In *Enquiry* XII Hume surveyed the major sceptical arguments and drew some conclusions about their efficacy and their implications. In the process, he clarified his own position on scepticism. His survey ranged over three main topics: (i) sceptical arguments against the testimony of the senses for the existence of an external world (arguments against the type of knowledge Locke had called “sensation”), (ii) sceptical arguments against the reliability of our intuitions and demonstrations of relations of ideas (arguments against the types of knowledge Locke had called “intuition” and “demonstration”), and (iii) sceptical arguments against our inferences concerning matters of fact that lie beyond the reach of our current sensation or memory (arguments against our presumption to know what experiences we will likely have in the future or would have had under other circumstances).

Hume had not previously said anything about the former two topics in the *Enquiry*, and while he had surveyed the third in some detail, he had also been concerned to provide a naturalistic answer to it. However, Hume’s naturalism does not provide a complete answer to the sceptical arguments on any of these topics. As it turns out, this is a good thing, for sceptical arguments have a certain utility. They can mitigate our dogmatic impulses and make us more tolerant of the beliefs of others, and they can make us reluctant to accept any claim that bears too little analogy to matters we have ourselves experienced in the past. In the process of doing this, sceptical arguments can actually make us more sober and “rational” in our inferences.

It is ironic that sceptical arguments, which attack our claims to know, should serve to make us wiser and more rational in our inferences. But a similar result has already been remarked upon in connection with Locke’s views on toleration. (An appreciation of how little anyone can know for sure can do more to convince everyone to tolerate everyone else’s beliefs than any direct attempt to recommend toleration as a virtue.) And it is very difficult for a naturalist like Hume to explain how we could come to be rational without offering some sort of indirect account. The difficulties that Hume’s naturalist account of belief has with accounting for what we would consider to be wise or “rational” belief are nowhere as evident as they are in the essay on miracles. In that essay, Hume drew what is fundamentally a normative conclusion: that no testimony *ought* to convince us of the truth of a miracle story. (Or, as was said in the previous chapter — with studied ambiguity — that no testimony “is” adequate to convince us that a miracle has occurred.) But Hume was also forced to admit in *Enquiry* X.ii that testimony nevertheless *does* lead us to believe in miracles “upon account of that very circumstance [that] *ought* to destroy all its authority.” The strong sentiments of surprise and wonder excited by the miracle story reflect vivacity back on their causes, and enliven those ideas as well. But if we (or at least some of us) *do* believe in miracle stories, with what right does Hume condemn that belief as one we *ought* not to hold? It cannot be because he thought that beliefs induced by sentiment are irrational and ought to be rejected for that reason. For his point in *Enquiry* IV and V was that *all* belief is based on sentiments of one sort or another, and that *no* causal inference has any rational basis. The tendency to suppose that what has always been observed to happen in those circumstances in the past will continue to happen in them in the future is no less an irrational and purely instinctive tendency of our nature than is the tendency to believe whatever arouses agreeable sentiments. How, therefore, could Hume, insofar as he restricted himself to giving a purely naturalist account of the workings of the mind in causal inference, make
normative claims and condemn one natural belief-forming mechanism as illegitimate, another as legitimate? How, especially, could he do this if he denied that the operation is in any way governed by reason?

As it turns out, it is through taking a particular position on the influence of sceptical arguments that Hume was able to work out an answer to this problem.

**QUESTIONS ON THE READING**
1. What is antecedent scepticism?
2. Why, according to Hume, is Cartesian scepticism incurable?
3. What is consequent scepticism?
4. What are the “trite topics” employed by the sceptics in all ages, and what is Hume’s estimate of the value of these topics?
5. What do we take external objects to be when we follow the blind and powerful instinct of our nature?
6. What does the slightest philosophy teach us that external objects are?
7. What could cause the perceptions of the mind besides external objects?
8. Why can experience not tell us what causes our perceptions?
9. What did Hume mean by calling the sensible qualities secondary?
10. Why must the primary qualities exist only in the mind?
11. What is the chief objection against all abstract reasoning?
12. What are the popular objections to our knowledge of matters of fact and why are they weak?
13. What do the philosophical objections to our knowledge of matters of fact assert?
14. What is the most that a Pyrrhonian can manage to do with his or her arguments?
15. What are the two main useful results that might follow when excessive scepticism is in some measure corrected by common sense and reflection?

