CHAPTER 2
THE SEARCH FOR KNOWLEDGE

CHAPTER OBJECTIVES

On completion of this chapter, you should be able to

1. Explain what epistemology is.
2. Identify the major arguments for skepticism.
3. Identify three anchor points of rationalism and indicate how these are illustrated in the thought of Socrates, Plato, and Descartes.
4. Identify three anchor points of empiricism and relate these to the views of Locke, Berkeley, and Hume.
5. Show how Kant’s constructivist epistemology steers a middle course between rationalism and empiricism.
6. Discuss and critique several varieties of epistemic relativism, especially Nietzsche’s radical perspectivism.
7. Explain how pragmatism introduces a significantly new perspective into traditional epistemology.
8. Describe some common criticisms of traditional epistemology made by feminists.
9. Describe the current issues in the philosophy of science.
In a science fiction story, philosopher Jonathan Harrison tells of a famous neurologist, Dr. Smythson, who was pushing forward the frontiers of science in the year A.D. 2167. Smythson was presented with the case of a newly born infant whose brain was normal but whose body was afflicted with so many problems that it was on the verge of ceasing to function. In a desperate attempt to preserve the child before his body shut down completely, the scientist separated the brain and its accompanying sensory nerves from the rest of the body. He then kept the brain alive by attaching it to a machine that replaced the abandoned body’s support system.

So that his patient (now a conscious brain attached to a machine) could continue his cognitive development, Dr. Smythson used an electrical hallucination machine to stimulate the sensory nerves, which caused the brain to experience sights, sounds, smells, tastes, and tactile sensations. Hence, through this computer-controlled, electrical stimulation of the brain, Smythson created a virtual reality for the patient (now named Ludwig) that was indistinguishable from the experiences of reality you and I enjoy. By means of another electrical contraption, the doctor was able to read Ludwig’s brain waves and monitor the patient’s cognitive and emotional life. Eventually, by learning from his simulated world produced by the simulated bodily sensations (which Ludwig assumed was the real world and a real, physical body), Ludwig’s intellectual development was equivalent to that of a well-educated and experienced adult.

To further enrich Ludwig’s intellect, Dr. Smythson stimulated Ludwig’s optic nerve with the contents of great works in philosophy. Ludwig studied the works of the skeptics who argued that, because we can only know the immediate contents of our own, internal, conscious experience, we cannot know whether there is a world external to our experience. Ludwig was shaken by this argument and worried about the possibility that his life was a dream from which he might someday awake and discover that all the objects and people he had previously experienced had been illusions. Upon thinking the argument through, however, he found it impossible to doubt that this solid, hard chair he now sat on was not real. (At this point the doctor was giving Ludwig’s brain the same sorts of sensations you and I have when sitting on a chair.) Furthermore, Ludwig concluded that his two hands were certainly real, material objects (as the machine fed him simulated experiences comparable to that of holding up one’s hands).

During this time period, Ludwig also read about researchers who discovered that the brain could be electrically stimulated such that the patient experienced artificial sensations that appeared to be coming from the body’s contact with the external world. However, Ludwig rejected the skeptical possibility that one’s entire experience of the world could be of this sort. At this point, although Ludwig considered these skeptical possibilities to be only fictional or hypothetical scenarios (not realizing that they described his actual lot in life), Dr. Smythson ceased allowing Ludwig to experience books that left him preoccupied with worries about illusion and reality.

The important point about this rather bizarre story is that it is logically possible that an incident like this could happen, even though at this point in our scientific research it is not yet medically possible to give someone the experience of an illusory world (although we do have the ability to stimulate the brain and produce a limited set of artificially created sensations). The theoretical possibility of someone being a brain in a vat and experiencing a virtual reality serves to raise the question of how we know that our experiences give us
STOP AND THINK

Think about a time when you were absolutely convinced that something was true, only to find out later that you were wrong. If this situation has happened to you, how do you know that anytime you are certain of something, you are not similarly mistaken in thinking it is true when it is not?

THOUGHT EXPERIMENT: Knowledge, Certainty, Justification

1. Place a quarter on the table. Look at it from above. It will look like a circular patch of silver. Now look at it from an angle. You will see an elliptical silver image in your visual field. If you look at its edge straight on, it will appear to be a silver line. Now look at it from across the room. The item in your visual field will be a very small silver speck. Presumably, the quarter is not constantly changing its shape and size. But the image present to your eyes is changing its shape and size. It follows that what you see cannot be the quarter itself but merely a changing image of the quarter. Can we say therefore that the real quarter has a constant shape and size that is causing the changing images in your experience? But how can we make such a statement, because we can never jump outside our experience to see the real quarter? How do we know that there is any relationship between what appears within experience and what lies outside of it?

