

Locke, *Essay* IV.xiv-xv; xvi.1,3-14
Probability

According to Locke, the scope of our knowledge is quite limited. We can know of the existence of ourselves and we can identify and list our ideas by intuition. We can demonstrate the existence of God and the truth of certain general principles of mathematics, geometry, ethics, and politics. But we cannot know much about the particular things that exist in the world around us. We can know that there are such things, that they exist when they affect us, and that they have those macroscopic primary qualities and those powers to affect us and other things that we see them exhibit. But we cannot know what makes them affect us and other things as they do, what powers and qualities they may or may not have in addition to the ones we actually observe them to have, whether they will continue to affect us in the same way, or even whether they will continue to exist when we are no longer perceiving them. Neither can we have any knowledge of the real constitution of the insensibly small parts of things, of our own minds and how it is that they are able to receive ideas or move our bodies, or of the existence of other minds in addition to ourselves and God.

But though our knowledge may be limited in all of these ways, there are still a number of things that we can accept as probably or likely true. Essay IV.xiv-xix, on judgment, probability, reason, faith, enthusiasm, and the degrees of assent, investigate the basis for belief in probabilities. Judged from the standpoint of Locke's initial project in the *Essay*, "to enquire into the Original, Certainty, and Extent of humane Knowledge; together, with the Grounds and Degrees of Belief, Opinion, and Assent:" (I.i.2), these chapters constitute the culmination of the argument, and are its most important part. It is in them that Locke drew the conclusions about the foundation of all faith in reason, the importance of exercising toleration for the beliefs of others, and the moral inadmissibility of blind faith or enthusiasm that he himself saw to be the most important contributions of his work.

QUESTIONS ON THE READING

1. Why did God not make us capable of knowing more things?
2. Why is judgment exercised?
3. Can a proposition be both certain and probable at one and the same time?
4. How can Locke say, without contradicting himself, that the testimony of others is one of the two grounds of probability (IV.xv.4), and that the opinions of others are no true grounds of probability (IV.xv.6)?
5. Under which, if any, of the following circumstances could a person be said to have violated Locke's ethics of belief?
 - a. a person reaches a decision without having fully examined the issue
 - b. a person sticks to a decision made earlier merely because they remember having decided that way earlier, and without bothering to remember the evidence for that decision
 - c. a person sticks to a decision made earlier without bothering to review new evidence that has since come in
 - d. a person sticks to a decision made earlier even after having been confronted with evidence that undermines that decision



6. Is intolerance ever justified?
7. Explain the difference between assurance and confidence.
8. What are the main causes of diminution in the probability of testimony to a matter of fact?
9. What are the two “foundations of credibility?”
10. What is a “traditional” testament?
11. What are some of the main reasons leading people to misrepresent someone else’s testimony?
12. Is it possible to have any sort of assurance or confidence about the existence of things that fall outside of anyone’s capacity to observe, such as the insensibly small, the insensibly remote, or the hidden mechanisms in causes responsible for giving them the power to bring about their effects? If so, how so, if not, why not?
13. Why can we have assurance in the occurrence of well-attested miracles, despite the fact that they are contrary to common experience and the regular course of nature?
14. Besides being contrary to the ordinary course of observation, what further feature must an event have before it can be considered a miracle?
15. What is faith?
16. What conditions must be satisfied before we can have faith in a revelation?

NOTES ON THE READING

Locke supposed that our beliefs can concern two main classes of things: matters of fact concerning sensible things, like the locations, actions, and manifest qualities of particular animals, minerals, and vegetables, and matters of fact concerning insensible things like the real constitutions or real essences of particular objects; the existence, nature, and operations of spirits other than ourselves and God; and the presence and behaviour of things in parts of the world that are inaccessible to human beings. By stressing that what is at issue in all of these cases is “matters of fact,” Locke emphasized that our beliefs concern particular propositions about the existence, powers, qualities, and actions of concrete, individual objects. The extent of our knowledge of general truths like “gold is malleable” is another matter altogether and one that Locke considered over *Essay IV.v-viii*.

