1
Bacon
Preface to *The great instauration;*
The new organon, Aphorisms 1-46;
selections from *The advancement of learning*
(*Works* IV: 13-17, 20-27, 47-57, and 294-98)

1. He took it to be unproductive, just as boys are infertile, but, like boys, to be capable of talking as if it were able to produce something. What it has failed to produce in particular is an augmentation of knowledge and some means of improving the material conditions of life. (Works IV, p.14)
2. They make advances and improve over time. (P.14)
3. He offered two replies. He observed that knowledge of past discoveries might have been lost, or that the discoveries might have been made by private individuals who never made their knowledge public. Further supporting this second possibility, he claimed what tends to pass the test of time is not what is most true and useful, but what gives rise to controversy and disputation or what is merely entertaining. (P.15)
4. By citing the myth of the Garden of Eden and claiming it is rather the pursuit of moral knowledge that was originally forbidden by God, not the identification and classification of the phenomena of nature (symbolized by Adam's naming of the beasts). (P.20)
5. Not pleasure of contemplation, profit, fame, or power (over other human beings), but "the benefit and use of life." This involves a kind of power, but it is power over nature rather than civil power. (P.21)
6. To be able to command nature in action. (P.24)
7. Induction from particular experience, reaching general concepts and laws only at the end of a long process of investigation. This is to be contrasted with the method of making a hasty induction to general concepts and principles and then deducing effects from them by syllogistic logic. (P.24)
8. Rather than proceed by "simple enumeration," it will proceed by analyzing experience through a process of exclusion and rejection (i.e., controlled experiment). (P.25)
9. Using sense just to judge the outcome of properly designed experiments. (P.26)
10. That we can only make judgments on the basis of a legitimate induction.(P.27)

2
Boyle
"On the Excellency and Grounds of the Corpuscular or Mechanical Philosophy"
(Matthews, 109-118)

1. Boyle was unwilling to suppose that the universe evolved simply through the atoms having chanced to come together in the right combinations. (As he pointed out at Matthews,

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111, this is what Epicurus and Lucretius thought.) He thought that God's intervention is necessary to bring this about.

2. Mechanical operations among the parts of matter (bottom of p.111).
3. Matter and motion (p.113).
4. One part of matter can impart motion to another ("drive it on in its entire bulk"--p.113), i.e. it can push or pull it, or it can split it to pieces. In both cases the effect is a result of collision, which emerges as the only possible cause of change in the created world. Cf. 117: "One part of matter can act upon another only by virtue of local motion, or the effects and consequence thereof." Note, however, that Boyle appears to have allowed that motion might be generated not just by matter (where one part of already moving matter collides with another), but also directly by spirits (cf. 113, 118).
5. Shape, size, motion, orientation, manner of aggregation of component parts (Boyle actually lists motion, figure, size, posture, rest, order or texture — p.113).
6. In one sense there are infinitely many different kinds of material, because the shapes, sizes, arrangements, and motions of the particles that compose things may be varied in infinitely many ways. But in another sense, there is just one kind of material because the particles themselves are all cut from the same kind of stuff, so that only the sizes and shapes of pieces makes the pieces different from one another, not anything else like weight or mass or hardness, etc. (pp. 113-114)
7. It allows for sufficiently rich explanatory resources to deal with almost any phenomenon. His idea seems to be that the more shapes and motions you have to appeal to, and the more different kinds of compounds of shaped and moving parts, the greater the number of results you can account for as following as a consequence. This is fine up to a point, but wildly optimistic if you consider that Boyle proposed to explain not just the workings of machines but all physical, chemical, and biological phenomena in this way: electricity and magnetism, fire, emission and absorption of light, brittleness, fluidity, colour, the phenomena of life.
8. All our experience goes to show us that, as bodies are divided down into smaller and smaller parts, mechanical principles still continue to be valid for describing their behaviour — they still operate under the force of pushes and pulls. (pp. 114-15)
9. Discussion question on p.116. Broadly, because the mechanical philosophy deals with common notions of everyday life that everyone can understand and experiences regularly, and also that everyone can know how to tinker with. Everyone understands what it is for one thing to hit one another and the other to move or break up or send the first flying back as a result. Everyone understands nailing and knitting. Everyone understands how levers work or ball bearings behave or how axles and spindles and gears and cogs and chains may work in a machine. All that is involved here is parts of matter hitting other parts of matter and causing them to move. And because these sorts of causes are so easy to describe and understand, they are also open to us to tinker with, modify and control. But the principles of the Aristotelian philosophy: form and matter, final cause, act and potency, are very obscure and difficult to understand. And explanations involving these

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terms leave no real room for us to modify or control the process of nature. They leave the ultimate causes of change mysterious or occult and so beyond our control.

10. The one has to move and collide with the other (p.117). But note again that he seems to allow that spirits (as opposed to parts of matter) might have an ability to also initiate motion (cf. 113, 118).
11. Boyle was happy to allow that spirits may exist and act in nature, but he insisted that if they do they must do so by making bits of matter move and collide. So the principles of mechanical philosophy, far from being undermined by the postulate that spirits act in nature, are themselves necessary to explain the manner in which the activity of those spirits brings about changes in nature. (The best way to explain Boyle's willingness to allow for the activity of spirits is to note that he explicitly allowed that motion may be produced, not just as a result of collision of one body against another, but directly by the action of spirits — cf. pp. 113, 118. So spirits can somehow act on bits of matter to initiate or change the direction of motion. It is just that all the subsequent effects of this action are described by mechanical principles.)

3
Galileo, "Il Saggiatore" (The Assayer)
(Matthews, 53-61)

1. P. 56. Something that actually exists as such in the bodies that affect us with the sensation of heat. When we feel a hot body we get a peculiar warm or burning sensation in our skin. That is what we commonly call "heat." And we suppose that this very thing — this warm or burning feeling isn't just in our skin but actually inheres in the hot body as a quality.
2. P. 56. Extension, shape, size, position, motion or rest, contact or separation with other bodies, and number.
3. Sense experience. P.56
4. All bodies lack colour in the dark. (Applying the claim on pp.57 and 59 that these qualities need not be supposed to exist in the absence of any perceiver. Darkness removes the conditions under which a perceiver can sense visually and so destroys colour, but the body remains.)
5. He took it to indicate that the tickling sensation must be entirely in us and not in the object. P.57
6. The configuration of the bodies that touch us. P.58
7. Variations in the arrangement of differently shaped particles. P.58
8. The size, shape, and motion of the bodies that impact on the sense organs. P.59
9. The quick motion and piercing shape of certain particles in the hot material. P60

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10. It is wrong. Fires are not hot. They are only more or less quickly moving. The only thing that actually exists in fire is motion of its shaped parts. The heat is a sensation that exists in the person who perceives the fire rather than in the fire itself. (P.60)
11. P. 60. Galileo thought that fire is simply a collection of fast moving, very small, sharp particles. The blast of air from the bellows increases the speed of their motion, which makes them penetrate our body more deeply, do more damage to it as a result, and so give us a feeling of greater heat. So whereas we today think that the bellows makes the fire hotter because it supplies more oxygen for the chemical reaction that generates the heat, Galileo thought that it makes the fire hotter because it increases the speed of motion of the fire particles.
12. P. 61. He thought that the process of division or dissolution can only go up to a point, at which point "truly indivisible atoms" are arrived at.

4
Hobbes, *Human nature* I-III
(Gaskin, 21-30)

1. A conception produced by the presently occuring action of an object (HN II.2). There is a fuller definition to be found in De Corp. XXV.2. Hobbes there specifies that sense is the outward rebound of a motion into the sense organ produced by an object. This is a more strictly physiological account of sense, echoed by what he says later in HN II.8.
2. The way the motion transmitted by the object into the brain appears to us (HN II.4.3). It is not clear where it is to be found since it is not obvious where appearances exist. What exists in the brain is a motion and not an appearance and Hobbes was not friendly to the notion that our minds are distinct from our brains.
3. The facts that they are not located in the places where they appear to be located, as is evident in the case of reflections and echos, that we may experience them when there is obviously no external object outside of us causing them, as is evident in the case of double vision, and that we may experience them merely as a result of motion and impact on our sense organs, when once again there is obviously nothing outside of us that could have them, as is evident in the case of seeing a flash of light when one's head is hit (HN II.5-7).
4. The fact that the motion in the brain, which is what these sensations really are, is traveling in an outward direction after having rebounded from going inwards (HN II.8).
5. Because sensation is just a motion of parts within our bodies, and once a thing is set in motion it will continue in that motion unless something special happens to bring it to rest. Since, even when something does happen to bring what is in motion to rest, it will only be able to do so gradually, and will not be able to stop the motion all at once, it follows that once we do get a sensation it will only fade away gradually (HN III.1).
6. They are obscured by the more violent motions coming in from the sense organs (HN III.1).
7. The fact that the sense organs have temporarily ceased to function, so that old motions, left over from past experiences, can come to our attention (HN III.2).

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8. Representations are clear when all their parts are distinctly conceivable, obscure when, even though the representation is present as a whole, its parts cannot be distinctly represented or told apart from one another (HN III.7).
9. When we remember we have an image that has parts that we were previously able to distinctly conceive, but that are now confused, so that we find that the image is able to give less information than we had expected to get from it (HN III.7).

5
Hobbes, *Human nature* IV-VI
(Gaskin, 31-43)

1. There are two parts to the answer to this question: the influence of past experience and appetite. The influence of past experience explains why one conception follows another in the order in which they do. Appetite explains why the first conception in the sequence arises in the mind. On the first point, Hobbes writes that "the cause of the coherence or consequence of one conception to another, is their first coherence, or consequence at the time when they were produced by sense" (HN IV.2). That is, the reason why one conception follows upon the other in the order they do is that they were originally experienced in that order. This is particularly the case with causes and effects. If one thing causes another, then in sensory experience the conception of the cause will regularly be followed by a conception of the effect and so they will tend afterwards to be imagined in that order. Thus, Hobbes writes, "as to the sense the conception of cause and effect succeed one another; so may they after sense in the imagination" (HN IV.2). Because conceptions tend to follow one another from cause to effect or effect to cause, when someone's appetites lead them to have a certain desire or aversion, or to conceive a certain end or purpose, they will tend to think first of that end, then the means to that end, then the means to that means, and so on. Thus, we end up tracing out chains of cause and effect in our deliberations. As Hobbes puts it, "The cause [of our deliberating in this way] is the appetite of them, who, having a conception of the end, have next unto it a conception of the next means to that end [and from thence to the thought of … the next means … etc.]." (HN IV.2) See also DE CORP. XXV.8.
2. Having seen one sort of event regularly happen after another sort in the past. This experience establishes a mental connection between the two types of event so that whenever the antecedent event is seen, we form a conception of the consequent event, even though it has not occurred yet, and whenever the consequent event is seen, we form a conception of the antecedent event and think it must have preceded, even though we did not witness its occurrence. (HN IV.7).
3. In general, a sign is any conception that leads us to think of some conception other than itself. At HN IV.9 Hobbes notes that when we have experienced one conception to be regularly followed by another, we are led to have the antecedent conception upon witnessing the consequent and vice versa. Thus, antecedent and consequent events are at least one kind of sign. The marks discussed in HN V.1, which are also said to lead us to conceive of something else, are another kind of sign. Note that Hobbes stresses at HN

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IV.10 that the connection between antecedent and consequent events is merely conjectural and can often fail. Indeed, people can often be quite mistaken when they deliberate about future and past events on this basis, and they differ from one another in prudence as a result. But if we think of causes as things that are in fact what brings about an effect, then the antecedent event cannot properly be considered to be a cause or the consequent event an effect. They are simply signs that lead the mind to form conceptions of one another.

4. No. He thinks that we cannot simply will to have a certain thought. Before we can get a thought, we need to have an experience of something that has been connected with that thought in the past and so calls it to mind (HN V.1).
5. Something that can be sensed (perhaps just by hearing), that has been regularly associated with a certain conception in the past, and that is set up in a certain place so that when we go back to that place and run into the mark we will, in virtue of its association, be reminded of the conception (HN V.1).
6. The person who uses a universal name does not expect their hearers to conceive of any particular one of the many individuals referred to by that name. The person who uses a particular name, in contrast, expects us to conceive of a certain individual (HN V.6).
7. To go back to sense experience and precisely identify those experiences we want each of our terms to pick out (HN V.14)
8. To have obtained conceptions of things from experience; to have unambiguously named these conceptions; to have constructed true propositions from these names (propositions where the predicate names a class of objects that include the thing named by the subject), and to have drawn correct or rational inferences from these propositions (VI.4)

6
Hobbes, Human Nature VII.1-2, XII, XI
(Gaskin, 43-44, 70-73, 64-70)

1. A motion that hinders the motion of the heart (HN VII.1).
2. An appetite is an impulse to move towards a pleasure, a fear an impulse to move away from a pain (HN VII.2).
3. Deliberation is the process where an appetite gives rise to a conception of a means to satisfy the appetite that gives rise to fear, that fear gives rise to a conception of a means to avoid the fear that produces another appetite, and so on until some final appetite or fear is reached. (The process may also start with a fear.) The final appetite or fear is what we will (HN XII.1).
4. For as long as we have the physical capacity or the command of the resources to enable us to either do or not do a thing, and for as long as we continue to be engaged in the process of deliberating about whether to do it or not. (HN XII.1)
5. Deliberation takes away liberty. This is because it is the process of reaching a decision about whether to do or not do a thing, and once that decision has been reached, we are no longer at liberty to do otherwise, since we have made up our minds. So long as

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deliberation is in process, we are at liberty, but once we have made up our minds there is no longer any question of our being able to do otherwise (if there were, then it would mean that we had not made up our minds yet). (HN XII.1)

6. When it follows from the will. Voluntary actions are those that are caused by our will whereas involuntary ones are those that result from causes that make our bodies move without producing desires or aversions or acting on our wills (HN XII.3).
7. It is voluntary because your action was determined by your own last fear (HN XII.3).
8. They are voluntary because they still proceed from your own last appetite after deliberation. That the deliberation is hasty or inadequate changes nothing (HN XII.4).
9. No. Hobbes considers talk of a voluntary or free will to be not just false, but incoherent. A voluntary action is one that proceeds from the will, that is, from the last appetite or fear to emerge after deliberation. To speak of the will being voluntary is therefore equivalent to saying that some last appetite or fear arises in us as a consequence of some last appetite or fear. But this is nonsense. If the former appetite or fear is "last" then the other cannot be. The other is just an earlier stage in the deliberative process that leads up to the truly last stage, and the entire chain of appetite and fear is a product of experience and of opinions concerning what unpleasant or pleasant consequences will follow from what causes (HN XII.5).
10. Nothing, other than that God exists (HN XI.2).
11. By means of a cosmological argument that infers that there must be a first cause that gave rise to everything that now exists. God just is the first cause. (HN XI.2)
12. A spirit is properly understood to be an extended, shaped body that is colourless and permeable and so not capable of affecting the senses, like air. It is improperly understood to be an unextended substance, which Hobbes takes to be a contradiction in terms. (HN XI.4)
13. It is a sign that a revelation, message or inspiration was given to someone by some spirit, that is, some superhuman agent. However, it does not prove that the spirit was godly (HN XI.7).
14. First, the message needs to be supported by miracles. Second, it needs to be in conformity with the Christian scripture (HN XI.7).
15. The trust we place in the testimony of others in the Church, who we must know to be honest and discerning, right back to the first individuals who saw the miracles and received the Christian message (HN XI.9).
16. He vests authority in the Church for all but the most important questions. This follows if our faith in the authenticity of the Bible needs to be derived from the trust we repose in others in the first place (HN XI.10).