**NOTES ON THE READING**

Scepticism with regard to the senses. Hume divided the arguments for scepticism with regard to the senses into “trite topics” and “more profound arguments.” The “trite topics” appeal to the unreliability of sensory experience in order to prove that we can never trust what our senses tell us about the nature of objects. The “more profound arguments” appeal to the subjectivity of sensory experience in order to prove that the senses give us no good reason for believing that there are any such things as objects in an external world. Hume did not consider the “trite topics” to be adequate to establish their conclusion. But he took the “more profound arguments” more seriously.

We are all naturally inclined to suppose that there is an external world, he observed. But this natural inclination disposes us to imagine the external world to be filled with our own sensory impressions. We are naturally inclined to suppose that the shapes and colours we see are not perceptions in us, but qualities existing outside of us on the surfaces of bodies. We are naturally inclined to suppose that the tastes we taste are not perceptions in us, but qualities permeating the flesh of the fruits and animals we eat. And so on.

However, this natural inclination is simply false, and the “slightest philosophy,” as Hume put it, suffices to teach us that it is false. When changes occur in us — when we become ill, or old, or when we simply shift our position or do something as trivial as pressing the side of an eyeball — the impressions we experience change. Colours change for people who have jaundice, tastes for people who have a cold; the sharpness of outlines diminishes as we grow older; the sizes and
shapes and even the numbers (single or double) of objects change when we change our position or press on the side of an eyeball. The only conclusion we can draw from these experiments is that what we experience by means of our senses must be perceptions in us, not the qualities of objects existing outside of us. For, were we perceiving qualities of those objects, what we perceive would only change when the objects change, not when we change.

But once we have been led by this argument to draw a distinction between perceptions and objects, and to say that all that we ever experience through our senses are our own perceptions and not the qualities of objects outside of us, then it becomes impossible to offer any good reason for believing in the existence of external objects. After all, the only ways we can know of the existence of objects are by present sensation or memory or causal inference. But if all we perceive and all we ever have perceived are our perceptions, then we cannot know of the existence of external objects by present sensation or memory. And if the only way to draw an inference from effect to cause is after the fact — that is, after first having perceived the effect being preceded by the cause on a number of past occasions — then the only inferences we can draw from effect to cause are inferences from perceptions to other perceptions. We cannot have any basis for drawing an inference from our perceptions to external objects that we have never perceived. In the absence of any experience, the supposition that there are external objects resembling our perceptions is no more than a wild hypothesis, on a par with the hypotheses that there are external objects only partially resembling our impressions, or that there are external objects that in no way resemble our impressions, or that all our perceptions are caused by ourselves or by God.

Thus, our belief in an external world is patently false, insofar as it is based on natural instinct (which inculcates this belief in an unacceptable form), and groundless insofar as we seek to base it on an inference from the testimony of our senses.

Hume concluded his exploration of this topic by mentioning a second “profound argument,” which he attributed to Berkeley, whose arguments “are in reality merely sceptical” though “otherwise intended.” This is the argument that the primary qualities of bodies — their extension and solidity and the various ways their extension and solidity is modified as shapes, sizes, textures, and so on — cannot be separated from the sensible qualities of colour and felt pressure or pain. This is proven by the fact that the one set of qualities cannot be conceived in abstraction from the other. But it is universally allowed by all modern philosophers that the sensible qualities exist only in us and not in objects outside of us. If, therefore, the primary qualities cannot be separated from the sensible, then they, too, can only exist in us and if external objects exist, they are left without any qualities that they could possibly bear, unless those qualities are something totally inconceivable. And to affirm the existence of something we cannot even conceive is “a notion so imperfect that no sceptic will think it worthwhile to contend against it.”