Belief in Matters of Fact concerning sensible things not actually perceived by us. Locke maintained that our beliefs about the existence, qualities, powers, and operations of objects that we ourselves have not perceived are based on analogy with our past experience. Often, they are also based on the testimony of others. For example, if I have in the past experienced that lamp posts tend to stay rooted in the same spot for long periods of time, then, having just experienced a lamp post and turned away, I can believe, on the basis of analogy with my past experience of the continued presence of lamp posts over time, that the lamp post I just saw still exists. This belief might be further supported by the testimony of a witness, someone standing beside me but still looking at the lamp post, who tells me that it is indeed still there. We cannot claim to *know* such matters of fact because nature is not always uniform in her operations (other things have occasionally catastrophically disappeared, so it is not impossible that this would happen now), and because witnesses sometimes lie and even honest witnesses can be deceived. But because people do by and large give true and accurate reports of their past experiences we cannot discount their reports as irrelevant, and because nature is by and large uniform in her operations we have some reason to assume that things that have been a certain way in certain circumstances in the past will continue to be that way in those circumstances in the present.



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This is the essence of probability: probability is something that establishes a tentative and breakable connection between two ideas in virtue of some third thing, rather than a necessary and unbreakable connection based on an intuition of relations between ideas or direct sensation. The probabilistic connection can vary in strength. If someone tells me that they saw an albino crow on the way to work, I may treat the report with suspicion, because such things bear little analogy to anything I have myself experienced or heard others report seeing in the past. But there is a way in which the report of the albino crow is like the report of the lamp post considered earlier. Both reports give me some reason to relate two ideas with one another: the ideas of whiteness and a crow or the ideas of a lamp post and a particular place on the street. But the relation is not certain in either case, as it would be were I to sense that the ideas are now occurring together in my experience. In both cases the connection is brought about by a third thing, the report of the witness. Though we judge that the mundane report of the lamp post helps to establish a stronger connection than does the marvelous report of the white crow, it still does not establish the sort of patently evident relation between the ideas that I would experience were I to sense the lamp post for myself.

When developing his account of probability, Locke was particularly concerned with testimony, as a significant portion of what we believe is ultimately accepted on the basis of the reports of others. People can testify to what they have intuited, demonstrated, or sensed. They can also testify to what they believe or, as Locke put it, to their opinions. However, Locke stipulated that only testimony to what people have demonstrated or sensed should be accepted as grounds for belief. Testimony to intuitions is not a ground for belief since everyone should be able to have the same intuitions as long as they have the same simple ideas to start with. Anyone who started off testifying to an intuition would use words that would evoke ideas in the minds of the audience and the audience ought to be able to intuit the relation of ideas in question for themselves. Testimony to what others believe is likewise not a good ground for belief. According to Locke, we should not accept a belief simply because others accept it. If others accept a belief, it must be for some reason, and they should tell us what that reason is. If they have no reason, then the belief does not deserve to be held, and if their reason is simply that someone else believes it, then we would want to know what reason that other person has. If we are not to get caught in an infinite regress, all beliefs must ultimately terminate in something that was demonstrated or sensed by someone. Otherwise, they are mere opinions that do not deserve credence.

However, while a witness's testimony to holding an opinion does not count as a ground for us to accept that opinion, hearsay does constitute grounds for belief. Hearsay is testimony about testimony, that is, testimony received at second, third, or higher hand. It is not the same as testimony to an opinion because when someone testifies to having an opinion they state what they believe whereas when someone gives hearsay evidence they testify to what they heard or read someone else say. Supposing that this other person testifies to what they sensed or demonstrated, neither the original witness nor the witness who reports on the original witness's testimony is offering an opinion. The original witness is reporting on some matter of fact he or she sensed or demonstrated, and the second witness is reporting on the fact that they sensed the first witness's testimony.