Descartes, *Discourse on method* I-II and V
(AT VI 1-22 and 55-60)

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1. The fact that we do not all employ the same method, or, as he put it, that "we lead our thoughts along different paths." (AT VI, 2)
2. Mathematics for improving the material conditions of life ("facilitating all the arts and lessening men's labour"); philosophy for indulging in pretentious disputation about matters you do not really understand ("speaking plausibly about all things and making oneself admired by the less learned"). (6)
3. He was delighted with mathematics because its claims are certain and evident (7) and disgusted with philosophy because it makes no claims that are not contentious and so open to doubt. (8)
4. To a broadly based, cosmopolitan experience and to a study of what he might discover in his own, inner nature. (9)
5. He rejected worldly experience because the things it taught him are not universally accepted in all parts of the world and so are as contentious and dubious as the claims of philosophy. (10)
6. He appealed to a sceptical impasse arising from "the differences that have always existed among the opinions of the most learned," leaving him uncertain what to believe unless he proceeded on his own initiative. Because all established knowledge had been called into question by one group or other and so was contentious and dubious, and because no common practice was universally accepted, someone wishing to determine the truth would have no alternative but to seek for a better method, immune to sceptical attack. (16)
7. Logic, geometry, and algebra. (17)
8. As in geometry, all are supposed to follow from one another by chains of simple and easy reasoning, proceeding from evidently true first principles and following the rules of proper demonstration. (19)
9. This is not obvious from the text. But anyone who wants to follow the example of geometricians and mathematicians and proceed to gain knowledge by deducing it from axioms had better be very sure that their axioms are sound. If you start off with false axioms, everything you deduce from them will be called into doubt. It is especially important that you be sure of the truth of your initial assumptions if you are going to doubt and reject the evidence of your senses. People who trust their senses can afford to make mistakes early on, because if they do, the progress of their sensory experiences will soon reveal to them that their deductions are at variance with the way the world is. But if you doubt what the senses tell you, there is no way you can discover your error from subsequent experience.
10. No. (56)
11. By reference to the way they use language to not merely give programmed replies, but respond appropriately to the sense of whatever might be said to them (56), and by reference to their abilities to solve new problems in new ways (57). The performance of both tasks requires, in Descartes's view, reasoning abilities that cannot be accounted for

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as the effects of mechanism since a machine can only do what it was designed to do and not respond appropriately to novel circumstances.

8
Descartes, *Meditations* I

1. We must reject everything we previously thought we knew and start again entirely afresh at building up a new system of knowledge. Descartes thought this is necessary because he discovered that so many of the things he was taught in his youth were false, and so many other beliefs were based on on these false things, that almost the whole edifice of his knowledge was so rotten and unstable, that there was no other way to fix it than by tearing it all down and starting again. (AT VII 17)
2. It is not necessary to prove that it is false. Neither is it necessary to find some reason for doubting it or thinking it is not certain. All that needs to be done is show that it is founded on something that is open to doubt. (18)
3. Sense experience (18).
4. They are unreliable only when telling us of small and distant things, but seem reliable when telling us of ourselves and objects in our immediate surroundings, though, as it turns out, Descartes thinks that there is a reason (the fact that we might be dreaming) that ought to lead us to doubt their veracity even then. (18-19)
5. No. (19)
6. That none of the objects our senses appear to tell us about, including our own bodies, might actually exist. (19)
7. Descartes suggested that the dreaming argument can only lead us to doubt whether there are compound things around us like the objects our senses reveal to us. But he thought that the "simple and universal things" that our sensory experiences are composed of, like colours and shapes, ought to correspond to something real, otherwise it would be difficult to explain how we could come to think of these things. He also thought that there are certain truths we discover upon comparing these simple and universal things with one another, notably the truths of arithmetic concerning numbers of these things, and the truths of geometry concerning shapes, that would have to be true even in a dream. (19-20)
8. What he called "corporeal nature in general," i.e., whatever generally and necessarily goes into everything that is called a body. More specifically, this means being extended in space. More specifically yet, it includes shape, size, number, place, and duration. (20)
9. In two respects: first, the former deal with composite things (i.e., things made up of a number of simple natures), whereas the latter deal only with simple things (e.g. mathematics just deals with number, and different branches of geometry deal with shape, measurement, analysis situs, etc.). Second, the former make claims about what actually exists in the world, whereas the latter describe their objects without supposing that they actually exist. (20)

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10. For two reasons. Firstly, because he saw no reason to rule out the possibility that someone might be deceiving him or forcing him to deceive himself every time that he performs the proofs of these truths. Secondly, because people sometimes make mistakes in calculation, even though they know better. If they make these mistakes sometimes, why could it not be at least possible that everyone might make them all the time? (21)
11. Because if God does not exist, then the cause of my existing would have to be something less perfect than God (God being by definition the most perfect being possible). But if I had a less than perfect cause, then it is even more likely that there would be some fault in my make-up that would lead me to always perform calculations incorrectly. (21)
12. It might make us slip into treating them as being certain and using them as first principles (22).

9
Descartes, *Meditations* II

1. He noted that for all he knew he might himself be the cause of these ideas. This seems to be what happens in dreams, for example. We create all the thoughts ourselves, even though we are not aware that we are doing so. (AT VII 24)
2. He noted that he had no reason to believe that he needed to have senses or a body in order to exist, (ii) he noted that if he had persuaded himself of something, then he must exist in order to have been persuaded, (iii) he noted that if he was deceived, then he had to exist in order to be deceived. (24-25)
3. He found the terminology obscure and meaningless, and thought that clarifying it would be so long and difficult a task that it would not be worth the effort. (25-26)
4. Because an evil genius could be deceiving him about the existence of all of these things, and because he had no grounds to be certain that any spatially extended bodies exist. (AT VIII 26-27 and 28)
5. The act of thinking. (27)
6. He worried that ceasing to think might entail ceasing to exist at p.27. This is an indication of just how essential he viewed thinking to be to his nature.
7. Doubting, understanding, affirming, denying, willing, imagining and sensing. (28-29)
8. The things that are being sensed or imagined may not exist, but the act of sensing or imagining must exist in us insofar as these ideas are being had by us. For, even an evil genius could not deceive us into thinking we are sensing or imagining without actually making us sense or imagine. (28)
9. That it is extended somehow in space, capable of taking on a variety of shapes and sizes, and capable of taking on a variety of sensible qualities. (30-31)
10. Through perception on the part of the mind alone. That is, through a kind of understanding.
11. In the same way, through an inspection on the part of the mind alone, though this inspection is more obscure and confused. Descartes stressed at p.31 that it only seems that

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perception is a sensing or touching or imagining. In fact, it is always a kind of judging or purely mental apprehension, not involving corporeal sense organs.

10
Descartes, *Meditations* IIIa
(AT VII 34-42)

1. My certainty of my own existence is founded on nothing other than a clear and distinct perception. If such a perception could deceive me, I would not be able to trust it when it tells me that I exist. Since, however, my own existence is beyond doubt, I must be able to trust it, and so must be able to trust whatever I perceive at least as clearly and distinctly as I perceive my own existence. (AT VII 35)
2. All that is clearly and distinctly perceived is that my ideas of these things exist in me; I do not clearly and distinctly perceive the existence of external objects resembling these ideas. This is because the dreaming argument leaves me with a sense of doubt about them. (35)
3. They are clearly and distinctly perceived. If they are open to doubt, it is only because of a very tenuous and metaphysical ground for doubting them: the thought that God might be powerful enough to deceive us even about things we clearly and distinctly perceive. This thought enables us to doubt them when we are not engaged in perceiving them (e.g., when we later remember having perceived them but do not review them in all their evidence). But while we are engaged in perceiving them, we cannot consider the doubt to be at all well founded. (36)
4. An idea is a thought that is like an image of a thing. More precisely, it is a thought that is about something else or that refers to an object. (37)
5. Supposing that our ideas depict objects that actually exist outside of us, and depict them as they exist. (37)
6. One that seems to proceed from something outside of me. (37-38)
7. By natural impulse he means a kind of instinct to believe a certain thing, even though we do not clearly and distinctly perceive its truth. By seeing something in the light of nature, he means clear and distinct perception. Natural impulse is not a trustworthy source of truth, but it is hard to accept that we might ever be mistaken about what we perceive very clearly and distinctly. (38-39)
8. Because I only know it on the basis of a natural impulse and those sorts of impulses have misled me in the past, and because there could be something else in me aside from my will that brings them about. This is obviously what happens in the case of dreaming, for instance. Moreover, we know for a fact that certain ideas that seem to us to proceed from objects do not do so. For example, there is no bright object about a foot in diameter that hangs just above the clouds and illuminates the earth. Even supposing there is a sun, it is represented by a very different idea.(39)

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9. Formal reality is the collection of real, positive qualities that go to constitute the form of a thing. Objective reality is the collection of real, positive qualities that go to constitute the form of the object of an idea. (40)
10. Because an effect can only acquire its positive and real qualities (those that make it as great a thing as it is) from its "total" cause (i.e. the totality of the circumstances that work together to produce the effect), and a cause cannot give positive and real qualities to an effect unless it has those qualities to give. *(Note that Descartes did not make these claims positively and in his own voice, but instead tried to prod his readers to accept them by asking rhetorical questions. Asking questions can sometimes be a way of stating what problem needs to be studied next. But at other times, as here, it serves as a belligerent way of making a point — by shifting the onus onto the reader to provide reasons to disagree rather than taking on the onus of supplying an argument to convince the reader. When someone turns to make a point by way of asking questions, it is a fairly clear indication that they lack a good argument for their position. Those who have good arguments give those arguments. They do not need to resort to rhetoric.)* (40)
11. It can't. The idea is like a Xerox copy or print of an original. It can be more confused or obscure than the original, but not more perfect in the sense of containing more than is to be found in the original. (42)

11
Descartes, *Meditations* IIIb

1. Ideas of myself, of physical bodies, and of God. Combining aspects of my ideas of myself with my ideas of corporeal things will permit me to form ideas of animals and other human beings, and combining aspects of my idea of myself with my ideas of God will permit me to form ideas of all other sorts of spirits. (AT VII 43)
2. Arising in us due to some imperfection in our nature in virtue of which we represented the absence of some type of quality (like heat) as if it were itself a real, positive thing. If cold is merely the absence of heat, but it nonetheless feels like something to be cold (and not like nothing at all), then cold would be a materially false idea. (43-44)
3. It is a thing that can exist on its own, independently of anything else (at least for a time). (44)
4. As a substance that is capable of existing on its own, I am greater than extension and its modes, which are mere properties that can only exist within some substance or other. Descartes claimed this is a sufficient reason for considering me to be the eminent cause of these ideas. (An eminent cause is a cause that does not formally contain its effect, but that rather belongs to a higher order of being than its effect.) (45)
5. God's infinity. (45)
6. Because I conceive of myself as imperfect. Descartes maintained that an awareness of imperfection is only possible if you have a sense of something more perfect. So from the fact that we conceive of ourselves as imperfect it follows that we must have a conception of a being more perfect than we are. (45-46)

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7. Because were I powerful and resourceful enough to do that, I should have been powerful and resourceful enough to give myself some better cognitive capacities so that I would not have so many doubts or make so many mistakes. This is because just bringing a substance (such as myself) into existence out of nothing is more difficult than bringing a quality (such as a power of knowledge) into being. To bring a substance into being is to create something that can exist on its own, whereas to bring a quality into being is to create something that can only exist in something else. So anyone who could do the former ought to be capable of doing the latter (48)
8. Because when the present becomes past, what exists at the present gets destroyed (since the past does not any longer exist). So to conserve something in existence means constantly recreating it from one moment to the next. (49)
9. Because a cause is not just required to account for my first coming into existence but of my being sustained in existence from one moment to the next. Whatever that cause is, it must be capable of recreating me (a substance) from one moment to the next. If it was not similarly capable of recreating itself from one moment to the next, it would require some other cause to sustain it. But there cannot be an infinite regress here, especially because we are concerned with what now sustains me. (Descartes did not go into any further detail, but perhaps his thought was that it takes time for a cause to act, so that were there even a short chain of causes, I would pass out of existence during the time it takes for a more remote cause, A, to act to sustain a more proximate cause, B, leaving B no more opportunity to act to sustain me, since I've disappeared. It is interesting that Descartes felt it necessary to add this further appeal to sustaining causes. While many philosophers have considered the claim that there cannot be an infinite regress of past causes for a given effect to be obviously true, others have not been persuaded and the point continues to be debated today.) But a cause capable of bringing itself into existence would be capable of giving itself all other perfections. So it would be God. (50)
10. Because these would not be adequate to produce my idea of God, which represents all distinct perfections as unified. (50)

12
Descartes, *Meditations* IV

1. Descartes's first proposal was that error does not arise from anything God made and put into me, but is rather simply due to the fact that I lack something. So I don't make mistakes because what God put into me malfunctions, but only because God did not put something into me. This is a consequence of the fact that I was not created to be a being that possesses all perfections, but instead as a being that occupies an intermediate point on the scale between possessing all perfection (being God) and possessing no perfection (being nothing). [It might be added by way of further justification that variety in creation is a good thing. Making a variety of things necessitates making things with varying degrees of perfection ranging between God himself and nothing. We should praise God for making the universe as rich in variety as it is rather than complain that we are not among the more perfect or angelic forms of creation.] (AT VII 54)

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2. Because we would expect that God, being a perfect artisan, would not create something that is supposed to perform a certain function, and then not put everything into it that it needs to perform that function to perfection. This is not to say that God could not create imperfect things, but their imperfection would just arise from their not having been created to perform certain functions. So God could create a thing that just grows and reproduces but does not sense or know and this thing would simply lack perfections. But given that he creates something that is supposed to sense or know, we should expect that, being an expert artisan, he would have put everything into that thing that it needs to perform those functions well, and so should not have put anything into it that would lead it to be deceived. (55)
3. What Aristotle called final causes, that is, those having to do with the reason why something happens (its end). Descartes claimed that knowledge of these causes would presuppose knowledge of God's intentions in making things as they are, and that this is more than we are in a position assume to know, given the vast difference between God and us. (55)
4. How well it fits in with the wholes of which it is a part and whether its imperfections might not contribute to a greater perfection in the whole. (55-56)
5. A capacity of knowing and a capacity of judging or affirming, which involves an act of will. (56)
6. All that the intellect does is perceive ideas (56). He says that the ideas are ones that I "can" make a judgment about, suggesting that it is not actually the intellect that judges, but the will. However, as later becomes clear, the intellect can in certain cases compel the will. (59)
7. It is imperfect to the extent that it does not clearly or distinctly perceive all the ideas that there are to be perceived. (56)
8. We cannot fault God for making us with intellects that are not able to clearly or distinctly perceive all ideas because this is merely a limitation on what we are able to achieve with our intellects and not a cause of error or imperfection in what our intellects are able to achieve. Insofar as they simply perceive ideas, they do not judge and do not make mistakes, and insofar as they compel the will to judge, they never compel it wrongly. They just can't make judgments about everything. This is a limitation, not a defect. (56)
9. An ability to adopt an attitude of affirmation or denial or approval or rejection that does not arise from any external constraint, but merely from our own nature. Note that Descartes is not here concerned with the freedom of action, but merely with the freedom of willing. Whether we can act on what we will is another question. (57)
10. The lowest grade of freedom is when we do not see any reason to prefer one choice over another, and merely pick one. In higher grades of freedom, there is something in us that determines us to prefer a certain choice. This thing might either be our understanding or some instinct or insight that God has implanted in us. The freedom we feel in circumstances of indifference is of a lower grade because it proceeds from an inadequacy in our knowledge. (57-58)

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11. An imbalance between the powers of the will and the intellect, which allows for the possibility that the will might determine us to make a judgment in circumstances where we lack understanding. (58)
12. By using our power of will to refrain from judging unless we feel our will determined to do so by a clear and distinct perception on the part of the understanding. (59)
13. Because God may have some inscrutable purpose for allowing this imperfection in my nature. (61)