2. Write down five statements that you believe are true. (Try to vary the subject matter of these items.) In terms of the relative degree of certainty you have about these statements compared to one another, rank these statements from the most certain to the least certain. Which three of these statements have the highest degree of certainty for you? Why these three? For the remaining two statements, try to imagine conditions or new information that would raise doubts about their truth. How plausible are these possible doubts? Among the three statements that

(continued . . .)
The questions raised in this thought experiment concern the nature and possibility of knowledge and truth as well as the justification of our beliefs. The area of philosophy that deals with questions concerning knowledge and that considers various theories of knowledge is called epistemology. The Greek word episteme means “knowledge” and logos means “rational discourse.” Hence, epistemology is the philosophy of knowledge.

There are several kinds of knowledge. Think about the different kinds of knowledge that are expressed in these three statements: (1) “I know the president of this university as a personal friend,” (2) “I know how to play the piano,” or (3) “I know that Chicago is in Illinois.” The third statement is an example of propositional knowledge, or “knowing that.” Here, the object of knowledge is the truth of some proposition or statement of fact. This sort of knowledge does not require direct acquaintance with what is being discussed, nor does it directly involve acquiring a skill. Although some epistemologists have concerned themselves with the first two kinds of knowledge, most theories of knowledge focus on propositional knowledge. Hence, our primary interest here concerns knowledge that can be stated in propositions.

Having limited our discussion to a particular kind of knowledge—propositional knowledge—we may now ask, What are the necessary and sufficient conditions for having this sort of knowledge? Perhaps the following thought experiment will help guide your intuitions on this matter.

**THOUGHT EXPERIMENT: Necessary and Sufficient Conditions for Knowledge**

Consider the following scenarios. In each case decide why it would or would not be correct to say that “Ernest knows that Brenda’s birthday is today.”

1. (a) Ernest believes that his friend Brenda’s birthday is today.
   (b) Brenda’s birthday really is next week.

2. (a) Ernest has no opinion about the date of Brenda’s birthday.
   (b) Brenda’s birthday is today.

(continued . . . )
THE DEFINITION OF KNOWLEDGE

What did you decide about the four scenarios in the thought experiment? Going as far back as Plato, philosophers have traditionally defined knowledge as true justified belief. If we accept this analysis, here is what we would have to say about the four scenarios. In case 1, Ernest could not be said to have knowledge because his belief is false. There is no such thing as false knowledge. However, we can have a false belief and mistakenly think we have knowledge. That is why, when we find out our mistake, we say, “I thought I knew the answer to the question, but I guess I didn’t.” In case 2, Ernest obviously does not have knowledge concerning Brenda’s birthday because he has no beliefs about it whatsoever. Case 3 is different from the first two because Ernest believes today is Brenda’s birthday and his belief happens to be true. Nevertheless, it would be reasonable to say that he doesn’t really know this fact because his belief, though true, is not justified. Beliefs that are based on a lucky guess or a happenstance throw of a dart seem to fall short of what is required to have knowledge. This conclusion lacks some sort of reasons or justification that would support his belief. The method Ernest used to form his belief in case 3 could just as easily have led him to a false belief. Case 4 has all the necessary and sufficient conditions for knowledge. Ernest has a true, justified belief concerning Brenda’s birth date. As we will see in later sections, philosophers disagree about what counts as justification. Is absolute certainty required for justification? Is the impossibility of error? Or is a justified belief merely a highly probable belief that is beyond any reasonable doubts? In recent years, some philosophers have questioned this definition of knowledge. Nevertheless, while quibbling over the details, most philosophers throughout history have agreed that knowledge is true justified belief. Because the notion of certainty has played such a large role in epistemology, the following “Stop and Think” box will ask you to assess its importance.