Scepticism with regard to reason. There are two types of reasoning for Hume: abstract reasoning, which corresponds to what Locke would have called intuition and demonstration — that is, to the discerning of relations of ideas and the performing of demonstrations by appeal to relations of ideas — and reasoning concerning matters of fact. The latter form of “reasoning” is actually a product of natural instinct, if Hume is right, and therefore not really “reasoning” at all. At the very least, it is importantly distinct from demonstrative reasoning, insofar as it does not imply necessary validity or even rational justification. After all, as Enquiry IV showed, causal inferences are neither necessarily true (since they can be denied without contradiction) nor justified
by past experience (since the course of nature could change, and any appeal to the unlikelihood of such a change would have to be based on causal inference, and so would be caught in a circle).

The chief objection Hume leveled against abstract reasoning is that there are certain demonstrations that produce incoherent results. The principal demonstrative sciences are mathematics and geometry, which are devoted to examining relations of ideas involving space and time. Among the things that are demonstrated is that space and time must be infinitely divisible. Consider two circles, one inside the other and each drawn around the same center. Now consider radii going from the common center to points on the outer circle. Each radius coming from a point on the outer circle must cross the inner circle at a distinct point from the point crossed by any other radius. This is because two distinct points (the center point of the two circles and any point on the circumference of the larger circle) define a unique straight line, and no two distinct straight lines can intersect at more than one point. If a radius coming from a point on the circumference of the larger circle crossed the smaller circle at the same point as any other radius coming from any other point on the circumference of the larger circle, however close to the first point, the two radii would lie on top of one another for the entire distance from the smaller circle to the center of the two circles, in violation of the principle that two distinct straight lines cannot intersect at more than one point. From this it follows that for every distinct point on the circumference of the larger circle, there must be a distinct point on the circumference of the smaller circle. Even if we take a very small angle, made by drawing radii from the center, C, to apparently adjacent points, A and B, on the circumference of the larger circle, the lines CA and CB must cross the inner circle at distinct points. Now consider a yet larger circle, drawn around the original two circles. If we project the radii CA and CB out to points A' and B' on the surface of this yet larger circle, we will some distance along the circumference of the yet larger circle between A' and B'. By the same argument, radii drawn from points on the circumference between A' and B' to C must cross the inner circle at a unique point — a point falling between points already defined by radii coming from the middle circle. Now consider a yet larger circle, and then a yet larger circle. Since space is infinite, there is no limit to the size of the circles we can keep drawing, and no limit to the number of new radii we can draw between radii we have already drawn. But this means that there must be infinitely many points on the circumference of the small circle. Indeed, between any two points on the circumference of the small circle, take those points to be as close to one another as you want, there must be infinitely many further points.

Mathematicians accept this demonstration, and others like it, as a proof of the infinite divisibility of space. But, Hume claimed, infinite divisibility has paradoxical consequences. He did not have to go on at length about these absurdities and paradoxes. Bayle, in his article on Zeno (notes F and G) in the *Dictionnaire* had revived all of Zeno’s paradoxes of motion and composition and added a few new ones of his own, and Bayle’s discussion of those problems was widely known. And for some years, there had been a controversy in mathematical circles over the proper interpretation of the infinitesimal calculus, which many (including Berkeley, who wrote a mathematical treatise, *The analyst*, on the topic) found incoherent. The principal problem Bayle and Berkeley fixed on concerned how we are to conceive of the ultimate parts or points into which space is divisible. If a finite portion of the circumference of a circle is divisible into infinitely many parts, what is the size of each of those parts? The size can’t be zero, because if it was they would not add up to anything and so would not produce a line of any length. But can’t be any non-zero quantity, however small, because an infinite number of parts of any non-zero quantity, regardless of how small it is, adds up to something infinitely big, not to a merely finite line.
Berkeley’s objection to the calculus was that the infinitesimal was treated as simultaneously being both zero and non-zero — a patent contradiction.