13
Descartes, *Meditations* V

1. Extension in length, breadth, and depth, together with its shapes, sizes, positions and motions, plus various particular geometrical properties and truths concerning these things. (AT VII 63)
2. Because they compel him to conceive their content in a certain way and he has no power to imagine them differently. (64)
3. He observed that I am able to call up many shapes in my imagination that I am sure I have never seen before, yet these shapes also have geometrical properties that appear to exist independently of my will, and in this sense are more like something I "recollect" than like something I hve myself produced. (64-65)
4. Because by definition God is an all-perfect being, and Descartes insists that existence is a perfection. (65)
5. The idea of existence is not attached at will and arbitrarily but necessarily. Insofar as God is an all-perfect being, it follows that the idea of existence must go along with God, and we have no ability to think otherwise, any more than we have the ability to think of a three-angled figure that does not have three sides. (66-67)
6. He claimed that things that are inseparable in thought must be inseparable in reality as well. This might be a sense in which my thought does impose necessity on things, though the sense is a negative one: what is *inconceivable* even in thought is taken to be impossible in reality. The idea here is that if reality is not constrained to conform to thought, so that though can range beyond what is really possible, then if something is impossible even in thought, it must be all the more impossible in reality. Here, Descartes claimed, the necessity of the thing itself being a certain way imposes itself on what we can think. (66-67)
7. The circumstance where one is no longer actively engaged in having the clear and distinct perception, but is doing other things and merely recalls having had the clear and distinct perception in the past. Under these circumstances, the thought that one has often made mistakes in calculation in the past or that there might be an evil genius can induce doubt. (69-70)
8. Because demonstrations in mathematics depend on clear and distinct perception, which, as long as the existence of God is in question, can only be trusted at the time it is actually being experienced. (Because it is only at that time that the understanding compels the

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will to believe.) At other times, when we are not clearly and distinctly perceiving the result, we can doubt it on the grounds that we have made errors in calculation in the past or might be deceived. However, once the existence of God has been clearly and distinctly perceived, we can say that if the demonstration was in fact clearly and distinctly perceived, then what it tells us is reliable because we cannot be deceived or mistaken about such things. Thus, a proof of God's existence provides mathematical demonstrations with an evidence they did not previously have. (70)

14
Descartes, *Meditations* VIa
(AT VII 71-80)

1. Those that are the objects of pure mathematics. Such objects are considered to only have those properties that mathematics deals with: shape, size, motion, and divisibility into a number of parts. They are not considered as bearing any sensible qualities. (AT VII 71)
2. When we imagine we not only grasp the simple natures that go into making the thing what it is, but "intuit the thing as if it were present," i.e., we feel the idea being offered to us by something outside of ourselves (where we consider ourselves as just our understandings). (72)
3. Essence has to do with what a thing has to have in order to be the sort of thing that it is. And I can quite well imagine myself still being a thinking thing, and even still having all the thoughts I now have (since imagination merely duplicates some of the thoughts I have in my understanding) without the imagination. So it can have nothing to do with my essence. (73)
4. Because these ideas occur independently of their wills, and because they are much more vivid, explicit, and detailed than the ideas formed in imagination. (75)
5. That the sensation of pain is not to be desired, that of pleasure to be welcomed, that particular sensations (such as hunger or thirst) are indicative of a need to perform certain actions (eat or drink), that objects exist in space outside of us and resemble the sensations we receive, that we have bodies to which we are intimately connected so that we can move them and feel pleasure and pain from them. (75-76)
6. One thing is the dreaming argument of Meditations I, but on 77 he mentions another one: the case of the phantom limb. People who have had a limb amputated report still experiencing it as if it were there, so obviously a limb need not be present for a pain in that limb to be felt by the mind.
7. He thought that these capacities are not really part of me, but are at best attached to me. I could exist as a thinking being even if I were to lack them, but they would need to be instantiated in some human being or other in order to exist. (78)
8. Because there would be no impossibility in God bringing the one about without or apart from the other. And that means that they must really be different things. God could not bring about a mountain without a valley (since a valley just is what is at the base of a mountain), at least not after the creation of the eternal truths, because these are in effect one and the same thing considered under different descriptions. But if God can bring

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about the one without the other, then it is not merely the descriptions that are different, but the things. (78)

9. Because these ideas must have some cause that contains extension either formally or eminently and God gave me a strong inclination to believe that this cause contains extension formally and not eminently. (79-80)

15
Descartes, *Meditations* VIb
(AT VII 80-90)

1. Because what our senses reveal to us is in very many cases obscure and confused. Corporeal things need only contain what we clearly and distinctly perceive. As it turns out, this means that they must be extended somehow. But exactly how they are extended, what particular sizes and shapes and motions they have, or whether they contain anything in addition to extension are not things we clearly or distinctly perceive. (AT VII 80)
2. By nature we are taught that we have bodies and that our sensations of hunger, thirst, and pain indicate when these bodies are in a less than optimal state. We are also taught that other bodies exist, that our sensations of different sensible qualities arise from differences in these bodies, and that sensations of pleasure and pain indicate whether these bodies are harmful or beneficial to our bodies. Reckless judgment teaches us that there is empty space and that bodies have exactly those sensible qualities and those modes of extension that they are peceived to have. (80-82)
3. To signify those things that are harmful or beneficial to the continued union of mind and body. (83)
4. No. Some are determined by the will and the mind. (84)
5. A particular part of the brain, the common sense, must be affected. (86)
6. No. It simply undergoes a motion, transmitted to it by the nerves. It is the mind that experiences a sensation of pain as a result of certain motions occurring in the brain. (87)
7. Because it is preferable that they tell us what is good or bad for us in the vast majority of cases than that they not tell us anything at all. And there is no other way they could work. They have to communicate what is happening at the surface of the sense organ to the brain. Since the brain is widely separated from the sense organs, information has to travel along a chain of nerves from the sense organs to the brain. That creates the possibility of deception when other causes than the usual ones move the nerves or the brain in the same way. (88-89)
8. We need to check the reports that a given sense organ is giving against those supplied by other organs, bring in our memories of what our senses have told us at earlier times about the thing we are examining, and check that all this information is consistent with what our understanding, through clear and distinct perception, tells us could be possible. (89)
9. Descartes claimed that dreams involve a discontinuity in the sequence of events. (89)

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Cartesian Science
(*Discourse* V [AT VI: 40-45]; *Principles of Philosophy* II.4-23 [online], 36-40, 64; IV.198-99, 203-4 [Matthews 99-108]; *Discourse* VI [AT VI: 63-65])

1. No. Everything happens in accord with laws that are strictly followed. (AT VI 41)
2. Aristotelian forms and sensible qualities really existing in things (42-43), and also weight (44).
3. He has two answers. The first is that he is merely describing a way God could have created the world and does not mean to deny that God actually created it in the more laborious way described in the Bible. The second is that since sustaining the world from moment to moment actually requires that it be recreated at each successive moment (since the mere passage of the present into the past is continually destroying what now exists), it detracts nothing from God's power or his governing role in creation to suppose that he could well have created the world in a different way. (45)
4. The sensation of strain we get in our muscles when we try to push or squeeze something and it does not yield. (*Principles* II 4.)
5. Because God, being a perfect being, is constant in the way he acts. For Descartes this means that having once decided to create something, God will preserve that thing in existence. Why constancy should have to be expressed in this particular way is unclear. One might be constant by letting the quantity of motion continuously decay, or continuously increase, or continuously oscillate. (Matthews, 99-100, *Principles* II.36.)
6. No. We know this by understanding (specifically by a deduction from the constancy of God). Sense experience teaches us that things naturally tend to rest, but this is only because all the bodies on the earth run into things that slow them down before long. (100-101, II.37)
7. Nothing but motion. Certainly not sensible qualities. (105, IV.198)
8. In the mind. In the external world and in the body, brain, and nerves there is nothing but parts in motion. (105, IV.198)
9. If you are struck on the eye in a dark room, you see flashes of light even though there is nothing coloured around you. This shows that colour is experienced as a consequence of motion in the object affecting the organ, not as a consequence of colour in the object affecting the organ. (105, IV.198)
10. By imagining the simplest shapes bodies could have and the effects of collections of these shapes in motion (e.g., that balls slide past one another and so make things fluid; that pointed particles pierce and divide; that hook and eye shaped particles coalesce). Observation of the workings of the machines we ourselves construct assists in doing this. (106-7, IV.203)
11. There is no role for experimentation at the foundations of science, where the first principles governing the motion of matter and its nature are presented. These principles are arrived at simply by clear and distinct perception on the part of the understanding. (AT VI: 63-64) But when it comes to understanding the particular operations of particular bodies, we

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see that there many alternative mechanisms that might possibly produce the same result (just as there are many different ways to build a clock that still tells the same time). The only way to determine which of these many different mechanisms is the actually operative one is to try to devise some sort of experiment capable of distinguishing between them, that is, a test situation that will turn out one way if one mechanism is the responsible one, and a different way if it is not. It is here that experimentation and sensory experience end up having a role to play. (AT VI: 64-65)

17
Newton
(Matthews 137-39, 146-158)

1. Geometry does not tell us how to produce the figures, such as straight lines and circles, that it works with, since it is really just the study of how to measure these figures, but mechanics, being the science of motion and what can be produced by motion (geometrical figures are typically taken to be produced by the motion of points, for instance) does tell us how to produce figures. (M 137)
2. The study of motions and the forces required to produce them. (M 137-38)
3. Attractive and repulsive forces, such as those responsible for the motions associated with the phenomena of gravity, levity, elasticity, and hydraulic pressure. (M 138)
4. The forces responsible for those motions. (M138)
5. Starting from certain very general instances of motion and deriving the "forces," i.e., the laws describing the manner in which these motions occur; then using these laws to account for all the particular instances of motion we see around us. (M138)
6. Attractive and repulsive forces operating between the particles of bodies in virtue of some causes hitherto unknown. (M 138)
7. If it is present in all the bodies our senses ever reveal to us ("is universally present in experiments") and does not come in differing degrees of intensity. (M146)
8. Extension, hardness, impenetrability, mobility, inertial mass, *mutual* gravitation (i.e, tending to move towards one another, not gravity understood as a property of heaviness since that is subject to remission), and possibly divisibility (though he later ruled this out). (M 147)
9. By our senses. (M147)
10. We know they are extended by induction from the bodies we do see, supposing that since these are extended those must be so as well. We know they are hard because some of the bodies we feel are hard, and it is impossible for soft parts to make up a hard body, whereas a soft body can easily have hard parts arranged in some sort of lattice formation. (M147)
11. (i) It cannot give a consistent account of the speed of the parts of the vortices carrying the planets. (ii) It cannot account for the motion of comets. (iii) It cannot account for the regularities in the design of the world, such as the fact that the planets and moons all orbit in the roughly same plane. (M148-49)


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12. By saying that all we can know is that gravity works this way, because experience generally teaches us so, but that we cannot explain its cause and have no business formulating hypotheses on the matter. (M152)
13. By mentioning that they might be due to pressure exerted a special kind of matter that permeates all things (a "subtle, elastic spirit"), but that we have no clear evidence on those matters yet. (M152)
14. No. He rather supposes it is always decaying due to the "stiffness" of bodies in collision. (M153-54).
15. The cause of gravitation and the cause of fermentation (M154). Also the cause of cohesion (M155).
16. Solidity, mass, hardness, impenetrability, motion, size, and shape. (M155)
17. Because were the fundamental particles of which compound bodies like earth or water are composed to be divisible, it is likely that these compound bodies would not continue to have the same character over time, so that earth and water would be different at later times, not being built from the same kinds of parts. But we have no evidence that any kinds of materials are changing their shapes. (M155)
18. By appeal to their evidence and universality. Rather than take them to be hidden qualities of specific things responsible for specific effects, he took them to be generally observable phenomena that occur in accord with general laws, so that an understanding of the laws allows us to predict how things will behave even though we don't understand what causes the phenomena.

18
Locke, *Essay* Epistle and I.i.1-4,6-8; I.ii.1-9,12,14-16; I.iii.1-6,9,22,24-25; I.iv.1-5,8-9,24-25 (Innate Ideas)

1. To determine the scope and limits of our powers of knowledge, or, as Locke put it, what objects our understandings are and are not fitted to deal with (Epistle: Nidditch, 7; Winkler, 2), and the origin, certainty, and extent of human knowledge, together with the grounds and degrees of belief, opinion, and assent (I.i.2).
2. The imprecise use of words. (Epistle: Nidditch, 10; Winkler, 2)
3. To examine the things we are originally conscious of, and the manner in which this original material is worked up by our minds into beliefs. Also to use this information to determine how much of what we believe can be asserted as knowledge, and how much we are entitled to affirm on faith or as a matter of probability. (I.i.2)
4. Dispute and scepticism, since we end up employing our faculties trying to answer questions they are not able to answer, end up indulging in wild speculations, disgree with one another because we can perceive no standard of truth, and end up doubting ourselves and our abilities and questioning everything. (I.i.7)
5. Whatever it is that is before the understanding or that the mind can be said to be working with, when we think. This is not a very helpful definition, but it is all that Locke says.

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Most problematically, it leaves it unclear whether ideas are objects, like pictures, that are somehow looked at by the mind, or whether they are rather actions whereby the mind reaches an understanding. (I.i.8) For a particularly clear expression of the former, see II.xi.17.

6. That the fact that there are certain things that are believed by all people in all times proves that these things are innately known. (I.ii.2)
7. The premise is false, since there are no principles that are known by all human beings whatsoever, and even if the premise were true, the conclusion would not follow because the universal knowledge may be based on some very common and evident experience. (I.ii.4 and 3)
8. If you do not have to be actually conscious of a proposition in order for it to be able to be considered to be in your mind, then there is no clear criterion for determining what is in your mind and what is not, and in principle any proposition could be said to be in your mind as long as it is true and is the sort of thing you are capable of knowing. But if all that it means to say that you have innate knowledge of a proposition is that you are capable of knowing that proposition, then the claim is trivial and uninteresting and does not say anything that someone who believes that all knowledge is learned from experience could not just as well accept. (I.ii.5)
9. No. He thought that we have the innate capacity to know certain propositions, and that no one would deny this. (I.ii.5)
10. Because reason is by definition the capacity to deduce something we do not know from other things that we have previously come to know. So if something is known by reason, then by defintion it must have previously been unknown and so cannot have been innately known by us. (I.ii.9)
11. First, it is false, since there are no principles that are known by all human beings who have attained the age of reason. Second, it is improbable, since there is no good reason why innate truths should suddenly pop into the mind just because our reasoning capacity has developed, especially since, as the answer to the previous question has shown, that capacity is unrelated to those truths. (I.ii.12,14)
12. The fact that these truths concern the ideas that are most commonly and readily obtained from experience. This indicates that the truths are not known innately, but by gathering ideas from experience and comparing them with one another. (I..ii.15)
13. He thought that there are absolute moral truths. He just did not think that they are innately known. The fact that different moral rules are accepted in different cultures is simply evidence for the fact that it is not obvious what the correct moral rules are. (I.iii.1)
14. First, that people's practice is the best indication of what they really believe, and that even if it were not, the fact that their actions and even their explicit statements of what they value reject moral principles makes it impossible to say with any certainty that they do in fact still assent to those principles. Second, that if something was really innately known as a practical principle then it ought to influence action. This because a practical principle just is a principle concerning what to do. A belief in a practical principle is therefore the same as a belief that one ought to act a certain way and hence as an inclination act in that

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way. A principle that is believed without being acted upon is not really a practical principle, concerning what ought to be done, but a speculative one, concerning what is or is not the case. So the possibility of assenting to a principle while not acting on it would imply that the principle is not in fact accepted as a practical principle. (I.iii.3)

15. No. He supposed that we have innate dispositions to take pleasure or displeasure in things, and innate tendencies to desire or reject certain things. He only denied innate knowledge and innate ideas. (I.iii.3)
16. An inadequate opportunity to reflect caused by the demands of meeting the needs of life in those who are less affluent. In the rest, one or more of ignorance, laziness, indoctrination, impatience, or having already accepted the principle that principles ought not to be questioned. (I.iii.24-25)
17. The parts of principles are ideas. But most of the ideas that purportedly innate principles are made up of are so complicated and abstract that it is implausible to suppose they could be innately known. But if the ideas are not innately in us, the principles they compose cannot be so either. (I.vi.1)
18. Observation of children, whom he claims give every indication of only having those ideas they have previously acquired from experience. (I.iv.2)
19. It is not had by all peoples. (I.iv.8)