STOP AND THINK

How important is it to be absolutely certain of your fundamental beliefs? Is there a difference between having a psychological feeling of confidence in your beliefs and having objective certainty? Is it even possible to achieve absolute certainty about any of your beliefs? If you think certainty is possible, what sorts of beliefs can provide you with such certainty? Is the basis of this certainty something that could be convincing to someone other than you? Is a high degree of probability an adequate substitute for absolute certainty? Why?
One of the most important issues in a theory of knowledge is the relationship between reason and experience. Philosophers use a number of specialized terms to talk about this issue. The following terms will be useful in our discussions of some of the philosophical positions in this chapter.

**A priori knowledge** is knowledge that is justified independently of (or prior to) experience. What kinds of knowledge could be justified without any appeal to experience? Certainly, we can know the truth of definitions and logical truths apart from experience. Hence, definitions and logically necessary truths are examples of a priori knowledge. For example, “All unicorns are one-horned creatures” is true by definition. Similarly, the following statement is a sure bet: “Either my university’s football team will win their next game or they won’t.” Even if they tie or the game is canceled, this would fulfill the “they won’t win” part of the prediction. Hence, this statement expresses a logically necessary truth about the football team. These two statements are cases of a priori knowledge. Notice that in the particular examples of a priori knowledge I have chosen, they do not give us any real, factual information about the world. Even though the statement about unicorns is true, it does not tell us whether there are any unicorns in the world. Similarly, the football prediction does not tell us the actual outcome of the game. Experience of the world is required to know these things.

The second kind of knowledge is **a posteriori knowledge**, or knowledge that is based on (or posterior to) experience. Similarly, the adjective **empirical** refers to anything that is based on experience. Any claims based on experience purport to add new information to the subject. Hence, “Water freezes at 32 degrees Fahrenheit” and “Tadpoles become frogs” would be examples of a posteriori knowledge. We know the freezing point of water and the life cycle of tadpoles through experience. Thus far, most philosophers would agree on these points.

The difficult question now arises: Is there any a priori knowledge that does give us knowledge about the real world? What would that be like? It would be knowledge expressible in a statement such that (a) its truth is not determined solely by the meaning of its...
terms and (b) it does provide information about the way the world is. Furthermore, since it is a priori, it would be knowledge that we could justify through reason, independently of experience. The question, then, is whether or not reason alone can tell us about the ultimate nature of reality. The philosophers discussed in this chapter will take different positions on this question.

Three Epistemological Questions

The previous “Philosophy in the Marketplace” survey probably demonstrated that even among nonphilosophers there is a wide range of opinions concerning how to justify our beliefs. As you read the rest of this chapter, try to see if some of your friends’ answers match up with the views of any of the philosophers discussed. These different philosophies are attempts to answer basic questions about knowledge. Although an enormous number of philosophical problems concern knowledge, I am going to focus on three of the major problems. The philosophies I discuss in the remaining sections of this chapter are various attempts to answer the following three epistemological questions. (As you read these questions, you might consider whether you would answer each one with a yes or a no at this point in your understanding.)

1. Is it possible to have knowledge at all?
2. Does reason provide us with knowledge of the world independently of experience?
3. Does our knowledge represent reality as it really is?

CHOOSING A PATH: What Are My Options Concerning Knowledge?

Skepticism is the claim that we do not have knowledge. Most skeptics accept the traditional view that knowledge is true, justified belief, but go on from there to argue that it is impossible to have justified beliefs or that no one has provided any reasons to think that our beliefs are capable of being justified. Hence, the skeptics give a negative answer to the first epistemological question. Because skeptics think that knowledge is unattainable, they consider the remaining two questions to be irrelevant. The philosophers represented by the remaining positions think we can obtain knowledge, and hence, in contrast to the skeptic, they answer the first question in the affirmative. The disagreements among the nonskeptics concern the source and nature of knowledge.

Rationalism claims that reason or the intellect is the primary source of our fundamental knowledge about reality. Nonrationalists agree that we can use reason to draw conclusions from the information provided by sense experience. However, what distinguishes the rationalists is that they claim that reason can give us knowledge apart from experience. For example, the rationalists point out that we can arrive at mathematical truths about circles or triangles without having to measure, experiment with, or experience circular or triangular objects. We do so by constructing rational, deductive proofs that lead to absolutely indubitable conclusions that are always universally true of the world outside our minds (a priori knowledge about the world). Obviously, the rationalists think the second question should be answered affirmatively.