Hume and Bayle claimed that the problem with time is even worse. (For reasons I won’t go into here, the infinitely divisibility of space implies the infinite divisibility of time on pain of making it impossible to have continuous motion. Motion would have to involve sudden jumps from points to widely separated points without crossing over the intervening points.) We consider time to be like a line. On this line, there is a moment that is the present moment, which divides the line into past and future halves. As time passes the point that is the present moment shifts forward, in the future direction. Imagine the “now” being like a pointer that is moving over the line of time from past to future, successively picking out each moment on the line as now. But now suppose that time is infinitely divisible. Then between any two moments on the line, however close (e.g., between 12:59.01 and 12.59.02) there are infinitely many moments that the moving pointer of the “now” has to pick out. But if there are infinitely many moments that the pointer has to pick out between 12:59.01 and 12:59.02, the pointer is going to have to move infinitely fast to touch them all before the 100th second between 12:59.01 and 12:59.02 has passed. But if it is going infinitely fast, it will far overshoot its mark. If the “now” moves infinitely fast, all of time will pass in an instant (even if there is infinitely much of it), and the world will end in a flash. If, on the other hand, the “now” does not move infinitely fast, then it will never make it over the infinitely many moments between 12:59.01 and 12:59.02 and it will be impossible for even a 100th second to pass.

In the process of expounding these difficulties, Hume made an interesting allusion to the Christian mysteries, in effect charging that mathematicians are no different than (indeed, perhaps worse than) theologians in their blind acceptance of certain fundamentally absurd doctrines.

No priestly dogmas invented on purpose to tame and subdue the rebellious reason of [humanity] ever shocked common sense more than the doctrine of the infinite divisibility of extension, with its consequences, as they are pompously displayed by all geometers and metaphysicians with a kind of triumph and exultation.

Hume’s point was that however clear and certain and direct the results of intuition and demonstration may at first appear, the fact that those demonstrations can lead to patently absurd conclusions, as is the case in our reasoning concerning the infinite divisibility of space and time, ought to make us re-think our confidence in the certainty of demonstration.

This is not to say that we should reject all conclusions of abstract reasoning, however. We ought, rather, to be equally sceptical of these sceptical arguments, for they lead us to a conclusion that is itself as contradictory as any they accuse the mathematicians of drawing: the conclusion that intuitions about the relations of our clearly and distinctly perceived ideas, or a chain of such intuitions (which is all that demonstration is) could ever lead to any false or contradictory conclusion. Intuitions just exhibit the content that is clearly present in our clear ideas, as those ideas have been received from original impressions. They really just repeat what we see in those ideas. And demonstrations are just chains of intuitions. Neither should lead us into error. But they contradict one another. The results we demonstrate from the infinite divisibility of space and time are counterintuitive. Since our conclusions from demonstrations and our intuitive sense of the absurdity of those conclusions have equal authority, all we can do is feel bewildered and continue to employ abstract reasoning, though with a degree of hesitation we did not previously feel.
Scepticism with regard to probabilistic inference. Hume divided the sceptical arguments against what he called “moral reasoning” (or what we would today call probabilistic or causal inference) into two groups: the popular and the philosophical.

Like the “trite topics,” which Hume mentioned when considering sceptical arguments against the evidence of the senses, the “popular objections” to probabilistic inference appeal to the inconstancy and unreliability of our powers. Our instinctive causal inferences have occasionally misled us, or have led us into conflict with the causal inferences drawn by people in other times and cultures, with the causal inferences drawn by others in our own society, and even with the causal inferences we ourselves have drawn at different times in our lives or on the basis of information from different senses. But, just as Hume considered the “trite topics” to be ineffective, so he dismissed the “popular objections.” The popular objections are, he claimed, “too weak” to overcome the force of the natural instincts impelling us to base our beliefs on past experience. Consequently, they can only have an influence in an academic setting, isolated from everyday affairs. As soon as we engage in the affairs of daily life, the vivacity communicated from impressions to ideas in virtue of past experience overcomes any hesitation and doubt.

Hume did not make it perfectly clear just why the “popular objections” are “weak,” but his references to the role played by instinctive inferences in allowing us to subsist and meet the needs of daily life suggest the following line of thought: Our instinctive inferences must turn out to be correct significantly more often than not (otherwise, we would not “subsist” very long or very well by relying upon them). Therefore, the few instances of error in these inferences that the “popular objections” draw our attention to are not sufficient in number to cancel our belief when we “weigh the evidence” in the way that a wise person thinks that we ought: that is, when we subtract the number of instances where our probable inferences have proven to be mistaken from the number of instances where they have proven to be reliable, and proportion our belief in subsequent probable inferences to the numbers that remain. The most that could happen is that proximity in time to a recent notable failure of probable inference, and the passions of dismay and disgust aroused by that failure, might induce a momentary, sullen, sceptical disposition. But this would not last as the needs of life force us to make renewed probable inferences that turn out to be correct, and so cancel the sceptical disposition.