19
Locke, *Essay* II.i.1-8,20,23-25; ii, viii.1-6, iii-vi; vii.1-2,7-10
(Sensation)

1. Perception of objects received through the senses and reflection on the operations on our own minds. (II.i.2-4)
2. Something that manages to produce perceptions in the mind. The relation between these perceptions and either their causes or objects existing in the world outside of us is so far unspecified. (II.i.3)
3. He hoped we would all argee that, upon performing a survey of the ideas in our minds, we do not find any that we did not either directly encounter in experience or construct from simpler ideas that we did encounter in experience (II.i.5) He also claimed that a study of children shows no evidence that they were born with any ideas already in them (II.i.6). Finally he observed that those brought up in very narrow environments, where there is little variety or change in the objects of experience, never manage to overcome the deficiencies of their circumstances to develop wider collections of ideas than just those they have managed to experience or build up by simply modifying ones they have experienced. (II.i.7)
4. No. Locke was explicit that the senses of sight and touch, in particular "often take in from the same object, at the same time, different ideas." He instanced motion and colour as well as softness and warmth. He did hold, however, that the different simple ideas are perfectly distinct from one another, even though given simultaneously. (II.ii.1)
5. They exhibit one uniform appearance, that is, there is no variety in their content. (II.ii.1)

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6. We can spontaneously create complex ideas by mixing together simple ideas we have previously been given in experience, but we cannot ourselves create new simple ideas. We must instead learn of them through sensation and reflection. (II.ii.2)
7. No. Some of our ideas might be caused by privations (or better, objects that have slowed or stopped motions in our sense organs), but the ideas arising from these causes are as apparently positive as any other. (II.viii.1-2)
8. The kind and arrangement of particles on the surfaces of things. (II.viii.2)
9. No. Not unless the state of rest or the state of moving in the opposite direction should be considered to be a privation rather than a positive state of being. It is most likely, Locke thought, that all of our ideas of sensation are caused by motions communicated to our sense organs and that changes in those ideas are due to changes in the motions. (II.viii.1, 4, 6) In that case, every idea whatsoever will be due to some real, positive cause, namely an alteration in the state of motion of the parts of the sense organs.
10. Solidity is one of the simple ideas received from the sense of touch. It is a feeling of resistance that we get from bodies when we press against them. For this reason, we think of this feeling as coming from a force of resistance to penetration present in the bodies. Hardness, in contrast, has to do with the degree to which the parts of a body resist being moved relative to one another. Things that are soft or fluid may nonetheless be very solid because they resist being compressed (e.g. water or hydraulic oil), so hardness is not the same as solidity. (II.iv.1 and 4)
11. Because of an induction from what is universally the case with those bodies that it is able to see. (II.iv.1)
12. To fill a space is to exercise a repulsive force to resist the entry of any other body into that space. A body that can be compressed, therefore, cannot be said to fill the space it occupies fully. (II.iv.2)
13. Space does not resist penetration, has inseparable parts, and is immovable. An extended body is solid, has separable parts, and is movable. (II.iv.5)

20a
Locke, *Essay* II.viii.7-26
(Primary and Secondary Qualities)

1. Qualities inhere in bodies, ideas in minds — though, oddly, Locke also used the term "idea" more vaguely as a blanket term to cover both qualities in bodies and ideas in the strict sense ("*Ideas* … as they are modifications of matter in the bodies that cause such perceptions in us"), and even used the term quality to cover both qualities of bodies and ideas in the mind (the Powers to produce those *Ideas* in us, … as they are Sensations or Perceptions in our Understandings"). (II.viii.7-8)
2. It must be one that remains in a body regardless of what changes it may undergo, and one that our senses inform us is universally present in all our ideas of bodies. (II.viii.9)
3. In virtue of the way particles with just the primary qualities are arranged, the collection of those particles can acquire a power to affect our senses in a particular way. This power is

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the secondary quality, though it is something that results from the primary qualities of the aggregate of particles. (II.viii.10)

4. Tertiary qualities are derivative from the primary qualities in the same way that secondary qualities are. They are powers that the arrangement of the solid, shaped, movable, insensible parts of bodies gives to those bodies. But whereas the secondary qualities are powers to bring about different sensations in us, the tertiary are powers to bring about alterations in other bodies. (II..viii.10)
5. Locke initially supposed that the answer was that this is only possible by communication of motion on contact (impulse). (II.viii.11) However, in later editions of the ESSAY he acknowledged that Newton's account of gravity might prove that there is another way this can happen.
6. Generally by some stream of insensibly small particles emanating from the surfaces of the bodies, hitting our sense organs, and bringing about motions in our nerves that are transmitted to the brain. Note that on this account, what comes to be present in the brain as the cause of our ideas of the primary qualities of bodies does not resemble those qualities, except for being also extended, solid, and moving. (II.viii.12)
7. The ideas are our ideas of colours, smells, tastes, sounds, and other sensible qualities. The secondary qualities are certain powers that bodies acquire, in virtue of the arrangement of their solid, shaped, and moving parts, to bring about these ideas in us. (II.viii.15)
8. In all cases, it is the solidity, shapes, motions and arrangements of the insensibly small parts of the manna, acting in concert. (II.viii.18)
9. All that pounding can do to the almond is break up it into parts and change the shape, size, and relative position of those parts. Yet we perceive its colour and taste differently. (The implication, of course, is that if all that is really happening is a change in the way the parts of the almond are shaped and arranged, then our perceptions of colour and taste must be consequences of the shape and arrangement of its parts, rather than of the presence of real qualities of colour and taste in the almond.) (II.viii.20)

20b
Essay II ix.1-4,8-9; x.1-2; xi,1,4,6,8,9,15,17
(Perception and other Simple Ideas of Reflection)

1. No. Locke's position at the close of II.ix.4 is just that there can be unnoticed stimulation of the sense organs. When that happens there simply is no idea produced.
2. A flat or plane circle, variously coloured and reflecting light to varying degrees. (II.ix.8)
3. Locke took this to be evident from painting. Probably this is an allusion to the fact that when a painter looks very carefully at a globe in order to depict it, he or she will notice that it does not in fact appear to be of one uniform colour. Then, when the painter replicates the colouration on a flat surface, the result takes on a bit of an appearance of depth. Locke is probably extrapolating from this to infer that all we really see is multi-coloured planes. (II.ix.8)

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4. Whether an adult who has been blind since birth, who knows how to identify geometrical shapes by touch, and who is suddenly made able to see would be able to tell, just by looking at a globe and a cube, which is which. Molyneux thought the subject would not be able to make the identification because a newly sighted person would have no good reason to suppose that, just because an object feels a certain way, that therefore it must look a certain way. So, even if the person could identify round and square visual shapes, the person would have no reason to suppose that what feels round would also have to look round. It may also be that Molyneux thought that the feeling of a cube with angles prickling the palm would be nothing like the visual appearance of a cube, so that perhaps the blind person would not even see any reason to label the shapes on the visual field with the same geometrical terms used to name two-dimensional tangible shapes. (II.ix.8)
5. That it illustrates the extent to which ideas that we think we immediately perceive as a result of sensory stimulation may in fact have been created by unnoticed mental operations that transform more primitive and more immediately given ideas. (II.ix.8)
6. A "perception of sensation" is an idea that is immediately perceived as a consequence of sensory stimulation. Not all ideas are perceived through sensation. Some are created by mental operations (such as combination or abstraction) performed upon previously given ideas. These ideas are said to arise from judgment. In visual perception, the main perceptions of sensation are light and colours. We have learned by experience that the qualities of light and colour are influenced in various ways by the distance, figure and motion of bodies (e.g., bodies seen at greater distances look to have fainter and more confused colouration). As a result, we often take the immediately perceived light and colour to be signs that serve as the basis for a judgment about distance or other spatial properties that are not immediately perceived. Often, the judgment occurs so rapidly and easily that we fail to notice the immediately perceived ideas that served as its premises, and mistakenly think we are immediately perceiving the distance or other spatial properties when in fact we are inferring it. (II.ix.9)
7. Ideas can only exist while they are being perceived. When we cease to actively perceive them they cease to exist and therefore they cannot be supposed to remain in some storehouse. Rather than be a storehouse for ideas not currently being perceived, memory is a capacity to recreate previously perceived ideas, together with the idea that they have been had before. (II.x.2)
8. By considering them in isolation from the other ideas along with they happen to be perceived, particularly those ideas having to do with location in time and space. (II.xi.9)

21
Locke, *Essay* II. xii; xiii.1-5; xxii.1-5,9; xxiii.1-11,15-20
Substance

1. In a complex idea various simple ideas are combined together in such a way as to be considered to make up one thing. In an idea of relation they retain their individuality and are merely thought of in connection with one another. (II.xii.1)

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2. Some are observed to be so united, others are united by an act of imagination even though they are not presented together in experience. An example of the first would be the complex idea of an apple, that of the second the complex idea of a unicorn.
3. A substance is a thing that can exist on its own. A mode is something that cannot exist, even for an instant, apart from some other thing. E.g., red is a mode because where ever there is red there must be some thing which is red. Red cannot exist all on its own, independently of any thing. That makes it a mode. (II.xii.6 and 4)
4. In any of three ways: by arbitrarily combining various simple ideas in our own minds (invention), by finding simple ideas to be combined in certain ways in experience, or by means of words, when we hear a certain name for a mixed mode defined in terms of a certain combination of names for various simple ideas. (II.xxii.2-3, 9)
5. The only things that are unified or one in a mixed mode are the one act of the mind in considering all the simple ideas together and the one name assigned to the mixed mode. Locke considered the act of mind to be what first creates or gives rise to the unity, and the name to be the mark or sign of this unity. (II.xxii.4)
6. That what we are experiencing is just one thing and not a collection of many different things. (II.xxiii.1)
7. Some sort of support or holder for the qualities of bodies or their parts. That is, something in which qualities such as extension, solidity, and powers inhere. However we have no clear idea of the nature of this substratum or of how it manages to hold or support qualities. (II.xxiii.2)
8. Some particular internal constitution or essence in this support or holder that determines the particular qualities that it supports or holds, and that also determines the way these qualities will change over time. (II.xxiii.3)
9. Our notion of matter is the idea of some support or holder for those qualities of bodies that affect our senses, that is, some substratum of the bundles of ideas we receive in sensation; our notion of spirit that of some substratum that performs the various operations exhibited in our ideas of reflection. (II.xxiii.5)
10. It includes more of the ideas that the substance in fact brings about in us. (II.xxiii.7)
11. Solid, extended, divisible parts capable of communicating motion by impulse, in the one case, thought, and a power of communicating motion by will in the other. (II.xxiii.17-18)

22
Locke, *Essay* II.xxi.1-5,7-11,13-15,22-25,29-33,40-48,51-53,56
(Power)

1. According to Locke it is simple. Though Locke admitted that the idea of power, understood as the ability to either undergo or produce change, involves the thought of a relation to action or change, he did not consider this to be enough to make it an idea of a relation. His excuse was that all ideas involve some relation. In taking this position he was suggesting that the idea of power is not just the idea of a relation (say, of constant

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conjunction) between types of earlier and later states, but is an idea of some separate thing bringing about the change. (II.xxi.3)

2. Reflection on what we experience in ourselves when we will to move our bodies. (II.xxi.4)
3. The power a person has to either bring about or change thought, or move a body part. (II.xxi.5)
4. Voluntary actions are those that follow upon a directive of the will, involuntary are those that are contrary to the will. (II.xxi.5)
5. Freedom is a power to either do or not do what is directed by the will, so it only exists relative to the will. Beings that have a power to either perform an act or not but that do not have will (a power to prefer one course of action to the other) are not free. Beings that have will but are either incapable of doing what they prefer or even incapable of doing the opposite of what they prefer are necessitated. (II.xxi.8) The case of lacking freedom even though you do what you will to do is illustrated by II.xxi.10.
6. The power of will is the power to bring about an action merely by deciding and making the effort. The power of freedom is the further power to prevent that action, supposing you had willed not to perform it. (II.xxi.15)
7. The most pressing among those things that make us uneasy which we think we are capable of removing. (II.xxi.40)
8. Contemplation of that good. Ordinarily we are distracted by the need to eliminate pains and other sources of uneasiness, which are more pressing and more readily resolved than great goods. The only way a great good can come to influence the will is if we contemplate it and its advantages long enough to become uneasy as a consequence of our lack of the good. (II.xxi.45-46)
9. A power we have to suspend desire. (II.xxi.47)
10. Being already made strongly uneasy by the prospect of acting so as not to realize happiness in general. (II.xxi.51)
11. Sometimes extreme uneasinesses (arising from pain or strong passions) overwhelm us and do not allow us to suspend action (II.xxi.53). Sometimes too hasty a choice of what is really conducive to happiness (II.xxi.56)

23
Locke, *Essay* II.xxvii.1-14
(Identity)

1. Seeing the one in a different place from the other at the same time. (II.xxvii.1)
2. God, finite minds or souls, and bodies. (II.xxvii.2)
3. Because there is only one, omnipresent, eternal God. So there can be no question whether or not a later God is the same as an earlier one. (II.xxvii.2)
4. Yes. Any of the three different kinds of substances may coexist in a place. So God, a soul, and a body could all be together in a place at the same time. But no two things of the

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same kind could be in a place at the same time. Two or more bodies could not be together in the same place at the same time, nor could two or more minds. (II.xxvii.2)

5. If it were possible for two things of the same kind to be in the same place at the same time, then two or more things could be one thing, and then it would be impossible to apply the concepts of identity or diversity. (II.xxvii.2)
6. The same thing that determines the identity of substances: their having a common point of origin in space and time determines their identity and their being at different places at the same time determines their diversity. The modes or relations that cannot have this sort of identity are those that only exist in succession, like motion and thought, since in this case at each moment a different feature of the mode or relation comes into existence. (II.xxvii.2)
7. Rearrangement does not affect the identity of a mass, but loss or addition of even one part does. (II.xxvii.3)
8. Its parts are arranged in a particular way and engaged in performing those operations that are characteristic of that form of life. (II.xxviii.4)
9. The fact that at some one moment, the organization of life-function performing parts characteristic of that species of plant exists in a different, organized collection of matter than does that of any other then existing member of the species. (II.xxvii.4)
10. That the organization of life-function performing parts that exists now preserves the same life as the earlier organization. So, starting from the earlier moment and considering what particles entered the organization and what ones left it, as long as the alterations continued to preserve the same life, the plant is the same. (II.xxvii.4)
11. In machines the organization of parts need not continually function to carry out the purpose for which the machine was designed, so the machine can stop running and start again and still be considered to be the same machine whether stopped, started, or stopped again. But for the organization of parts in a plant or animal to cease to perform the life functions, the plant or animal would be considered to have died and to no longer be the same thing, but a corpse. (II.xxvii.5)
12. People look very different when they are newborn from what they look like when they are adult, and very different again when they are old and shrivelled up. But we still think they are the same people. (II.xxvii.6)
13. For all we can tell, souls may be reincarnated into different bodies, perhaps even animal ones. That would mean that we would have to consider someone who lived and died long ago to be the same human being as someone who is alive today, or even to consider some animal to be a human being. And that is obviously not tenable. (II.xxvii.6)
14. By means of consciousness, which Locke understands as a perception or awareness of the existence of all of our other thoughts or perceptions, including past ones. I consider whatever thoughts or sensations I am conscious of to be what my self is, and whatever thoughts or sensations I am not conscious of to belong to other selves. (II.xxvii.9)
15. My present self extends as far back in time as I can remember and those thoughts and actions that I can remember are what constitutes my past self. (II.xxvii.9)

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16. No. Just as a succession of substances, preserving the same organization of parts, can constitute the same animal life, so a succession (or collection) of substances, retaining the same memories, can constitute the same self. (II.xxvii.10)
17. None other than the reflection that it would be incompatible with the goodness of God to allow this to happen, since then a soul might be punished at the last judgment for crimes it never committed. But this is a matter of faith, and to get knowledge of the impossibility of transubstantiation would require knowledge of the precise nature of the relation between a thinking substance and its thoughts and of the causes of memory and dreams, and this is knowledge that we do not have. (II.xxvii.13)
18. Reincarnation would involve nothing more than stripping a thinking being of all of its thoughts and memories and having it start again with an entirely new set of experiences. There is no evident impossibility in this. (II.xxviii.14)

24a
Locke, *Essay* III.iii.1-4,6-13,15-18
(Abstract Ideas)

1. At Essay III.iii.2 Locke remarked that the "signification and use" of words depends on their being associated with ideas. So the meaning of a word, for Locke, is the idea it is taken to stand for.
2. It is used to communicate the ideas you are having to another person. By speaking or writing words that name your ideas, you hope to arouse similar ideas in the mind of the person who understands those words. (III.iii.3)
3. By being made to stand for general ideas. (III.iii.6)
4. By a process of abstraction performed upon particular ideas. These ideas are given to us in perception as collections of many simple ideas occurring together and standing in certain relations of time and place to other collections of ideas perceived at the same time. What we do is isolate (i.e., abstract) particular simple ideas from the collection and then combine just those ideas with one another to form a general idea. What makes the idea general is that it can be used to refer to a number of other collections of ideas that also exhibit the particular simple ideas we have abstracted (though they would exhibit a number of other simple ideas as well). (III.iii.6)
5. This one is not answered in the text and requires some ingenuity: Because in the chapter on identity Locke identified location in space and time as the primary means by which one thing is individuated from another.
6. Sorts. That is, groups or classes to which many things belong. That they signify groups or classes to which a number of things belong rather than directly signifying a number of things, is indicated by the fact that they are singular terms. If they signified a number of things they would not have singular grammatical forms, but plural ones (e.g., insects rather than insect, or animals rather than animal).