Empiricism is the claim that sense experience is the sole source of our knowledge about the world. Empiricists insist that when we start life, the original equipment of our intellect is a tabula rasa, or blank tablet. Only through experience does that empty mind become filled with content. Various empiricists give different explanations of the nature of logical and mathematical truths. They are all agreed, however, that these truths are not already latent in the mind before we discover them and that there is no genuine a priori knowledge about the nature of reality. The empiricists would respond “No!” to the second


**constructivism** the claim that knowledge is neither already in the mind nor passively received from experience but that the mind constructs knowledge out of the materials of experience.

**epistemological relativism** the claim that there is no universal, objective knowledge of reality because all knowledge is relative to either the individual or his or her culture.

Epistemological question. With respect to question 3, both the rationalists and the empiricists think that our knowledge does represent reality as it really is.

**Constructivism** is used in this discussion to refer to the claim that knowledge is neither already in the mind nor passively received from experience, but that the mind constructs knowledge out of the materials of experience. Immanuel Kant, an 18th-century German philosopher, introduced this view. He was influenced by both the rationalists and the empiricists and attempted to reach a compromise between them. While Kant did not agree with the rationalists on everything, he did believe we can have a priori knowledge of the world as we experience it. Although Kant did not use this label, I call his position constructivism to capture his distinctive account of knowledge. One troubling consequence of his view was that because the mind imposes its own order on experience, we can never know reality as it is in itself. We can only know reality as it appears to us after it has been filtered and processed by our minds. Hence, Kant answers question 3 negatively. Nevertheless, because Kant thought our minds all have the same cognitive structure, he thought we are able to arrive at universal and objective knowledge within the boundaries of the human situation.

**Epistemological relativism** is the claim that there is no universal, objective knowledge of reality because all knowledge is relative to either the individual or his or her culture. In other words, the relativist believes that there is no one, true story about reality, but that there are many stories. Since we can no more jump outside our respective ways of viewing the world than we can our own skins, there is no way to say that a particular claim about reality is the only true one. It may seem that the relativist is denying knowledge the way the skeptic does. However, the relativists would insist that we do have knowledge but would deny that this knowledge is universal and objective. Knowledge is always knowledge for someone and is shaped by each knower’s psychological, philosophical, historical, or cultural circumstances. Hence, while answering question 1 affirmatively, the relativist would respond with a no to the remaining two questions. There are many varieties of relativism as it has been defined here: Existentialism, pragmatism, and some forms of feminism are discussed in later sections to illustrate this epistemological outlook.

Table 2.1 presents the three epistemological questions just discussed and lists the answers provided by the five different positions.

The next exercise asks you to register your agreement or disagreement with 10 statements. In some cases, you may not be sure what you think; nevertheless, choose the response that you think seems to be the most correct.

<table>
<thead>
<tr>
<th>TABLE 2.1 Three Epistemological Questions and Five Positions on Them</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Skepticism</strong></td>
</tr>
<tr>
<td>Does Reason Provide Us with Knowledge of the World Independently of Experience?</td>
</tr>
<tr>
<td>Does Our Knowledge Represent Reality as It Really Is?</td>
</tr>
</tbody>
</table>
### WHAT DO I THINK? Questionnaire on Knowledge, Doubt, Reason, and Experience

<table>
<thead>
<tr>
<th></th>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>It is impossible to ever truly know anything, for all we can ever have are merely opinions and beliefs.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>It is possible to have objective knowledge of what reality is like in itself.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>When my reason convinces me that something must be true, but my experience tells me the opposite, I trust my experience.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>When we come into the world at birth, the mind is like a blank tablet. In other words, all the contents of the mind, anything that we can think about or know to be true, must have come to us originally through experience.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Our knowledge about reality can never be absolutely certain. However, if a belief is true and we have sufficient evidence of its probability, we have knowledge.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>When my experience convinces me that something is the case, but my reason tells me it is illogical, I trust my reason.</td>
<td></td>
</tr>
</tbody>
</table>
| 7. | At least some of the following ideas are directly known by the mind and are not learned from experience:  
   (a) the laws of logic  
   (b) the basic principles of mathematics  
   (c) “every event has a cause”  
   (d) the concept of perfection  
   (e) the idea of God  
   (f) moral concepts and principles (such as “It is wrong to torture an innocent person”) | |
| 8. | Through reason, it is possible to have knowledge about reality that is absolutely certain. | |
| 9. | We can have universal and objective knowledge of how reality consistently appears to the human mind, but we can not know what reality is like in itself. | |
| 10. | There is no absolute truth, for when I say that something is “true,” I am saying nothing more than “it is true for me” or that “the majority of the people in my society agree that it is true.” | |
KEY TO THE QUESTIONNAIRE ON KNOWLEDGE

Statement 1 is an expression of skepticism. Strictly speaking, the skeptic would disagree with all the other statements, and all the other positions would disagree with this statement.