Locke nonetheless thought that hearsay ought to be distinguished from first-hand testimony, because it might not be as certain as first-hand testimony, and because assessments of its reliability are more difficult and require attention to factors that do not arise for first-hand testimony.

As Locke saw it, the reliability of testimony is determined by two main factors, the analogy of the report with our own experience and the experience of others, and the quality of the witness or



witnesses giving the testimony. Testimony reports the occurrence of matters of fact that can be more or less unusual, judging from what has commonly been observed by oneself to be the case in the past, as well as from reports of what others have witnessed in similar circumstances. At one end of the scale is testimony reporting the occurrence of a matter that is of a sort that all people in all times have always observed to be that way on other occasions. Thus, if someone reports that a stone fell, that a fire burned, or that immersion in a particular lake was suffocating, that report affirms a relations of ideas (between stones and falling, fire and burning, and water and suffocating) that all people in all times have observed to hold true on all other relevant occasions in the past. Other reports may concern relations between ideas that are of a type that are usually observed to go together in the past. For instance, if someone reports that a friend chose a higher-yielding investment in preference to an otherwise equal, but lower-yielding one, or that there was a frost in England in January on a particular day of a particular year, then that report asserts the occurrence of an event of a type that has usually been observed by others in the past, but that is known to have exceptions: that people act in their own interest, and that it is cold enough to freeze water in England in January. Yet other reports may testify to a matter of fact that is of a sort that is as likely to have happened that way as not, for instance, that the bird flew East, that the baby cried, or that the glass broke upon hitting the ground. Then there are reports that testify to matters of fact that are of a sort that only rarely happens, like an avalanche or a frost in June. At the other extreme of the scale are reports testifying to matters of fact that are contrary to all past experience and the common course of nature, for example, that a man walked on water or that a bush burned and was not consumed.

The quality of the witnesses to a report may vary in any of a number of ways. To mention just a few, the witnesses may be many or few, in agreement or conflicting, expert or ignorant, self-interested or disinterested, honest or dishonest, critical or credulous.

Locke claimed that it was beyond his power to write a probabilistic logic that would specify exactly what degree of conviction should be ascribed to testimony in each of the different circumstances under which it could vary. However, he took different general sorts of circumstances to warrant one or the other of four broad classes of belief: assurance, confidence, lesser confidence, and faith.

Faith, as Locke understood it, is belief in the testimony of a witness who cannot be deceived and who would not lie. (In this case, there need be only one witness, since if the witness cannot possibly be deceived and would not lie, any further testimony by other witnesses would be redundant.) We might think that such testimony ought to entitle us to claim knowledge rather than merely belief. After all, the witness could not be wrong. However, there are two problems standing in the way of claiming knowledge upon the basis of such testimony. One problem is that we sometimes misinterpret what witnesses mean to say. Since misinterpretation in fact happens from time to time, we can never claim to *know* (i.e., be certain) that we have not misinterpreted the witness's claims. The other problem is posed by the fact that there is really only one witness who absolutely could not be deceived and who would certainly never lie: God. This is not a problem because Locke had any doubts about God's existence. He thought that God not only exists, but is intelligent, capable of communication with us, and willing to communicate things to us that it is important to know and that we could not discover by other means. The problem is how to know whether any particular witness is in fact God. Locke observed that when we study the various forms of life, we find a continual gradation in intelligence, powers, and capacities from ourselves through the great apes and other mammals down to birds, fish, and plants. We also find a continual



gradation in the plant kingdom linking the more advanced with the more primitive forms of vegetable life. By analogy, therefore, we are warranted in judging that there might be a similar gradation of forms of intelligent life between us and God. There might, then, be beings who are vastly more powerful than ourselves, though not God, who could appear to us and deliver messages to us, while pretending to be God. Could we know that a particular being is in fact God and that we have interpreted his message correctly, then we could claim knowledge of the fact reported by that message. But we can never be more than assured that a witness is God and confident that we have interpreted his message correctly, and that is why we cannot be said to have more than faith in any message that we presume comes from God.