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7. That in a thing that makes it express the qualities and powers it does. (On Locke's hypothesis, this is the fine constitution of the small corpuscles making up the thing.) (III.iii.15)
8. The abstract idea that is used to define the genus, sort or kind. This idea is a list of simple ideas (and perhaps simple and complex modes) that a number of perceptions of things may have in common. Whatever things give us perceptions that satisfy what is demanded on this list are considered to be of that genus, sort or kind for that reason. It is in this sense that the abstract idea makes the genus, sort or kind what it is: it determines what things will be included and what will be excluded. (III.iii.15)
9. Yes. Simple ideas and modes, since in these cases the real essence, which makes the thing what it is, is just the nominal essence. The real essence of a triangle, for instance, is just what we define a triangle as being, and that is a collection of simple ideas taken to be common to all triangles. But in substances the real essence and the nominal are quite distinct. (III.iii.18)

24b
Locke, *Essay* III.vi.1-9,12,14-19,23,25-26,28
(Essence)

1. Because it is one and the same object that appears as a sun to those close by and a star to those far off. So its nature cannot be different and if it is nonetheless sorted into different groups by viewers at these different distances it is because of the different ideas they get of it at those distances. (III.vi.1)
2. The nominal essence is the abstract idea we have formed of those complex ideas that each thing must give us in order to be considered to be of that sort. The real essence is that in the thing (perhaps a "constitution of insensible parts") that makes it give us all the characteristic ideas we get from it — those included in our abstract ideas, as well as any others that may be common to all the members of the group, even though we have not noticed it. (III.vi.2)
3. The nominal essence is voluntary motion, sense, and reason in a body of a certain shape. The real essence is the constitution human beings must have in order to give us the complex ideas listed in the nominal essence. (III.vi.3)
4. The individual must be considered as belonging to some group or other. E.g., when Socrates is considered as a person, his essence is consciousness, when as a human animal, power of sense and motion attached to a body of a certain sort, when as a male, possession of certain sex organs, etc. But considered just as an individual, Socrates has no nominal essence. (III.vi.4)
5. No. The real essence is the foundation of those complex ideas that we get from all the members of a group. So unless you specify what group you want to consider a particular as belonging to (e.g., as horse, as male, as thing with four legs that you sit on) you will not be able to specify what in its particular constitution is the foundation for those qualities. (III.vi.5)


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6. The real constitution is the foundation for all the qualities that a particular thing exhibits and hence for all the ideas we get from it (III.vi.8). The real essence is that part of the real constitution responsible just for the ideas that are listed in the nominal essence (as well as for whatever other properties might necessarily follow from this part of the real constitution). (III.vi.6)
7. It means we do not know the real essences that give these substances these properties. (III.vi.9)
8. The chasms and gaps he is talking about are gaps between species of things. His claim is that between any two kinds of things we always seem to be able to find individuals that are of an intermediate kind, in that they exhibit some of the features of both kinds. (III.vi.12)
9. It indicates that these essences are created by the understanding, which in different people picks on certain similarities rather than others, depending on their "care, industry, or fancy" (III.vi.29, i.e., their degree of attention, their concerns, their past experience). (III.vi.26)
10. Because the understanding is guided by what ideas we observe to commonly go together in perception, and we make no such observations. (III.vi.28)

25
Locke, *Essay* IV.i; ii.1-7,14; iii.1-14,17-18,21
(Knowledge)

1. Its own ideas. (IV.i.1)
2. Substances. We are concerned to determine what ideas do and do not belong together in our complex ideas of substances. (IV.i.6)
3. According to the definition of knowledge in IV.i.2, all our knowledge is just of relations between our ideas. IV.i.7 claims that we can also, at least in some cases, know of the actual existence of objects "agreeing" to certain of our ideas. But note that in the strict sense, knowledge of real existence is merely knowledge that there is something corresponding to our ideas that exists outside of the mind. To know that there is something corresponding to our ideas and to know what this thing is and how completely it resembles our ideas are two different things. Just to know that there is something related to an idea without knowing what this thing is does not seriously overstep the definition given in IV.i.2.
4. He came to think that the person who just remembers the result of a past demonstration is, in the very act of remembering it, performing a demonstration of that result, though a demonstration of a different kind from the original demonstration. (In this demonstration the person first remembers that a certain conclusion was in the past perceived to follow from certain conclusions, then thinks that as long as things do not change or cannot change [because they are immutable], what was once perceived to be true of them must continue to be so, and from these two premises draws the previous conclusion again with all the force of a demonstration.) (IV.i.9)

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5. The thought of the "immutability of the same relations between the same immutable things," i.e., the thought that if the things have not changed from what they were before, then their relations will have to be what they were perceived to be before. Also the thought that certain relations were perceived before. (IV.i.9)
6. The principle that, where immutable (unchangeable) things are concerned, what has once been perceived to be true of them will always be so. We must rely on this principle if we are to think that what we have proven of a figure or number in one particular instance will remain true of that figure in all other instances. And were we not able to generalize from one particular instance to others, all our mathematical knowledge would be of particular propositions, not of general ones. (IV.i.9)
7. While this hardly seems correct, Locke seems to have thought that it is not really possible to misremember something, since he defines memory as "but the reviving of past knowledge" at IV.i.9. However, in the last sentence of IV.i.9 he did recognize that it is possible for memory to fade and become unclear over time, so that it is no longer possible to remember what one once knew, or remember and hence know it as clearly. This imperfection of memory does not degrade it from the status of knowledge, however. It merely makes it a more "imperfect" form of knowledge than intuition, whatever that means.
8. In intuition the relation between two ideas is directly and immediately perceived by the mind. In demonstration it can only be perceived by means of an intermediate chain of ideas, each of which is intuited to be appropriately related to its predecessor and successor. (IV.ii.1 and 2)
9. No. Locke described demonstration at "certain" at IV.ii.4, and said that it "removes all doubt" in IV.ii.5, and that it is "very clear" at IV.ii.6. These statements are incompatible with demonstration ever being in error. But Locke does seem to have thought that while demonstration cannot be in error, people can be in error in supposing that they have demonstrated something when in fact they have not. This can happen because of weakness of memory, which leads to a part of the demonstration being left out. While memory cannot misinform us (see answer to question 7), Locke's position seems to have been that we confuse demonstrations all the parts of which we cannot exactly remember with arguments that are not in fact complete demonstrations, and so end up accepting false conclusions. However, it is not clear that this position is entirely coherent with the infallibility of memory insisted on in IV.i.9.
10. We are ultimately concerned with what will give us pleasure and pain. An idea that we ourselves have cooked up in imagination cannot hurt us, nor can it benefit us, since it comes and goes as we see fit (except, of course, in certain dreams). But if the idea comes from an object, and that object has powers in it to bring about further ideas of pleasure and pain in us, then we think that, depending on how we behave, we will get ideas of pleasure and pain (or fail to get them) from that object independently of our wills. Thus it is a concern with the connection between our ideas of pleasure and pain and our ideas of objects that motivates a concern with determining what ideas actually are of objects existing outside of us. (IV.ii.14)

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11. Motion can be conceived to produce nothing other than motion, but we perceive that it is somehow able to produce ideas of colours, pleasure and pain, and other such things in us. (IV.iii.6)
12. We could possibly deduce what type (i) ideas we would get of the primary qualities of bodies, but since there is no apparent connection between the primary qualities of bodies and our type (ii) ideas of sensible qualities (which Locke here referred to as "secondary qualities," contrary to his official definition), even knowing the real constitution of bodies would not allow us to deduce what type (ii) ideas those bodies might or might not bring about in us. (IV.iii.13)
13. Sensory experience. Only by seeing the substance actually exhibit those qualities or powers can we tell. We cannot learn about just a part of its nature and then hope to deduce the remainder, because most of the qualities and powers in bodies have no necessary connection with any others, so that from the fact that a body has certain ones, it does not follow that it has any others. (IV.iii.14)

26
Locke, *Essay* IV.iv.1-12; ix.2-3; x.1-7; xi
(Knowledge of Real Existence)

1. The fact that we are only able to get these ideas when our sense organs are suitably affected. Were the ideas innate or such that we could create them from a mere act of imagination, then we could doubt whether they correspond to powers in bodies. But since they only first originate in us after our senses have been affected in a particular way, and no one can get these ideas without having that happen (even talking to others who have had them is not enough to make the conception of them arise in the mind, just as the blind can have no concept of colours), we can be sure that there must be some power in the objects that affect our senses to produce them. (Essay IV.iv.4)
2. Because if any actually existing objects were to exactly conform to what we think as defining the shapes and numbers we consider in mathematics, whatever we demonstrate of those shapes and numbers would also have to be true of these actually existing objects. (IV.iv.6)
3. Demonstrations proceeding on the basis just of what is contained in the ideas involved in those propositions. Otherwise put, general principles are known by analysis of their component terms or by intuiting relations between their component terms. Since these principles are true whether or not any of the things they talk about actually exists, their truth has nothing to do with the real existence of things, but only with relations of the ideas they contain. (IV.iv.8)
4. We cannot put ideas together in such a way as to create a contradiction. (IV.iv.12)
5. To be considered real the simple ideas that are combined in the substance must be actually experienced to go together in perception. To be considered at least possibly real, that collection of simple ideas must have been experienced to go together at some point in the past. (Since we do not know the real constitutions responsible for giving things the powers they have to bring about the ideas they do, we cannot automatically assume that

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just any two simple ideas may be combined together in a substance, for the real constitutions needed to produce those simple ideas may be incompatible and incapable of coexisting. The only way we can be sure the combination of simple ideas is even possible, therefore, is if we have actually experienced some substance exhibiting them. The bare fact that they do not contradict one another is no indication.) (IV.iv.12)

6. No. You know of your own existence by perceiving yourself as the subject of all of your thoughts. Either you see it or you don't, and if you don't there is no way to prove it to you (but as long as you are alive and conscious you cannot but perceive it). (IV.ix.2 and 3)
7. Yes. He claims we know it by "intuition," which means we must just see its truth immediately by inspection of our ideas. (IV.x.3)
8. The fact that we cannot produce new ideas on our own (as evidenced by the fact that blind people can form no ideas of colours or those who have never tasted pineapple realize what it tastes like) is an indication that there must be different things in the environment around us that act on our sense organs and so give them the stimulus to originally produce ideas. The fact that we can call up some ideas out of memory and send them away again is an indication that those ideas are imagined, whereas the contrary fact that there are some ideas that we cannot call up or dismiss at will is an indication that there must be something else that is imposing those ideas on us. (IV.xi.4 and 5)
9. One is that Locke believed that the imagination could not produce feelings of pleasure and pain, so that when these feelings accompany an idea, it is a sure sign that the idea is being perceived and not imagined. The other is that he took reality itself to consist in whatever can produce pleasure or pain or serves as a reliable sign for what can produce pleasure or pain. On this account, if dreams and fantasies could produce pleasure and pain then they would be as good as real for us and would have to be treated as such since they would determine our happiness and change our state of well being. Otherwise put, a dream or fantasy is only a dream or fantasy if it does not produce feelings of pleasure or pain. The conclusion, once again, is that where these feelings arise, we can be sure we are dealing with reality. (IV.xi.6-8)
10. No (IV.xi.9). We can know that they existed (in the past) if we remember having perceived them (IV.xi.11), but our conviction that they exist now can never be more than probable. We can only be certain that they continue to exist when we are actually perceiving them. — But there is no reason why we should not rest content with mere probability in these matters. (IV.xi.10)
11. No. For Locke this is something that falls short even of probability and has to be accepted merely on faith. (IV.xi.12)

27
Locke, *Essay* IV.xiv-xv; xvi.1,3-14
(Probability)

1. To keep us from becoming too confident and make us more careful and hesitant in our assertions (IV.xiv.2)

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2. Because knowledge cannot be obtained yet the circumstances of life compel us to make a decision. But also because, even though a demonstration is available and within our grasp, we are too impatient, lazy, or stupid to work it out. (IV.xiv.3)
3. Yes, if it is entertained by two different people. Certainty and probability do not concern the proposition but the person who entertains it. If the person intuits or is able to demonstrate the truth of the proposition, then it is certain for that person. But another person may not be able to do this, or may accept the proposition on the basis of evidence that is less than certain, for example, the say-so of someone else. (IV.xv.1)
4. When the talks about the testimony of others as being a ground of probability, he means their testimony to things that they know because they have intuited, demonstrated, or experienced them. Opinions are not things they know, but that they themselves are accepting on the basis of probability. In many cases, others' judgments of probability are not very careful.
5. In none of them. Locke wrote that the demands of life often compel people to make decisions upon matters when they have not been able to review all of the pertinent evidence, and that few actually have the leisure, resources, and patience to be able to collect all of the relevant information. (IV.xvi.3) No one can therefore be blamed for reaching a decision upon an incomplete survey of the evidence. However, people can be blamed for reaching a decision without sifting matters to the best of their ability, at the time that they were obliged to reach their initial decision. (IV.xvi.3) Locke also wrote that retaining all the evidence for a decision once reached in one's memory is too hard, and that no one should be expected to have to do that as long as they can clearly remember that they did reach that decision in the past upon surveying the evidence to the best of their ability at the time. (IV.xvi.1) Finally, he wrote that reviewing all the evidence that is continually coming in would be too burdensome for people to be obliged to do it, given their minimal amount of leisure time, resources, and patience and the pressures of everyday life, (IV.xvi.3), and that since reliability and steadfastness are also virtues, people cannot be expected to abandon their opinions even in the face of contrary evidence, as long as that evidence does not amount to a demonstration. For, anything short of a demonstration could be wrong, and anyone who were to abandon one opinion for another merely as the evidence swings back and fourth would end up being too inconstant in their opinions. (IV.xvi.4)
6. Hardly ever. If you have good reason to suppose that a person could easily have performed a more adequate survey of the evidence before reaching their initial decision, or if you are actually in possession of a demonstration that is fairly direct and easy to grasp, then you might be able to criticize the person for their beliefs, but simply having stronger evidence does not entitle you to even expect the other person to consider your evidence. (IV.xvi.4)
7. To have assurance you must be told of the occurrence of some matter of fact (i.e., something concerning the qualities, powers, causes, or effects of some substance or group of substances) you did not yourself experience (if you did experience it you would have sensation and not belief). Moreover, all the witnesses must agree that the matter of fact occurred. Finally, the matter of fact must be of a type that both you and everyone else have always observed to be true in the past; that is, it must be a consequence of a

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universal law of nature, such as that stones fall or fire burns. For confidence all of these same conditions must be met except for the last one. If the matter of fact is one that is sometimes true and sometimes false, but could as well be true as false or is most often true, then you can have confidence, but not assurance. Assurance is thus a higher degree of belief. (IV.xvi.6-7)

