the primary. 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 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 its 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 every one 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 effect 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 or tasted, would need some reason to explain.

19. Examples. Let us consider the red and white colours in porphyry. Hinder light 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 any one 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 it is 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...

21. Explains how water felt as cold by one hand may be warm to the other. 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 sensations 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.