Note that I have just made reference to “assurance” (that a witness is God) and “confidence” (that a message has been correctly understood). “Assurance” and “confidence” are technical terms that Locke employed to designate degrees of belief.

Assurance is belief that is so strong that it is virtually indistinguishable from the certainty of a demonstration or the evidence of our own experience. It is warranted when all the circumstances affecting testimony are uniformly positive, that is, when the witnesses are impeccable, when the matter of fact they report is of a type that you yourself have always observed to be that way on all other relevant occasions in the past, and when a study of history and survey of others reveals that they, too, have always found that type of object to be or to behave that way on all other relevant occasions.

If the witnesses remain impeccable, but the matter of fact they report is of a type that is only observed to normally be the case on other occasions (that is, to be usually the case, or to be the case as often as not), or if a study of history and survey of others reveals that on other occasions they have observed that type of object to be or to behave differently, then I cannot be assured of the truth of the report, but I can have confidence in its truth. The only thing diminishing the strength of my belief in this case is the evidence that it is not absolutely unprecedented for that sort of matter to turn out differently. But though I myself or others may have experienced that sort of matter to turn out differently on *some other* occasions, it *normally* happens as reported, and because the witness are impeccable, I have only the weakest of grounds for entertaining any doubt that it did indeed happen on *this* occasion. Thus, I can have a kind of belief that falls just short of assurance, and that Locke called confidence.

However, if the event the witnesses report is unusual, extraordinary, or marvelous, or the witnesses are not impeccable, my confidence in the report must be diminished. There are no hard and fast rules for how much, other than that as the report becomes more extraordinary, or the witnesses less credible, our confidence must diminish to hesitation, uncertainty, doubt, disbelief, and even contrary belief in the falsity of the testimony. Locke did stress, however, that one’s own personal experience must play a significant role in these calculations. To illustrate, he told the story of a King of Siam who disbelieved the Dutch ambassador’s report that the cold in Amsterdam in the winter made the water on the lakes so hard that an elephant could walk on it. Locke took the King’s disbelief to be legitimate. For, even though the report was delivered by a credible, disinterested witness and concerned a type of event that all those who had ever been in any position to make an observation were agreed did normally happen on all such occasions, the King had no personal experience of the occurrence of even one such event, and could not justly be expected to believe something that, judging from his own experience of the sinking of bodies placed on the water, was a violation of the common course of nature.



When testimony is delivered by hearsay, confidence must also be diminished. Testimony can be corrupted in transmission. This can happen deliberately, if the witness transmitting the testimony finds that it contains something that is contrary to their interest or that they disapprove of, or it can happen inadvertently through accidental omission or misinterpretation. Locke did not think that these possibilities justify rejecting hearsay. Were we to do that, all history beyond living memory would have to be rejected. But in assessing what degree of confidence to place in hearsay we must be concerned not merely with the quality of the original witnesses and the unusualness of the event, but also the integrity of the chain of transmission of testimony from one report to the next.

With this understanding of assurance and confidence in place, let us return to the matter of faith. Locke maintained that we can have faith when we are assured that a particular witness is God, and confident that we have interpreted his message correctly. (We can never be more than confident that we have interpreted a message correctly because misinterpretation is something that does happen from time to time, and assurance can only be had of matters that have never been observed to turn out any differently.) But what could entitle us to be assured that it is God who is speaking to us? Locke observed that the prophets of old had an answer to this question. Worried that they might be being deceived by some demon, they asked the person who had appeared to them to give some sign to prove who he was. Such a sign would have to consist in the performance of some deed that only God could do.