8. Conflict of the testimony with common experience, with the regular course of nature, or with other testimony. (IV.xvi.9)
9. What has been commonly observed in similar cases in the past, and the quality of the testimony in favour of what happened in this particular case. (IV.xvi.9)
10. One received at second or third or a more remote hand. (IV.xvi.10)
11. Passion, vested interest, oversight, and misinterpretation. (IV.xvi.11)
12. We can have some probable conjecture about these matters based on the assumption that unobservable things will be relevantly analogous to observable things. The stronger the analogy, the greater the probability of our belief can be. (IV.xvi.12)
13. Because if beings exist that are powerful enough to alter the course of nature, we should expect that they would do so in those circumstances where they have ends or goals that might be served by such an intervention. (IV. xvi.13)
14. It would have to be supposed to serve some purpose that a supernatural agent could reasonably be supposed to have. (IV.xvi.13)
15. Belief in the testimony of a being who knows all and would not lie. (IV.xvi.14)
16. We must know that the revelation in fact came from God, and we must be assured that we have interpreted it correctly. (IV.xvi.14)

28
Locke, *Essay* IV.xviii.1-10; xix
(Reason, Faith, and Enthusiasm)

1. At IV.xviii.2 he defined reason as the discovery of the certainty *or probability* of propositions by means of deductions. However, judgments based on revelation are also probable, and Locke distinguished faith from reason in this passage as well. Thus, for Locke, reason would include demonstration and all forms of probable judgment other than faith. But it would exclude intuition and sensation (since they do not involve "deductions" but rather are immediate forms of knowing) as well as faith. However, at IV.xviii.3 he used the term "reason" more broadly to include whatever is taught to us by our "natural" faculties and so here included intuition and sensation as part of "reason" and excluded only faith.
2. When a person is themselves the subject of a religious experience, they have an original revelation. When a person believes a certain revealed truth, not because they have themselves experienced it to be revealed, but because they have accepted someone else's report (perhaps at second or third or more remote hand), then they get their belief from a tradition rather than personal (original) experience. (IV.xviii.3)

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3. We have to know that the tradition that hands this revelation down to us is reliable (e.g. that books really were written by those who received the revelation, that copies are accurate, etc.). (IV.xviii.4)
4. We have to be sure that what has been revealed to us did in fact come from God and was not induced by something else (say delirium caused by too much fasting, fever, trance, mental disease, or the indulgence in certain exotic substances). We also have to be sure that we have understood the message correctly. (IV.xviii.5)
5. Reason. Locke's position is that we are in fact constitutionally incapable of doing otherwise (except in the case of those suffering from the mental disease of enthusiasm, which he discusses in the next chapter). This is because we cannot help but put our belief in that relation of ideas that we perceive most clearly. And given the answers already supplied to questions 4 and 3, there must always be some residual doubt attached to a traditional revelation — either about the authenticity of its source or the reliability of its tradition. Nor can this doubt be removed by a further, original revelation that the traditional revelation is true. For even in that case we would still need to employ reason to decide if the message really came from God and was correctly understood, which means we have to put trust in reason before faith. Thus, the proposition that a particular revelation is good ground for faith can never be as trustworthy as the clear perception of a relation between ideas. (IV.xviii.4-6)
6. Faith. But we must use reason to make sure that the revelation came from God. (IV.xviii.7)
7. Faith, supposing that reason demonstrates that the revelation did come from God and the message has been correctly understood. Our decision is grounded on the fact that as long as reason is not able to demonstrate that the opposite of what faith tells us as impossible, we ought to accept the testimony of a witness who knows all and would not lie. Insofar as we have reason to think that God is the witness, we are dealing with such testimony. (IV.xviii.8-9)
8. Yes. They could only be said not to love the truth if they assented to the proposition with more or less conviction than was warranted by such a survey of the evidence as they had managed to perform. For Locke, to love the truth means merely to not accept a proposition with any more or less certainty than the evidence that you have examined warrants. However, that a love of the truth should compel a survey of all the available evidence is not something he suggests, and is something IV.xvi.1-4 condemns as impractible. (IV.xix.1)
9. Lack of love and respect for the truth. Someone who does not love the truth is apt to affirm a proposition with more conviction than the evidence warrants. And someone who is unjustifiably certain of a proposition is apt to expect others to accept it as well and be indignant with them if they fail to do so (which is likely if the proposition is not in fact certain). Moreover, since this person will have ignored the voice of their own reason, and so imposed a belief upon themselves in the absence of true evidence, it is only to be expected that they will exercise the same violence on others. (IV.xix.2)
10. Putting faith in a revelation that has not been shown by reason to have come from God. (IV.xix.3)

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11. Because without reason we have no way to distinguish between authentic and fake cases of revelation. If we are going to accept a revelation without question and not inquire whether, firstly, it contradicts reason or, secondly, is of probable authenticity, then we open ourselves to the danger of accepting all sorts of "ungrounded fancies" as Locke put it — things spun out of our own heads. Ironically, this means being blind to the real revelations that may be out there to be attended to.
12. Immediate revelation is like original revelation in being a direct communication of an individual with God. But unlike original revelation it is supposed to be evidently a message from God and is not taken to stand in need of authentication by reason. Thus, it is a form of enthusiasm. If enthusiasm is putting faith in a revelation that has not been shown to have come from God, immediate revelation is putting faith in a revelation you imagine to have yourself received from God, even though you have no rational warrant for doing so. People believe they have it because it is not impossible that God might in fact have given it to them, because if they can suppose that something has been revealed by God they can avoid the hard work of finding it out by other means, or can maintain it even though it is strictly unprovable by any other means, and because it flatters their pride to imagine God has chosen them for a special communication. (IV.xix.5)
13. Laziness, ignorance, and vanity. The enthusiast is someone who is too lazy, too impatient, or too afraid to embark on the hard work of doing research guided by reason. The enthusiast prefers quick and easy answers instead and is willing to sacrifice love of the truth to get them. And the enthusiast is flattered by the fancy of having been specially chosen by God for communication. (IV.xix.8)
14. Did it come from God, from some other spirit, or from one's own fancy? (IV.xix.10)
15. Because were it "seeing" I would know it to be so simply by inspecting the ideas involved and seeing their relation to one another (this is what happens in intuition) or by having an experience where the ideas are so connected. In the first case anyone else with those same ideas should intuit the same thing. In the second case, anyone else in the same circumstances should sense the same thing. But in fact, those claiming to have immediate revelations are not claiming to simply see but to have something revealed to them by God, so that the case is not actually one of intuiting or sensing but rather one of accepting something on God's purported say-so, even though the visionaries claim to be "seeing." (IV.xix.10)
16. By means of some outward sign such as a miracle. (IV.xix.15) In cases where that is lacking, the revelation must be conformable to already authenticated revelations. (IV.xix.16)

29
Bayle
Dictionnaire, "Pyrrho B"

1. Locke believed that ethics could be known by demonstration whereas Pyrrho held that they are merely conventional. In the main text of the Pyrrho article, Bayle took Pyrrho's position to naturally follow from his view that the absolute internal constitution of things


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cannot be known, so that we might as well simply accept whatever laws and customs happen to be in effect in a given society. While Locke also believed that the real constitution of substances cannot be known, he took our knowledge of ethics to be based on knowledge of complex modes, which can be known. (p. 2622 of the main article)

2. Because the scientists are all sceptics already (since none of them believe that we can know what is ultimately responsible for the phenomena of nature — the Cartesians believe we can only make hypotheses about it and the Newtonians that we can only describe its laws, and Locke insisted we cannot know the real constitution of things), and the sceptics always said that since we can't know for sure what is right or wrong or how we ought to behave, we might as well just follow whatever laws and customs happen to be in effect in our societies. (p.2619right column of Note B)
3. Because if you have any doubts in religious matters you will lose your faith in the religion and no longer be willing to observe its rituals or other practices. (2619r)
4. Because the sceptical arguments are not very effective means of persuading most people. (2619r)
5. The Grace of God which compels those who receive it to believe, the force of education, ignorance of those arguments, and our natural instincts, notably a natural instinct to want to have answers to things and to be dissatisfied with uncertainty. (2619r)
6. Because Christian theology would give him unanswerable arguments against all those who suppose that it is possible for us to comprehend things. (2620l)
7. That sensible qualities are only appearances. (2620l)
8. From the claim that they, like the other sensible qualities, are only appearances in us and not true qualities of bodies. They were not actually able to do this because if bodies can appear to us to be coloured, hot, cold, and odiferous without really being so, then they can just as well appear to us to be extended and moving without really being so. (2620l)
9. Bayle's argument rests on the premise that bodies cannot be the cause our sensations, so we cannot infer that bodies exist from the fact that our sensations exist. Bayle did not say why bodies could not be the causes of our sensations. A popular argument at the time was that because minds are such radically different things from bodies, it is inconceivable how bodies could act on minds to cause them to have sensations. (26201)
10. Because the same argument would also prove that these extended things must have the qualities our senses reveal them to have, and all the "new philosophers" deny this. (2620l)
11. Just as the one cannot doubt that objects have sensible qualities, so the other cannot doubt that they have extension. (2620l)
12. The mystery of the Trinity, which teaches us that though the Father is God and Christ is God, Christ is not the Father. Since the Christian revelation proves this principle to be true, and the principle contradicts the principle of the transitivity of identity, we must conclude that the transitivity of identity is false.(2620l-r)
13. Because the mystery of the Eucharist assures us that one and the same body can be in two different places at the same time. (2620r)

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14. Because it makes it possible that things we count up as two or more may in fact be just one thing. (2620r)
15. Nothing more than a faith in scripture, which tells us that our souls will be judged for their deeds during life at the last judgment, a claim that implies we must last for more than a moment. But there is nothing in memory or in the nature of things that could provide this certainty. The doctrine of constant creation entails that a new soul could possibly be created for each person at each successive moment of time, and that this soul could have all the memories of the previous soul implanted in it. Thus, there need be nothing discernible to memory were I newly created, and there would be no physical impossibility in such an occurrence. (2621r)

30
Berkeley, *Principles*, Introduction
(Abstract Ideas)

1. False principles, wrongly insisted upon. And among these, particularly the doctrine that the mind has a power of abstracting ideas. (Introduction §§4 and 6)
2. Just of the taking up of some space, without any specification of how much space is taken up or what shape this space taken up is or what it is that takes up the space.
3. The sense of dividing things into their spatial or temporal parts and considering those parts separately from their surroundings. (§10)
4. The ability to form isolated and separate ideas of qualities that cannot in fact exist on their own, and the ability to form separate and isolated ideas just of those qualities that a number of different objects share in common. (§10)
5. (i) That he personally found it psychologically impossible, upon introspection, to "imagine," "consider by itself abstracted or separated," "frame," "conceive," or "form" ideas of individual qualities abstracted from concomitant qualities, or the essences of kinds abstracted from all particularizing features. (ii) That the generality of simple, illiterate people make no claim to have such ideas.
6. We use general terms, and Locke maintained that this indicates that we must have formed abstract ideas of sorts or kinds for the terms to refer to. (§11)
7. Just because we use general terms, it does not follow that they must refer to abstract ideas. The terms could instead be used to refer to classes of resembling particulars. (§11)
8. By being made to serve as a sign for a kind of particular, much as a particular black, one-inch long line segment on a particular piece of paper can serve as a sign for any segment whatsoever. (§12)
9. That it is impossible to form abstract ideas because the ideas would have to exhibit contradictory qualities.
10. The supposition that each name in a language can only refer to one particular idea. (§18)

31

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Berkeley, *Principles* 1-24
(Immaterialism)

1. Ideas — either of sensation, reflection or imagination. (*Principles* §1)
2. No. The account of where our knowledge comes from is exactly the same (Berkeley's remarks about extra-ideational sources of knowledge are not made here), as is the account of our knowledge of substances as consisting of a collection of ideas commonly observed to go together. The claim that all our knowledge is just of our ideas is none other than the major thesis of Essay 4: that all knowledge consists in affirming or denying relations between ideas.
3. It must be perceived by someone. Note that in conjunction with the answer to #1, this entails that the objects of human knowledge can exist only when perceived. (§§2-3)
4. That were I to position myself differently, I would get ideas of it. (§3)
5. I can only abstract from one another those things which are actually or could possibly be perceived apart from one another. Since I cannot perceive colour without some shape or shape without some visible or tangible quality, ideas of pure colours, pure heat and pure space cannot be abstracted from one another. Since I cannot perceive a body without some sensation, the idea of the body and the idea of the sensation cannot be abstracted from one another. And since I cannot perceive a sensation without thinking it to be perceived by a mind, the idea of a sensation and the idea of being perceived cannot be abstracted from one another. (§5)
6. Because specific sizes, shapes and velocities are relative to the perceiver. The same object will appear to be differently shaped, sized and moving depending on how big or small the perceiver is, how the perceiver's sense organs work, and how the perceiver is positioned. But if the size, shape and velocity can vary without any variation in the object, then these things must be ideas existing in the mind of the perceiver. If extension in general cannot be separated from these things, then it, too, cannot exist anywhere but in the mind. There are therefore two "inseparability" arguments for the mind-dependence of extension to be found in Berkeley: the one described in the lecture and in §10, which appeals to the impossibility of abstracting extension from colour and temperature and to the generally agreed upon fact that the latter exist only in the mind, and the other, described in §11 and just now, which appeals to the impossibility of abstracting extension from specific shapes, sizes and motions, and to the perceptual relativity of shape, size, and motion. (§11)
7. Sense does not inform us of these things because all it tells us about are our ideas, not what causes these ideas. And reason cannot infer that such substances must exist in order to cause our ideas because it is obvious that we are able to get such ideas when it is incontestably the case that there is nothing acting on us to produce them, as when we are dreaming or hallucinating. (§18)
8. It is impossible to explain how something which is capable only of aggregating together in clumps and communicating motion by impact should cause ideas. So to suppose that this sort of stuff exists does not help to explain the origin of ideas in the least. You can get as far as it hitting the sense organs and then something happens which it cannot explain and

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which could, for all you know, be going on even in the absence of the sense organs being hit or even in the absence of any sense organs whatsoever. (§19)

32
Berkeley *Principles* 25-33, 89, 135-156
(Realism)

1. Berkeley maintained that ideas are "passive and inert," that is, that they can't do anything, they can only be something. (Principles §25)
2. Just one: mental substance. Berkeley thought that material substance is impossible and he did not ever mention any other kind of substance. Sometimes, however, he divided mental substances into two sub-groups, putting God alone in one group and all other "finite" minds in the other. (§26)
3. Berkeley made no mention of the will being able to make the body move. All it is able to do is make ideas come and go. Since he believed that there is no such thing as material substance, and that all we are is minds with certain collections of ideas in them, among which are some that we refer to as their own bodies, this makes perfect sense. There is no body to move, for Berkeley. All that moving the body amounts to is being able, through an act of will, to be able to change your sensory ideas of where the parts of the body are located. (§27)
4. The fact that we have no power over them (they come and go independently of what our wills dictate). (§29)
5. By their appearance (they are clearer and more distinct, draw our attention more forcibly, and are better able to excite feelings of pleasure and pain, or attraction and aversion), and also by their manner of occurrence (they happen in certain regular patterns or sequences, eg., fire burns and heavy things fall down). (§30)
6. The law of gravitation is a description of the manner in which God produces ideas of bodies in us from moment to moment. The laws of nature are in general descriptions of the order in which God produces ideas. (Since God, being supremely constant, always produces ideas in the same way, these laws are never violated.) The only force in nature, therefore, is God, who acts by producing ideas of nature in us in accord with certain laws. (§30)
7. No. He thought that there is a causal argument that establishes that the existence of other finite minds is at least a likely hypothesis. Among our ideas of reality are ideas of other human bodies. And these human bodies appear to be moved by causes which indicate that they are actuated by distinct and separate intelligences. The most likely way to account for this, according to Berkeley, is to suppose that my ideas of these human bodies are caused by these other intelligences, albeit with God's concurrence. (§§145, 148)
8. By seeing a collection of ordered, regular, magnificent, beautiful, vast, detailed and harmonious ideas of reality, that testify to the ongoing activity of a supremely wise and beneficent agent responsible for creating them. (§§146-148)