In contrast to the “popular objections” to probable inference, the “philosophical objections” do not question the reliability of our probabilistic inferences, and they certainly do not attempt to get us to refrain from probabilistic inference or withhold assent from matters of probability. They rather seek to prove that, as reliable as those inferences may be, they have no basis in reason. (Enquiry IV has already shown why. Our probabilistic inferences are all based on the relation of cause and effect. All our knowledge of relations of cause and effect is based on past experience. But there is no rational justification for making the leap from what has been the case in the past to what will be the case in the future. So there is no rational justification for any causal inference.) Such grounding as our probabilistic inferences have is based rather on instinct, custom, and habit (as Enquiry V and IX have shown). Hume noted that an appreciation of these facts cannot but dismay us, and lead us to doubt the reliability of inferences that have such an arbitrary and irrational basis.

Hume’s conclusions. Having surveyed the chief sceptical arguments, Hume proceeded to draw some conclusions about their efficacy and influence.
His first conclusion was that however rationally compelling all of these different sceptical arguments may be, they will never be able to overcome the natural instincts inducing us to form beliefs on those matters that are of immediate importance for everyday life and survival. We will still continue to believe that there is an external world, that demonstrations can be relied upon, and that regularities observed in the past will continue into the future.

But this is not to say that there is no point to studying sceptical arguments. Hume made this point well in another work:

if a man has accustomed himself to sceptical considerations on the uncertainty and narrow limits of reason, he will not entirely forget them when he turns his reflections on other subjects; but in all his philosophical principles and reasoning, I dare not say, in his common conduct, he will be found different from those, who either never formed any opinions in the case, or have entertained sentiments more favourable to human reason. [Dialogues I]

There are two chief ways in which someone who has been impressed with the force of the sceptical arguments will differ from other people. First, even when that person is induced by natural causes to go ahead and form a belief, that belief will be weaker. However ineffective the sceptical arguments may be at preventing us from forming beliefs, they do serve to “show the whimsical condition of [humanity], who must act and reason and believe, though they are not able, by their most diligent inquiry, to satisfy themselves concerning the foundation of these operations or to remove the objections [that] may be raised against them.” The person who is confronted with this fact cannot help but be less committed to all of their beliefs and more tolerant of the views of others who might disagree. Thus, for Hume, an appreciation of the sceptical arguments actually serves to mitigate enthusiasms of all kinds, and makes people more hesitant in their convictions and less certain of themselves. This is quite a different line from that taken by Bayle, who would have sceptical attacks on reason serve merely as a preface to a leap of faith based on an infusion of grace, the force of education, or natural inclination.

The second difference that marks a person who has once been convinced of the force of sceptical arguments is that that person will be less ready to adopt any belief whatsoever when the arguments for that belief involve no direct engagement with sense impressions. It is only the strong force of nature that is able to overcome sceptical doubts. Where that force is not strong, but has been weakened by the distance, dimness, or obscurity of the objects, or a long chain of reasoning, not enough vivacity will be communicated to the associated ideas to overcome our residual doubts about the efficacy of all our knowing powers. As a result, we will end up limiting our beliefs just to matters of trade, art, craft, politics, criticism, and other such everyday concerns, which constantly engage us with experiences. We will retain all our sceptical doubts when it comes to “distant and high enquiries” about metaphysical or theological topics.

However, this does not mean that we will simply abandon scientific research into remote questions.

Those who have a propensity to philosophy will still continue their researches, because they reflect that, besides the immediate pleasure attending such an occupation, philosophical decisions are nothing but the reflections of common life methodized and corrected. ...