Obviously, this poses a problem. For, according to Locke's core theory, the more unusual an event is, the less we ought to be inclined to believe anyone who testifies that it has occurred. But an event that is the sort of thing that usually occurs could hardly be taken to constitute a sign of God's special presence. Such a sign would have to be something extraordinary, that violates all our expectations of what can occur naturally, and that we would think only God could do. In a word, it would have to be a miracle. But then how could anyone, other than the eye witnesses to the miracle, have assurance that it actually occurred? (We might wonder whether even the eye witnesses should trust their senses, but let us grant this since we still have a problem even if the eye witnesses can trust their senses.)

Locke tweaked his theory to evade this problem. He maintained that there is one case where we should not apply the rule that confidence is to be diminished as the event reported becomes more unusual. This is the case where the unusual event can be supposed to achieve some purpose formulated by a superior being. Since we have reason to suppose that superior beings exist, indeed, since we *know* by demonstration that God exists, we can expect that whenever a good reason arises to do so, God could perform a miracle. God could, for instance, perform a miracle to prove to us that he is really the one who is talking to us, or to prove to us that some prophet is speaking with his authority. Indeed, as far as Locke was concerned this is more than just a possibility. According to Locke, we should expect that it would happen, since God, being benevolent, is disposed to inform us of any facts that it might be important for us to know and that we could not discover in any other way. (One such fact might be that there is an afterlife where the good will be rewarded and the wicked punished.) We should expect, therefore, that God would have wanted to appear to us, or to some among us, and report these facts to us. And we should expect that God would have wanted to give us some sign to prove that He really is God, so that we would have faith in the message he wanted to deliver. Indeed, in these cases, the more extraordinary the sign, the more we ought to be inclined to believe it, because it is most likely that God would have chosen to give clear



signs of his presence rather than ones that could be dismissed as accidentally occurring, though unusual natural operations. So we should expect that miracles will have occurred.

Given that miracles can be expected to have occurred, it is most likely that they occurred fairly early in history. After all, a good God would not wait to deliver an important message. Accordingly, people in later ages could know of miracles only by hearsay, indeed, by a tradition of hearsay. However, as long as it could be shown that the chances of the original reports being corrupted were minimal (perhaps because the earliest records were already written, and because history testifies to the integrity of the scholars responsible for copying and preserving the manuscripts), belief in the occurrence of miracles would still be possible. We would merely need to be assured that the original witnesses were impeccable and that the event reported, despite being extraordinary, served some Divine purpose.

Belief in matters of fact concerning insensible things. Barring revelation, there are no witnesses who can tell us about the existence of insensible things like the constitution of the insensibly small parts of things or the objects existing on other planets. But there is still one ground of belief remaining: analogy of the matter of fact to those things we can experience. Thus, if observable objects like rakes, plows, axes, and knives are made of hard, sharp parts that tear into other materials, we may suppose by analogy that substances like fire that are similarly able to tear things apart may be composed of small, hard, sharp particles that similarly pierce and tear away at the parts of other things. Or, if the species of animal, mineral, and vegetable that we see in bodies around us are continuous, so that between diverse species there is always an intermediate species, then it would be legitimate to suppose that spiritual beings are similarly multiform and numerous in their species.

Toleration and the Ethics of Belief. It is natural to suppose that where we cannot obtain certainty through intuition, demonstration, or personal experience, we ought to proportion our belief to the evidence and only assent to a matter of fact after a due consideration of its analogy to our own experience and after weighing the quality of any testimony in its favour. However, Locke did not accept this “ethic of belief.” His study of the circumstances bearing on belief revealed those circumstances to be so numerous, and the job of assessing precisely how much to proportion our conviction to what combinations of these numerous positive and negative factors so intractable, that he thought it would exceed the resources (not to mention the patience and the intelligence) of most people to do a full and adequate survey of all the evidence before reaching a decision on a matter of fact they have not themselves observed. To make matters worse, the demands of day-to-day existence often force even those with the leisure, the patience, and the intelligence to carry on large research projects to abandon those projects and make snap decisions. Accordingly, Locke declared that no one can be expected to make a full survey of the evidence before reaching a decision on a matter of fact. The most that people can be expected to do is study important issues once and to the best of their ability and as time permits.