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33
Hume, *Enquiry* IV
(Inductive scepticism)

1. Hume said "by the mere operation of thought." By this he seems to have meant that all we need to do is think about the two ideas being related, and we should be simply able to see, from comparing them with one another as regards to their content, that they stand in the relation. Or, if we can't simply see how they are related, we should at least be able to demonstrate this fact. (*Enquiry* §4 ¶1: Steinberg, p.15)
2. Even though the matter of fact is true, it is not necessarily true. We can imagine it turning out to be false and the thought of its falsity is not incoherent or self-contradictory. But we cannot consistently think that equals added to equals are unequal. So the relation of ideas is not just true, but necessarily true. Unlike the matter of fact, it could not even possibly be false. (4.2: 15)
3. The present testimony of the senses, memory, and causal inference (i.e. inferring past causes from presently sensed or remembered effects, or past, present or future effects from presently sensed or remembered causes). (4.3-4: 16)
4. Because we presume that there is a connection between our present experience of the watch and the prior existence of inhabitants. This connection is causal. We think that the watch must have been created by some person, and that it can only be present on an uninhabited island if some person left it there. (4.4: 16)
5. Experience that the one is constantly followed by the other. (4.6: 17)
6. (i) when we see a cause for the first time, we have no idea what effect will result from it until we witness that effect occurring. Similarly for witnessing an effect and not knowing what its cause was. The implication is that it is only experience of the effect actually following upon the cause that teaches us of the connection between the two, not deduction of the one from the other. (4.6-7: 17) (ii) Cause and effect are two different things, not one and the same thing. But where two different things are concerned, the affirmation of the existence of the one and the denial of the existence of the other can never amount to a contradiction. To say P exists and P does not exist is a contradiction and impossible. But to say C (say, a cause of some kind) exists and E (say, an effect of some kind) does not exist can never make a contradiction. But if there can be no contradiction in having C and not having (or coming to have) E, then the existence of E can never be deduced from that of C by deductive reasoning. The only way to discover the connection is by experience and not by analysis and deduction. (4.11: 19). Hume later (4.20: 23) added a third reason. It seems that we never infer the existence of a causal connection from just one case, but usually require a number of "experiments" before we come to accept it (any exceptions are drawn under circumstances that very closely resemble those of causal relations we already have come to trust). But if the connection between cause and effect were deduced by reason alone, we ought to know it after just one occurrence. Later occurrences merely repeat the information given in the first one, they do not add to it. This is an indication, therefore, that we do not deduce the

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effect from the cause or vice versa, but from the experience of frequent, regular conjunction between two events.

7. Because it is only through experience that they learn that certain bodies return to their previous shape after distortion, that others stick together in certain ways, that all bodies gravitate toward one another, and that motion is transmitted upon impact. So anyone who relies on these principles in predicting what will happen next is still drawing inferences from past experience. (4.11-12: 19)
8. It does not tell us how experience leads us to this conclusion. (4.14: 20)
9. That there is no reasoning or process of understanding (by which, as becomes clear later, he means any intuitive or demonstrative relation) that leads us from our experience that one type of object is regularly followed or preceded by another type to the conclusion that the one is the cause or the effect of the other. (4.15: 21)
10. It informs us of what happened in the past (for instance, that one type of object has always preceded or followed another in the past). It does not inform us of what will happen in the future (for instance, the objects will continue to be so related in the future). (4.16: 21)
11. Yes. (4.16: 22). (He just did not think that this inference can be justified by intuition or demonstration.)
12. Yes. (4.16: 22)
13. No. (4.16: 22)
14. Because the course of nature could change (and there is no contradiction in this possibility. (4.18: 22)
15. This begs the question. Why should we suppose that the fact that things have been a certain way in the past sets any rule for how they will continue to be in the future? This is precisely what is at issue and it is only if we presuppose that it is not at issue and that the future must resemble the past that the argument of this question can have any force with us. (4.21: 24)
16. That causal reasoning cannot be based on any difficult, obscure or sophisticated thought process. (4.23: 25)

34
Hume *Enquiry* V.i, IX
(Naturalism)

1. The love of truth. (*Enquiry* §5 ¶1: Steinberg, p.27)
2. Because our natural instincts will induce us to act even if the sceptical philosophy shows us that we have no rational justification for choosing to act as we do. (5.2: 27)
3. Because all the being would see is one event following another. It would not see any connecting link between events that pulls one after the other, and it could not justly infer that simply because one event has occurred after another on one occasion in the past that therefore the first caused the second. (5.3: 27)

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4. It supposes that the existence of the one implies the existence of the other. (5.4: 27-28)
5. The fact that we are so constituted that the repetition of a particular activity induces us to further repeat that activity. In other words, the fact that we are creatures of habit. (5.5: 28)
6. Nothing. All we are in a position to declare is that when a certain sequence of events has been repeatedly observed to take place in the past, the appearance of one of those events will lead us to habitually think of the others and suppose them to exist. But we have no idea why witnessing a repetition should have this effect on us. All we know is that this effect does regularly arise in us as a consequence of having repeatedly witnessed a certain sequence of events. (5.5: 28)
7. When we infer causes from effects, we will often hesitate to infer a causal connection from just one experience of the cause being followed by its effect. We typically demand evidence of a repeated and constant conjunction between the two types of events. This is a feature of our thought that cannot be explained by supposing that the inference depends on reasoning, that is, on intuiting the content of ideas, discerning relations between ideas given their intuited content, and demonstrating consequences based on our intuitions of these relations. Repetition of the same ideas over and over again does not add anything to their content and so cannot enable us to draw any conclusion by means of reasoning that we could not draw the first time we witnessed the ideas, prior to any repetition. But if we suppose that causal inference is due to custom, then that explains why repetition has such an influence on us. The repetition is what establishes the custom. (5.5: 28)
8. (i) We have to have an impression of some other object given to us by our senses or an idea of it delivered by memory, and (ii) we have to have in the past experienced some customary conjunction between this other object and the object that we believe to exist. (5.7: 30)
9. Our natural instincts (as opposed to our reasoning ability). (5.8: 30)
10. By showing that it accounts for how animals come by their beliefs in the existence of unperceived objects. Since animals bear a degree of analogy to human beings, showing that something is the case for animals supports the likelihood that it is the case for human beings as well, just as showing that blood circulates in gorillas and chimpanzees establishes a likelihood that it does in human beings as well. (9.1: 69-70)
11. Young animals appear not to have this knowledge and seem only to acquire it through experiencing the appropriate objects. (9.2: 70) Also because animals may be trained to do or not do things by experience of rewards and punishments, even if those things are contrary to their natural instincts. (9.3: 70)
12. They don't appear to be smart enough to formulate such arguments. (9.5: 70)
13. Because reasoning is difficult to do and often fails us because we do it too slowly or improperly. The business of drawing causal inferences is too important for everyday life, and needs to be done too quickly to be trusted to such a slow and fallible operation as reasoning. Custom is quicker, broader, and easier in its application. (9.5: 70-71)

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14. When we have lived for a while and gained a broad experience of many different sorts of things, we become accustomed to expect that more or less the same thing that has happened in certain circumstances in the past will happen in those circumstances in the future. That is, we form a sort of general habit. In contrast to our specific habits, which lead us to associate some specific type of thing with some specific other type of thing (e.g., stones with falling, fire with burning, water with suffocating, etc.) this general habit leads us to associate any thing in general with whatever has once been observed to follow from that thing. We are led to form this habit because, by and large, that is just what we experience. Nature is generally uniform in its operations, and it is less likely that, when the same circumstances recur, something different will happen than that the same sort of thing will happen again. So, the short answer is that a broad and general experience of an underlying uniformity in nature leads us to form this habit. (Note 20: 71n)
15. Instinctive beliefs lead animals to do things that much exceed the degree of intelligence we would be inclined to ascribe to them based on a broad survey of what they are able to learn. Moreover, it is not altered by experience. (9.6: 72)
16. Because our own tendency to draw inferences based on analogy to what we have witnessed in the past is itself based merely on an animal instinct. (9.6)

35
Hume, *Enquiry* II-III, V.ii
(Belief)

1. All the more lively perceptions of the mind. (*Enquiry* §2 ¶3: Steinberg, 10)
2. It must work with the materials supplied to us by our senses and experience and cannot originate any absolutely new simple ideas. (2.4: 11)
3. Unlike Descartes, Hume thought that this idea can be created by simply taking impressions of our mental, moral, and physical capacities and multiplying them. (2.6: 11)
4. It implies that we do not have the ability to create ideas that do not copy impressions we have previously received. (2.7: 12)
5. By investigating what the words employed in metaphysical disputes stand for. Metaphysical terms should stand for ideas, and all ideas must have been copied from impressions. If we can't identify the original impressions, we can dismiss the terms as meaningless. (2.9: 13)
6.
    a) causality (effect to cause)
    b) resemblance
    c) causality (cause to effect)
    d) contiguity (in space)
    e) contiguity (in time) (3.3: 14)
7. When we believe, there is some sentiment that attaches itself to the idea of what we believe. This sentiment must be excited by natural causes and is not within our control. (5.11: 31)

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8. Because if it did, the imagination, which can alter the content and order of ideas as it sees fit, could produce belief at will, and this is not the case. (5.12:)
9. There must be a resemblance between the picture and the friend, and the picture has to be actually seen or remembered. (5.15: 33)
10. He considered this to be evidence that the relation of resemblance can enliven belief in an object — or at least draw our attention to the resembled object more readily by communicating vivacity from a presently sensed object (the statue) to a resembling idea (the saints). "Sensible objects, have always a greater influence on the fancy than any other; and this influence they readily convey to those ideas . . . which they resemble." (5.16)
11. Because we receive impressions of the contiguous regions. A thought of the contiguous region would not produce a lively idea, though it would lead us to think of home. But an actual impression produces a lively idea. (5.17: 34)
12. Just as, when you have an impression, that impression both brings to mind any ideas you may have that resemble it or are of objects contiguous to it, and enlivens those ideas, so, when you have an impression, that impression both brings to mind ideas of its effects and its causes and creates a belief in the past or impending existence of those causes and effects. (5.18: 35-36)
13. The fact that we are naturally so constituted as to habitually believe objects to continue to occur in succession if they have customarily occurred in that way in the past. (5.20: 36)
14. Reason takes years to develop, is not as infallible in its working and takes longer to figure out what to do. (5.22: 37)

36a
Hume *Enquiry* VI
(Probability)

1. No. (*Enquiry* §6 ¶11: Steinberg, 37)
2. Our ignorance of the true cause of events. (6.1: 37)
3. A chance event is one of a number of alternative outcomes that are considered equally capable of occurring in a given circumstance. (6.3: 38)
4. We believe that event will occur. (6.3: 38)
5. That is just how we are made. Hume attributed the origin of the belief to an "inexplicable contrivance of nature." (6.3:38)
6. By appeal to the operation of hidden causes (typically, some small circumstance that needs to be present or absent for the cause to be followed by its effect but that typically goes unnoticed). (6.4: 38)
7. We imagine all the different sorts of events that have been observed to follow from that cause in the past. But we also imagine those events in their proportions. That is, if one type of event has only been observed to follow from the cause once, we imagine just one

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of it, where if another type of event has been observed to follow from the cause a hundred times, we imagine one hundred copies of it. We then believe that event which is imagined most often, with a degree of belief that is proportional to its frequency in the total sample. (6.4: 38-39)

36b
Hume, *Enquiry* VII
Necessary Connection

1. Those of the mathematical sciences are clear and determinate. Hume attributed this to the fact that they copy impressions that are given in sensation, but it might be more accurate to specify that they copy impressions of vision and touch, that is, impressions of specifically spatial objects. Because the parts of space are permanent, it is at least possible to go back to look at spatial things a second time. Things that exist only in time are not like this. Once the time has passed, we can't go back to compare them with other things or check our memories. Hume thought that those ideas that copy our passions and our impressions of reflection of the operations of our own minds are ambiguous, and it is largely for the reason that they exist only in time. Though these latter impressions are quite distinct, they are difficult to attend to when they occur and cannot be simply be recreated at will and this makes them hard to contemplate and reflect upon. (7.1: 39-40)
2. We need to identify and examine the impression or impressions from which these ideas were first derived. (7.5: 41)
3. Just that the cause is followed by its effect. But we do not witness any power in the cause in virtue of which it brings its effect about. We just see that the effect follows after it. (7.6: 41)
4. It means that our senses cannot be telling us anything about any power in causes in virtue of which they are enabled to bring about their effects. For, if we knew of such a thing, we ought to be able to deduce the effect from it and so predict what the effect will be in advance. (7.7: 41-42)
5. Since they are complete in themselves, contemplating them can't tell us about any other thing. But if a body has powers, those powers are abilities to bring about changes of certain kinds, either in that body itself or in other things. So they involve a reference to something else (another thing or a changed state of the given thing). Thus, we cannot hope to deduce what powers a body will have simply by contemplating its sensible qualities. (7.8: 42)
6. Because we sense in ourselves an ability to move our limbs or make out thoughts come and go through willing it to happen. In experiencing volition we therefore appear to be experiencing a power. (7.9: 42)
7. Just that certain kinds of volitions are regularly followed by certain kinds of body motions. But we have no idea of why. This means that we have no idea of any power in the will that enables it to move the body. (7.10: 42-43)

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8. That the feeling and the power to move the limb must be two different things (because obviously the feeling doesn't work in this case to bring about motion). (7.13: 43)
9. To know what it is in the cause that enables it to bring about a particular effect. (7.17:43)
10. That we have no conception of any power in us to create ideas. Our feeling of our own will when we desire to have a certain thought is not a sensation of a power, but merely a peculiar feeling that is regularly followed by a certain effect (the production of an idea). (7.17: 43)
11. The uneducated think that those events that regularly happen before other events just are the forces or powers responsible for producing those events. (Even though they have no idea of how the earlier event produces the later one, the fact that the two regularly occur in succession makes their sequence seem so natural that the uneducated think that no special explanation is required, and that is just the way things are.) However, when they encounter extraordinary events in nature, which by definition do not have any regularly occurring antecedents, they turn to explain them by supposing they were produced by some unseen intelligence. But philosophers, who have inquired into how causes actually work to bring about their effects, and have found that they cannot identify any force or power in causes that enables them to make their effects happen, have come to see even familiar events as being just as inexplicable and miraculous as supernatural events, and so they have been led to suppose that these "natural" events, too, must all be produced by some unseen intelligence. (7.21 46)
12. It insults the power of God to suppose that he could make the universe so that it would run on its own without constant intervention (7.22: 47); it is simply too extravagant a hypothesis given the evidence that can be cited in its support (7.24: 47-48); and, most significantly, it ignores that the force or power in minds, through their volition, to bring things about is just as inexplicable as any force or power in natural causes to bring about effects (7.25: 48).
13. He examined single instances of the operation of one body on another; the operation of the mind on the body; the operation of the mind on its ideas (7.26: 49). Though he mentioned that there is one remaining source that still needs to be examined at 7.27: 50, he did not identify it. However, it becomes clear from 7.28: 50 that the source is reflection upon our own passions and sentiments.
14. In the latter case we suppose that the two events are conjoined as cause and effect whereas in the former we hesitate to do so. We also suppose in the latter case that the two events are necessarily connected. (7.27: 50)
15. It is not anything we discover in the cause, but rather a sentiment we experience in our own minds when we contemplate a cause that we have experienced to be frequently followed by its effect in the past: the purely subjective, internal feeling of being impelled by habit to form the idea of the effect. We confuse this sentiment in our own minds with a property of the cause, and think it is the cause that is bringing the effect about rather than our own minds that are calling up the idea of the effect. (7.28: 50)


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16. Just that the two have acquired a connection in our thought, not that there is a physical connection discernible between the two. The connection is only in us, between our thoughts, not in the objects. (7.28: 50)
17. The first talks about the objects involved in the causal relation (that the cause the one, among two constantly conjoined objects that happens first in the sequence), the second about its influence on the mind (that the cause is what, upon its appearance, determines the mind to think of the effect). But neither comes close to identifying a force or power in the cause in virtue of which it is enabled to bring the effect about. (7.29: 51)