In Dialogues I, Hume expanded further on this remark:
If [we] ever carry [our] speculations further than this necessity [to believe whatever the strong force of nature compels us to believe], and [philosophize], either on natural or moral subjects, [we are] allured by a certain pleasure and satisfaction, [that we find] in employing [ourselves] after that manner. [We consider] besides, that every one, even in common life, is constrained to have more or less of this philosophy; that from our earliest infancy we make continual advances in forming more general principles of conduct and reasoning; that the larger experience we acquire, and the stronger reason we are endowed with, we always render our principles the more general and comprehensive; and that what we call philosophy is nothing but a more regular and methodical operation of the same kind. To philosophise on such subjects is nothing essentially different from reasoning on common life; and we may only expect greater stability, if not greater truth, from our philosophy, on account of its exacter and more scrupulous method of proceeding. ...

But Hume continued in Enquiry XII:

[we] will never be tempted to go beyond common life so long as [we] consider the imperfection of those faculties [that we] employ, their narrow reach, and their inaccurate operations. While we cannot give a satisfactory reason why we believe, after a thousand experiments, that a stone will fall or fire burn, can we ever satisfy ourselves concerning any determination [that] we may form with regard to the origin of worlds and the situation of nature from and to eternity?

There is more than meets the eye to this last remark. To say that we cannot satisfy ourselves concerning the origin of worlds is to say that we cannot draw any conclusion from experience of the world around us to the existence of a creator. And to say that we cannot satisfy ourselves concerning the situation of nature from and to eternity is to say that we cannot draw any conclusions concerning the existence of heaven or hell or a final judgment. Hume was once again more explicit in Dialogues I:

But when we look beyond human affairs and the properties of the surrounding bodies: When we carry our speculations into the two eternities, before and after the present state of things; into the creation and formation of the universe; the existence and properties of spirits; the powers and operations of one universal spirit, existing without beginning and without end; omnipotent, omniscient, immutable, infinite, and incomprehensible: We must be far removed from the smallest tendency to scepticism not to be apprehensive, that we have here got quite beyond the reach of our faculties.

All of these remarks provide an answer to the problem posed at the outset of this section: the problem of how, within the confines of a naturalistic account of the workings of the mind in producing belief, Hume could presume to make normative claims about what we ought or ought not to believe.

There are two kinds of believers, for Hume, the vulgar and the philosophical. Vulgar believers have never heard of the sceptical arguments, or if they have heard of them, they have been too blinded by prejudice to take them seriously. Philosophical believers have been impressed with the force of the sceptical arguments. Vulgar believers will believe whatever their natural belief-forming mechanisms incline them to believe, like a weather vane turning with the wind. Philosophical believers will believe only what their stronger natural belief-forming mechanisms incline them to believe, like a check valve that only opens when the pressure on the other side exceeds a certain point. Both believers are ultimately only determined in their beliefs by the force of nature, but in the philosophers a part of the force of nature is the force that an appreciation of the sceptical arguments plays in opposing all of our other conclusions. Hume speaks as a philosophical.
believer, who looks at the practices of vulgar believers and condemns them as credulous and their beliefs as demonstrably unreliable.

It is ironic that the key to becoming truly rational and capable of overcoming blind credulity and confining our beliefs just to what the evidence indicates should rest with an appreciation of the force of the sceptical arguments that attack reasoning in all of its forms. This ironic message is perhaps the most important one that a course in philosophy has to teach.

ESSAY QUESTIONS AND RESEARCH PROJECTS
1. Critically assess Hume’s reasons for denying that our senses give us knowledge of an external world.
2. In Part I of his *Dialogues on natural religion* Hume has one of his characters, Cleanthes, reproach another, Philo, for maintaining that we ought to limit ourselves to matters of everyday life and common experience, and not attempt to engage in distant and remote inquires concerning whether the world had a divine cause or whether there will be a final judgment. Cleanthes’s charge was that, if we refrain from inquiries of this sort, then by parity of argument we ought to refrain from doing theoretical physics, chemistry, or biology, since in all of these sciences we carry our researches far beyond the bounds of everyday experience. Does Hume have a way of replying to this objection? Can he allow for the validity of scientific inferences concerning small or remote things, or things in the distant past or future, while denying that we have any justification for drawing inferences from the evidence of design in nature to the existence of a designer, or from the apparent goodness of creation to the creator’s determination to institute a just distribution of rewards and punishments in an afterlife?