Moreover, Locke supposed that having once examined an issue to the best of their ability in the time available, people should not be expected to review that issue at greater length should more time become available, to consider new evidence that has come in since they reached their decision, or even to remember what reasons led them to their decision in the first place. They should be allowed to simply persist in their belief, as long as they can remember what it was. Indeed, even if



compelling evidence contrary to their belief were drawn to their attention, they should not be expected to revise their previous opinion.

Locke considered that expecting people to be able to justify their views on command, and to constantly be able to recite the reasons that had originally led them to a decision, would be to impose too much of a demand on their memory and attention. It should be enough, he said, that a person have once examined an issue to the best of their ability and reached a decision, and that they now remember what that decision was. They should not be expected to recall all the evidence. And just as they should not be expected to be constantly engaged in a process of recalling all the evidence for their decisions, so they should not be expected to be constantly engaged in a process of reviewing their opinions in light of all the new evidence that comes in. Keeping up with all the evidence for or against just one belief could itself turn into a full-time job, and no one can be expected to occupy themselves in that way.

Indeed, even if a person has strong evidence against their belief presented to them they should not be expected to change their minds. Nothing short of a demonstration should be able to compel a person to abandon a belief. Any evidence that falls short of a demonstration, even if it were to produce assurance or confidence, would not be certain and could, therefore, be itself contradicted by later evidence. Were people to change their opinions as the evidence comes in, they would be constantly abandoning their opinions and no one could be relied upon. Moreover, the new evidence against a belief may be counterbalanced by earlier evidence that was considered when reaching the decision in the past but that is now no longer remembered. If people cannot be expected keep recalling all the reasons for their decisions, they cannot be compelled to answer every new objection to their beliefs that may come along.

There is only one exception to this rule: if someone is able to come up with a demonstration of some matter of fact, then others can be expected to believe it, supposing the demonstration is sound. For, a demonstration establishes the point beyond any possibility of a doubt. However, matters of fact concern the coexistence of simple ideas in substances, and demonstrations are seldom possible where relations of coexistence are concerned.

For all of these reasons, Locke maintained that people are entitled to persist in beliefs that they have once formed. While this may seem like an endorsement of irrationalism and blind obstinacy, it is actually something quite different: an argument for a broad toleration of the opinions of others and for a concomitant freedom of thought and belief. For, just as I can have no right to blame someone else for persisting in their beliefs, however inadequate I may take the reasons for them to be, so they have no right to blame me for persisting in mine, and certainly no right to compel me to change my beliefs in favour of their own. (It is an ironic but nonetheless true result that freedom of thought and opinion can have no other just foundation than ignorance and scepticism. Where the truth is known, no one has a right to think otherwise. It is only when it is beyond our grasp that we can claim any right to an opinion.)

This is the conclusion that Locke wrote the *Essay concerning human understanding* to establish. It is a conclusion that expresses a link between empiricism, scepticism about the extent of our powers of knowledge, toleration, and freedom of thought and that marks the boundary between the rationalism and dogmatism of the seventeenth century and the enlightenment values that were to characterize the century to follow.

ESSAY QUESTIONS AND RESEARCH PROJECTS



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1. In *Essay* II.xxxiii, entitled “Of the Association of Ideas,” Locke identified “custom,” i.e., the past experience of a regularity in how ideas are conjoined, as a “degree of madness” and a “disorder of the mind” which exerts a baleful influence on our intellectual habits. But in *Essay* IV.xvi he treated “analogy to our own or other’s experience” as an important determinant of the degree of confidence or assurance we ought to place in a belief. Study these chapters and determine whether there is a contradiction in Locke’s account. (Thanks to Ted Morris for suggesting this problem.)