Statement 2 expresses epistemological objectivism. Some empiricists and all traditional rationalists would agree with this statement.

Statement 3 represents empiricism. It conflicts with statement 6.

Statement 4 represents empiricism. It conflicts with statement 7.

Statement 5 represents empiricism. It conflicts with statement 8.

Statement 6 represents rationalism. It conflicts with statement 3.

Statement 7 represents rationalism. It conflicts with statement 4.

Statement 8 represents rationalism. It conflicts with statement 5.

Statement 9 represents Kantian constructivism. This position would disagree with statements 1, 2, and 10. With qualifications, the Kantian constructivist could agree with some of the statements of empiricism and rationalism.

Statement 10 represents epistemological relativism. The subjectivist (or subjective relativist) says “true” equals “true for me,” because according to this position, the individual is the measure of truth. The cultural relativist (or conventionalist) believes that “x is true” equals “the majority of one’s culture or society agrees that x is true.” Generally, the relativist disagrees with skepticism, rationalism, and Kantian constructivism. However, some forms of empiricism would be consistent with relativism.

Which position seems closest to your own? How consistent were your answers? In other words, did you agree with two statements that conflict with each other?

2.1 SKEPTICISM

LEADING QUESTIONS: Skepticism

1. How do we know that our sense experience ever reveals reality to us? We think that the water in our drinking glass is real because we can touch it (unlike the illusory water we see on the road). But maybe what we think we experience in the drinking glass is simply a deeper and more persistent illusion. After all, the illusory water on the road looks like real water even though it isn’t. Similarly, maybe the water in the glass feels and tastes like real water even though it isn’t. Perhaps everything we think is water is really like the illusory water on the road. While the latter fools only our eyes, maybe all the other kinds of illusory water are capable of fooling all five senses.

2. Take some ordinary, simple belief that you have. It might be something like “There is a book in front of me right now.” Consider what reasons you have for thinking this belief to be true. Now, consider why you think each of those reasons is true. Continue this process as far as you can until you arrive at your most fundamental beliefs. Now, what reasons do you have for these fundamental beliefs? Does the process of finding reasons for our beliefs ever come to an end? Does it end with some beliefs we simply hold onto tenaciously without any reason? Or is there another alternative?

3. Right now, as you read this sentence, you believe that you are awake and not dreaming. But isn’t it usually the case that when we are dreaming, we also think that we are awake
and actually experiencing the events in the dream? In our waking experience we believe that we are awake. But when we dream, we also believe we are awake. So how do we tell the difference? How do you know that right now you are not dreaming that you are reading about dreaming while you are really sleeping soundly in your own bed?

SURVEYING THE CASE FOR SKEPTICISM

Skepticism is the claim that we do not have knowledge. It makes sense to begin our discussion of epistemology with skepticism, for if the skeptic is right, there is no point in examining all the other approaches to knowledge. Universal skeptics claim that we have no knowledge whatsoever. They think that every knowledge claim is unjustified and subject to doubt. On the other hand, limited skeptics allow that we may have some knowledge, but they focus their skeptical doubts on particular types of knowledge claims. For example, one type of limited skeptic might agree that we can have mathematical or scientific knowledge, but might doubt that we know the truth or falsity concerning other types of claims such as moral judgments or religious claims. On the other hand, another limited skeptic might claim that mystical experience provides us with the truth about reality, but that science does not give us anything more than conjectures, guesses, and likely stories. The following thought experiment explores the degree to which you and your friends are or are not skeptical about three major domains of knowledge.

**THOUGHT EXPERIMENT: Skepticism and Knowledge**

For each of the following statements, check the box corresponding to one of the following three responses:

- I tend to either agree or disagree with this statement. (I do have knowledge.)
- At this point, I am not sure if this statement is true or false, but I think it is possible to find the answer. (Knowledge is possible, but I do not know the answer.)
- I do not believe it is ever possible to find the answer. (Knowledge is impossible.)

(While taking the survey, ignore the numbers in the boxes; they will be used later to analyze your responses.)