37
Hume, *Enquiry* VIII
(Liberty & Necessity)

1. The uniformity, observable in the operations of nature, that is, from the fact that certain sorts of things are regularly observed to be preceded or followed by certain other sorts of things. (*Enquiry* §8. ¶5: Steinberg, pp.54-55)
2. Constant conjunction and a disposition of the mind to draw an inference. That is, the idea that a thing is necessitated is just the idea that it is of a sort that is regularly preceded by some other sort of thing, and of an impulse felt by the mind to infer the former from the latter on account of this constant conjunction. So the idea of necessity is not the idea of being made or forced to happen. It is just the idea of being regularly preceded by something else. (8.6: 55)
3. First, that similar human actions are constantly preceded by similar motives, so there is a constant conjunction between motive and action. Second, that as a matter of fact people cannot resist drawing inferences from a knowledge of motives to anticipated future actions, or from a knowledge of actions to the interpretation of motives for those actions. Since these are the two components of our idea of necessity, it follows that all people think that human actions are necessitated. (8.7 and 8.16: 55 and 59)
4. To discover the constant and universal principles of human nature, that is, what actions can be expected to follow from what passions, and what passions are followed by what actions. (8.7: 55)
5. It tells us what actions, expressions, and gestures are preceded by what motives, and so allows us to anticipate their actions from a prior knowledge of their motives, even when they try to convince us that they intend to act differently. (8.9: 56)
6. That particular human actions be necessitated in the sense of being regularly preceded by particular motives. If there were no regularity in human behaviour, it would be impossible to predict what anyone would do next, and so impossible to say that someone with a vested interested in an outcome would act to achieve that outcome rather than behave altruistically. (8.9: 56)
7. The diversity of characters, prejudices, and opinions. (8.10: 57)
8. Because human actions do not exhibit any greater degree of irregularity than is observed in occurrences in inanimate nature, and the irregularity in nature does not induce us to reject

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causal determinism. So, by parity of example, it ought not to induce us to accept determinism of human actions either. In somewhat more detail, there are just as many or more occurrences in inanimate nature that do not appear to us to be the consequence of regularly occurring antecedents. When we encounter these sorts of things in nature, we do not abandon our belief that events are caused. Instead, we either think that most events are caused, that causal laws are generally true, and that the anomalies are due to some weaknesses in the causes to always bring about their effect, or else we think that we have simply failed to identify all the circumstances and that a more exact scrutiny of the case will uncover some previously unnoticed regularity. The former view is the (incorrect) view of the vulgar, whereas the latter view, which is strictly necessitarian, is the view of philosophers and is proven by constant experience of investigating anomalous cases and finding that we do always discover some hidden circumstance, so that there appear to be no irreducibly stochastic occurrences in nature. (8.12-15: 57-58)

9. Character and sentiment. (8.18: 60 Elsewhere, Hume specified that actions are considered to be morally good or bad — virtuous or vicious, as he put it — depending on the motives people have for performing them. These motives are always sentiments and sentiments are broadly determined by ingrained character traits. Some people are more quick to anger, for example.)
10. All they mean to deny is that there is anything in them that forces them to act as they do. They deny this because they feel no such force or power. But they think (wrongly) that there is a force or power in natural causes that makes the effects of those causes come about. This leads them to suppose that they have a freedom that is not to be found in inanimate nature. As a matter of fact, however, there is no force or power in natural causes and all there is to necessity is just constant conjunction of antecedent and consequent types of events. And there is the same sort of constant conjunction between human motives and actions. (8.21: 61)
11. That those actions are consequences of a prior will to perform them (8.23: 63)
12. Criminal principles of the mind. In other words, the motives or reasons people have for performing them. In themselves even actions that have very bad effects can be innocent if they were not done deliberately. (8.29-30: 65-66)
13. Because we only consider actions to be evil when done from evil motives. If you deny that there was a motive that determined the action, you make the agent innocent, just as if they were forced by some external cause to do the action, did the action out of ignorance or accidentally, or did the action out of haste and without premeditation. (8.29: 65-66)
14. The interest in the peace and security of society and the interest in public detriment and disturbance. Moral sentiments of approbation arise when we contemplate personal traits of character that advance the former interest, whereas moral sentiments of disapproval arise when we contemplate personal traits of character that advance the latter interest. (8.35: 68)
15. He claimed that our sentiments of praise and blame are not determined by reflections on the ultimate cause of actions but are instead aroused by the characters and motives of the agents who immediately performed them. Even if you have an “enlarged view”

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according to which all the evil in the universe is for the best and those who deliberately do evil are necessitated to have their evil motives, you will still blame those who deliberately do evil. This is because our minds have been so formed that we naturally feel moral sentiments when contemplating the characters and motives of the agents who performed good or bad actions. (8.35: 68)

16. He claimed that it is a mystery which mere human reason is unable to resolve. This is only a valid answer if it really is a mystery, that is, if the alternative "system" that human actions are not necessitated but freely chosen doesn't resolve the mystery either. Hume claimed that it doesn't because even on the alternative view it is supposed that God knows all ("prescience") and it is not easy to understand how your actions can be free if God knows thousands of years before you are born that you will do them. (8.36: 69)

38
Hume on Miracles
(*Enquiry* X)

1. They were supposed to prove that he was on a mission from God. Just as an ambassador carries letters of introduction from the government to a foreign country to serve as credentials, so miracles, which only God can perform, serve as signs that a particular person is God's ambassador. God is supposed to really be the one working the miracles at the behest of the prophet, to prove the prophet's mission. (*Enquiry* §10. ¶1: Steinberg, p.72)
2. Because Christianity is ultimately based on the sensory experiences of the Apostles, who purportedly witnessed the miracles that prove that Christ was God. And a report of someone else's sensory experiences, handed down by a tradition (and so converted to hearsay) can never be as certain as your own sensory experiences. (10.1: 72-73)
3. Because it can never be reasonable to accept a conclusion if there is stronger evidence for its opposite ("a weaker evidence can never destroy a stronger"). But the evidence for a scriptural doctrine can never be stronger than the evidence of one's own senses (see 1 above). (10.1: 73)
4. If God's grace (i.e., the "immediate operation of the Holy Spirit" bringing something into one's breast) forcibly compelled someone to believe against all reason, in the sort of way Bayle alluded to. (10.1: 73)
5. A proof is a causal inference founded on a uniform past experience of a particular cause always being conjoined with a particular effect. A probability is a causal inference founded on an experience of a particular cause being conjoined with a particular effect in most but not all cases. (10.4: 73-74)
6. In both cases we are guided by past experience of a constant or regular conjunction between events. In the former case it is hearing a report and ascertaining that the report is true, in the latter it is between witnessing an object and witnessing its cause or effect. (10.5: 74)
7. We balance the circumstances of the case that are indicative of the truth of the testimony against those that are indicative of its unreliability and we incline to the side that is

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stronger, but with a degree of certainty proportioned just to the amount by which the evidence in favour of the stronger side exceeds that in favour of the weaker. (10.6: 75)

8. Greater trust arises if there are a number of independent witness (i.e., witnesses who have not communicated with one another before hand) all giving the same story, if the witnesses are known to be honest, if they have no interest in the case, if they are expert in the field and were in a position to make clear observations, if there is no chance of their having being deceived, and if they would have a great deal to lose were they discovered in a lie or proven to have been duped. Lesser trust arises if there are few witnesses, if they communicated with one another in advance, if they contradict themselves or one another, if they have something to gain by testifying in the way that they do, if they are known to be dishonest or have nothing to lose by being detected in a lie, if they have no expertise in the area, were not in a position to make accurate observations, or could easily have been duped, or if they deliver their testimony with too much hesitation or too much confidence. Other circumstances might be mentioned as well. (10.5, 7: 74, 75)
9. Because an unusual event is one that our own experience tells us does not normally occur in those circumstances. Thus, when we hear anyone testify to such an event, their testimony, which ought to make us inclined to believe the event occurred, conflicts with our own experience, which makes us inclined to believe the event likely did not occur. The more unusual the event, the greater the conflict. Since conflicting pieces of evidence cancel one another in proportion to their strength, and since the more unlikely the event, the greater the conflict with our own experience, a larger portion of the strength of testimony to very unusual events must be devoted to cancelling the evidence of our experience, and that means less strength is left over to incline us to believe. (10.8: 75)
10. Because, by definition, an unusual event is one that turns out contrary to what most of our experience tells us it should. This means, therefore, that our experience gives us a strong inclination to suppose that the event turned out in a different way, which is to say that we form a suspicion that the witnesses are either deceived or attempting to deceive us. If, however, our experience also goes to prove to us that witnesses of that sort are likely to be telling the truth, then the two inclinations cancel one another out, and we are left not knowing whether to distrust our natural assumptions about what most likely happens in that sort of case, or to distrust the witnesses to the unusual event. If one of these options is even slightly more likely than the other, we will opt for it, though with a great diminution in the degree of our conviction. (10.8: 75)
11. Because a "proof," as Hume defined the term, is just a uniform past experience whereas a miracle is by definition what is contrary to a uniform past experience. Thus a miracle always has a proof (i.e., a uniform past experience telling against it). For example, if it is a miracle that a bush burns and is not consumed, this is because all our past experience, without exception, tells us that wood is consumed in fire. If all our past experience did not show that wood is consumed in fire, then this event would not be miraculous, but merely marvellous. But if all our past experience does show that wood is consumed in fire, then that past experience constitutes a "proof" against the occurrence of the miracle. (10.12: 76-77)

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12. It would have to be the case that it would be more likely that events occurred as the witnesses to the miracles described than that they are lying or were duped. But since the witnesses are reporting the occurrence an event that is contrary to what a uniform past experience tells us should have occurred in those particular circumstances, we already have a proof, from past experience, against the occurrence that they are testifying to. It is not possible that we could have a stronger proof of the reliability of the witnesses since a stronger proof would have to have more evidence in its favour, and it is not possible to have a more than 100% of the evidence (i.e., a uniform experience of a correlation) in favour of a claim. The best that we could hope for is that we could have a proof of the credibility of the witnesses that is just as good as the proof we have against the occurrence of the event they report. This could be the case if all our past experience were also to show that those sorts of witnesses have never been deceiving or deceived. But even if such a defence were available (and Hume argues in X.ii that it never has been), all that would do is succeed in opposing one uniform proof to another. The two proofs would cancel one another out, inducing us to doubt both the credibility of the witnesses and the certainty of our past beliefs to an equal extent, so that we would be unsure which was right. (10.13: 77)
13. Miraculous events evoke surprise and wonder in us, which are agreeable sentiments that the mind likes to indulge in. Because of this the mind has what Hume called "a sensible tendency towards belief" in miraculous events. That is, its natural desire for pleasure pushes it in the direction of believing the miraculous tale (because such belief would increase its sentiments of awe and wonder). And even if it cannot push us so far as to make us actually believe the event, it makes us want to recount it to others and try to convince them of it (so that we can experience surprise and wonder at second hand, by witnessing it in others). (10.16: 78)
14. Miracle stories are still told all the time. But they are generally exploded because not all people are as easily taken in as they once were. (10.20-23: 79-81)
15. Because just as we have no conception of any force or power in any other cause adequate to allow us to predict ahead of time what its effect will be, so we have no conception of the nature of God adequate for us to determine what God will or will not do. The only way we can know this is after the fact, through either our own experience or reports of the experiences of others, and this throws us back on having to base our belief in miracles on the testimony of witnesses rather than on a contemplation of the necessary effects of the divine nature. (10.38: 89)
16. Bayle's. Locke believed that the testimony of witnesses to the occurrence of miracles could give us reason to suppose that a particular revelation had come from God and could so establish a foundation for faith. But Hume denied that any testimony could be adequate to establish that a miracle has occurred, and maintained that the testimony that has in fact been given for the historical miracles of Christianity falls well short of the standard that would be needed even to lead us to suspend disbelief. He at least paid lip service to Bayle's conclusion that belief is accordingly based on nothing more than God's graciously (or "miraculously" as he put it) compelling some to believe even against all the evidence. (10.41: 90)

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39
Hume, *Enquiry* XII
(Scepticism)

1. The recommendation that we begin our philosophical inquiries by doubting all of our opinions and even all of our cognitive faculties until such time as we have been able to conclusively demonstrate their validity by deduction from absolutely certain first principles. (*Enquiry* §12. ¶3: Steinberg, pp.102-3)
2. He maintained that there is no first indubitable principle upon which all our beliefs can be based, and that even if there was we could not make any use of it, because as long as we distrust our cognitive faculties we cannot make any certain deductions from the first principle. (12.3: 103)
3. A doubt of the truth of our previous opinions and the reliability of our cognitive faculties that arises from a profound inquiry into the basis of those opinions and the manner of operation of those faculties. (12.5: 103)
4. The trite topics are the classic perceptual relativity arguments, such as the ones found in the "modes" of the Ancient sceptics. Hume thinks these topics are only adequate to prove that the evidence of the senses must be relativized to circumstances and subjected to the corroboration of the other senses and of reason. (12.6: 104)
5. The images presented by our senses. (12.8: 104)
6. Something distinct from the images or perceptions presented to us by our senses that can remain the same even when those impressions change. (12.9: 104)
7. The mind itself (as it in fact does when dreaming), or some other spirit, like a God or demon, or some alien entity that we can't even conceive of. (12.11: 105)
8. Because all we ever experience is the perceptions themselves, not the objects that cause them. (And, of course, if you have never experienced the cause of an effect in the past, then none of your current experiences of the effect can lead you to draw any inferences about what it is. The identity of causes can never be deduced ahead of time, simply by inspecting their effects.) (12.12: 105)
9. That they exist only in the mind as its perceptions, and not in bodies. (12.15: 106)
10. Because we cannot conceive how there could be such a thing as shape or size without colour or solidity, and we cannot conceive solidity without conceiving of either some tangible quality or moving colour patches being turned back by another colour patch. Thus, the notions of pure extension and pure solidity apart from all sensible qualities make no sense. Insofar as we understand anything by these notions, therefore, they refer to something that can only exist where the sensible qualities exist, namely, in the mind. (12.15: 106)
11. The fact that the ideas of infinitely divisible space and time are fundamentally incoherent and generate paradoxes. (12.18: 107-8)
12. The popular objections appeal to the existence of widespread disagreement about matters of fact, be they between different times and cultures, different people, the same person at

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different time, or different faculties of the same person at the same time. They also appeal to the fact that we have often made mistakes in our judgments of matters of fact. Hume supposed that our instinctive tendency to draw inferences about matters of fact in light of our past experience is too strong to be blocked by these sorts of considerations. While a recognition of conflict and past error over matters of fact might give us an academic appreciation of the weakness of our powers of inference, we will be instinctively impelled to go ahead and use those powers anyway. Hume may also have wanted to suggest that as long as our natural instincts induce us to make judgments about matters of fact that turn out to be most often correct (that is, that allow us to subsist, and get by in life), the relatively fewer number of cases where we have been misled will not be able to induce a natural distrust of our instinctive inferences. As long as our inferences from cause and effect have generally proven to be reliable in the past, they will have the weight of the evidence of experience on their side and the contrary cases that the popular sceptical objections draw to our attention will not be numerous enough to "destroy that evidence." (12.21: 109-110)

13. That any conclusions we draw about matters of fact that lie beyond the reach of our senses and memory are based on nothing more than the observation of a constant conjunction in the past combined with a natural instinct to transfer that experience to the future, and that this instinct could possibly mislead us since there is no good reason why the future should resemble the past. (12.23: 110)

14. Induce a temporary surprise, confusion, and dismay by showing us that there is no foundation for beliefs we nonetheless must have and are naturally compelled to have (12.23: 110-111), but also give us a more lasting sense of the weakness of the human knowing powers (12.24: 111), and a disposition to restrict our knowledge claims to matters closely analogous to those we have experienced in the past (12.25: 112).

15. They will lead dogmatic reasoners to be more diffident of their conclusions and more tolerant of the views of others (12.24: 111), and lead us all to confine our investigations to topics that better fall within our capacities and refrain from distant and high inquiries (12.25: 112).

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