<table>
<thead>
<tr>
<th>Statement</th>
<th>I do have knowledge</th>
<th>Knowledge is possible, but I do not know the answer</th>
<th>Knowledge is impossible</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There is a God.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. There are no such events as supernatural miracles.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. There is life after death.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. One particular religion is the true one.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

(continued . . .)
5. Science gives us our best information about reality. 
   - 1 point
   - 2 points
   - 3 points

6. Science can tell us about the origins of the universe. 
   - 1 point
   - 2 points
   - 3 points

7. Science can tell us about the origins of human life. 
   - 1 point
   - 2 points
   - 3 points

8. Scientists will one day be able to explain all human behavior. 
   - 1 point
   - 2 points
   - 3 points

9. Some actions are objectively right or wrong. 
   - 1 point
   - 2 points
   - 3 points

10. The conventions of one’s society determine what is right or wrong. 
   - 1 point
   - 2 points
   - 3 points

11. Pleasure is the only thing in life that has value. 
   - 1 point
   - 2 points
   - 3 points

12. Sometimes it could be one’s moral duty to lie. 
   - 1 point
   - 2 points
   - 3 points

The responses to each statement have the point value that is indicated. In other words, every answer in the first column is worth one point. Each answer in the second column is worth two points, and each answer in the third column is three points.

Add up your scores for statements 1 through 4. This total is your religion score. If your religion score is 4–6, you are very confident that knowledge is possible concerning religious questions and are not a skeptic. If your score is 7–9, you tend to believe that there are answers to religious questions, but you are uncertain about the answers or have a moderate degree of skepticism. If your score is 10–12, you are very skeptical about the possibility of having knowledge concerning religious issues. Notice that both the religious believer and the atheist would be nonskeptics. The atheist would say that the statement “There is a God” is false. Hence, contrary to the skeptic, the atheist believes we can know the truth about this issue.

Add up your scores for statements 5 through 8. This total is your science score. If your science score is 4–6, you are nonskeptical about scientific knowledge. If your score is 7–9, you have some confidence in scientific knowledge along with a degree of skepticism on some issues. If your score is 10–12, you are very skeptical of the possibility of scientific knowledge.

Add up your scores for statements 9 through 12. This total is your score on moral knowledge. If your moral knowledge score is 4–6, you believe moral knowledge is possible and are not a skeptic. If your score is 7–9, you believe moral knowledge is possible, but have reservations about some issues. If your score is 10–12, you think we can have little or no knowledge about the truth or falsity of moral claims.
Those people who embrace skepticism must be able to give reasons for that skepticism. On the other hand, those people who reject skepticism must wrestle with the skeptic’s arguments and show where those arguments go wrong. Remember that the traditional view of knowledge involves three conditions: truth, justification, and belief. If these conditions are essential for having knowledge, the skeptic, in order to show that we do not have knowledge, has to show that one of these conditions is missing. The most obvious target of the skeptic’s attacks on knowledge claims is condition 2, which states that our beliefs must be justified in order for them to count as knowledge.

Before reading further, look at the highway picture for an example of a classic experiment in perception. Did you get the right answer, or were your eyes fooled? One way that skeptics attack knowledge claims is to point to all the ways in which we have been deceived by illusions. Our experience with perceptual illusions shows that in the past we have been mistaken about what we thought we knew. These mistakes lead, the skeptic claims, to the conclusion that we can never be certain about our beliefs, from which it follows that our beliefs are not justified.

Another, similar strategy of the skeptic is to point to the possibility that our apprehension of reality could be systematically flawed in some way. The story of Ludwig, the brain in the vat who experienced a false virtual reality, would be an example of this strategy. Another strategy is to suppose that there is an inherent flaw in human psychology such that our beliefs never correspond to reality. I call these possible scenarios universal belief falsifiers. The characteristics of a universal belief falsifier are (1) it is a theoretically possible state of affairs, (2) we have no way of knowing if this state of affairs is actual or not, and (3) if this state of affairs is actual, we would never be able to distinguish beliefs that are true from beliefs that seem to be true but are actually false. Note that the skeptic does not need to prove that these possibilities are actual. For example, the skeptic does not have to establish that we really are brains in a vat, but merely that this condition is possible. Furthermore, the skeptic need not claim that all our beliefs are false. The skeptic’s point is simply that we have no fail-safe method for determining when our beliefs are true or false. Given this circumstance, the skeptic will argue that we cannot distinguish the situation of having evidence that leads to true beliefs from the situation of having the same sort of evidence plus a universal belief falsifier, which leads to false beliefs.

Obviously, the skeptic believes that nothing is beyond doubt. For any one of our beliefs, we can imagine a set of circumstances in which it would be false. For example, I believe I was born in Rahway, New Jersey. However, my birth certificate could be inaccurate. Furthermore, for whatever reasons, my parents may have wished to keep the truth from me. I will never know for sure. I also believe that there is overwhelming evidence that Adolf Hitler committed suicide at the close of World War II. However, it could be true (as conspiracy theorists maintain) that his death was faked and that he lived a long life in South America after the war. The theme of the skeptic is that certainty is necessary for there to be knowledge, and if doubt is possible, then we do not have certainty.
We now have the considerations in place that the skeptic uses to make his or her case. There are many varieties of skeptical arguments, each one exploiting some possible flaw in either human cognition or the alleged evidence we use to justify our beliefs. Instead of presenting various specific arguments, we can consider a "generic skeptical argument."

**Generic Skeptical Argument**

1. We can find reasons for doubting any one of our beliefs.
2. It follows that we can doubt all our beliefs.
3. If we can doubt all our beliefs, then we cannot be certain of any of them.
4. If we do not have certainty about any of our beliefs, then we do not have knowledge.
5. Therefore, we do not have knowledge.

**STOP AND THINK**

- What do you think of the generic skeptical argument? Is there any premise or inference you would question?
- Do you agree with the claim that if we do not have absolute certainty, we do not have knowledge?

**EARLY GREEK SKEPTICS**

Skepticism arose in ancient Greek philosophy after several centuries of philosophical speculation that yielded little agreement about what reality was like. Some philosophers concluded that this massive amount of disagreement meant that no one had knowledge and that we possessed only a diversity of unfounded opinions. One of the earliest and most cantankerous of the skeptics was Cratylus, who was a fifth-century Athenian and a younger contemporary of Socrates. Cratylus believed that little could be known because everything was changing, including oneself. This belief led him to become skeptical about even the possibility of communication. Since the world, the speaker, the listener, and the words were in a constant state of flux, there was no possibility of stable meanings. Cratylus is said to have been true to his own skepticism by refusing to discuss anything. When someone attempted to assert an opinion, Cratylus merely wagged his finger, indicating that nothing could be known or communicated.

Pyrrho of Elis (360–270 B.C.), a philosopher in ancient Greece, inspired a skeptical movement that bore his name (Pyrrhonian skepticism). Pyrrho was skeptical concerning sense experience. He argued that for experience to be a source of knowledge, our sense data must agree with reality. But it is impossible to jump outside our experience to see how it compares with the external world. So, we can never know whether our experience is giving us accurate information about reality. Furthermore, rational argument cannot give us knowledge either, Pyrrho said, because for every argument supporting one side of an issue, another argument can be constructed to prove the opposing case. Hence, the two arguments cancel each other out and they are equally ineffective in leading us to the truth. The followers of Pyrrho stressed that we can make claims only about how things appear to us. You can say, “The honey appears to me to be sweet” but not, “The honey is sweet.” The
best approach, according to these skeptics, was to suspend judgment whenever possible and
make no assumptions at all. They believed that skeptical detachment would lead to seren-
ity. “Don’t worry about what you cannot know,” they advised.

Although Plato spent his life attempting to refute skepticism, an influential group of
skeptics arose within the Academy, the school that Plato originally founded. The most
clever of these was Carneades (who lived about 214–129 B.C.). Carneades represented
Athens as an ambassador to Rome along with two other philosophers. The Romans were
most interested in his public lectures because those lectures were their first exposure to
philosophy. On the first day Carneades argued in favor of justice and eloquently com-
mented its practice to the Romans. The next day, he argued the opposite position, using
equally brilliant rhetoric to downgrade justice. This two-faced arguing was a favorite
method of the Greek skeptics for undermining the belief that we can know anything to be
true. Later skeptics, following Pyrrho, formalized lists of arguments supporting Pyrrho’s
philosophy. Some skeptics distilled these arguments down into two simple theses. First,
nothing is self-evident, for any axiom we start with can be doubted. Second, nothing can
be proven, for either we will have an infinite regress of reasons that support our previous
reasons or we will end up assuming what we are trying to prove.

RENÉ DESCARTES (1596–1650)

Descartes’s Life

Some of the best-known arguments for skepticism were produced by the French philoso-
pher René Descartes. Descartes lived in exciting times. He was born almost 100 years after
Columbus sailed to the Americas and half a century after Copernicus published the con-
 troversial thesis that the earth revolves around the sun. About the time that Descartes was
born, Shakespeare was writing Hamlet. Descartes came from a wealthy, respected family in
France. His inherited family fortune gave him the freedom to travel and write without
having to provide for his own support. It also enabled him to receive one of the best educa-
tions available to a young man in France at that time.

In spite of the reputation of his college, Descartes felt a sense of disappointment and
even bitterness about his education. He said about the philosophy he was taught that “it
has been cultivated for many centuries by the most excellent minds and yet there is still no
point in it which is not disputed and hence doubtful.” Feeling unsettled and restless, he
decided to remedy the limitations of his formal education by traveling and studying “the
great book of the world.” On November 10, 1619, the harsh German winter confined him
to a lonely stove-heated room where he spent the day in intense philosophical thought.
There, Descartes says, he “discovered the foundations of a wonderful new science.” The
following night, his excitement over this discovery culminated in three vivid dreams during
which he felt “the Spirit of Truth descending to take possession” of him. This experience
convinced him that his mission in life was to develop a new philosophy, based on mathe-
matical reasoning, that would provide absolute certainty and serve as the foundation of all
the other sciences.

Descartes spent most of his life in Holland, where the liberal atmosphere provided a safe
refuge for intellectuals working on controversial ideas. In 1633 he finished The World, a
book on physics that contained the controversial thesis that the sun, not the earth, was the
center of our universe. He was set to publish it when he learned that Galileo had been
formally condemned by the Inquisition in Rome for promoting the same idea. Descartes
prudently hid his manuscript with a friend, and it was published only after his death.
However, he did go on to publish numerous other works on philosophy, mathematics, and science, and he became world famous. In spite of his tensions with the theologians of his day, Descartes remained a sincere Catholic and always hoped that his works would be of service to theology.

Among Descartes’s many correspondents was Queen Christina of Sweden, who was not only a monarch but a person with keen philosophical abilities. She read some of Descartes’s manuscripts and sent him critiques of his arguments. In 1649, she invited him to come to Sweden to be her tutor. He wrote to a friend that he was reluctant to go to the land of “bears, rocks and ice.” Nevertheless, he did not feel that he could turn down her request, and so he accepted the position. The new position turned out to be disastrous. Descartes had suffered from frail health all his life, and the frigid weather and the five o’clock in the morning tutoring sessions wore him down until he contracted pneumonia and died on February 11, 1650.

The Quest for Certainty

Descartes’s lifelong passion was to find certainty. He felt as though his education had given him a collection of ideas based on little else but tradition; many of these ideas had been proven false by his own research. In despair he wrote, “I found myself beset by so many doubts and errors that I came to think I had gained nothing from my attempts to become educated but increasing recognition of my ignorance.”4 While his quest for certainty was a matter of great personal concern, Descartes also thought the quest was essential before science could make any real progress. Looking at the philosophical presuppositions of the sciences of his day, Descartes concluded that “nothing solid could have been built upon such shaky foundations.”5

STOP AND THINK

Think of a time in your life when you lacked certainty about something that was important to you.

• How did this uncertainty make you feel?
• What attempts did you make to resolve your uncertainty?
• Were they successful?

Although Descartes did not end up a skeptic, he initially used skeptical doubt as a test to decide which beliefs were absolutely certain. Hence, his strategy for finding certainty could be called methodological skepticism. Descartes’s method was to bathe every one of his beliefs in an acid bath of doubt to see if any survived. Descartes employed a very rigorous standard here. If he could think of any possibility that a belief of his could be mistaken, no matter how improbable this basis of doubt was, then he would suspend judgment concerning that belief. He realized that most of his beliefs would dissolve when subjected to such intense scrutiny, but if even one belief survived the skeptical attack, then he could be absolutely certain about that belief. Before we trace Descartes’s journey through skeptical doubt, see if you can anticipate the path he will take by working through the next thought experiment.
Descartes carried out his project of philosophical demolition and reconstruction in a work called *Meditations on First Philosophy*. This work consisted of six meditations that traced his journey from skeptical doubt to absolute certainty. He opens his book with the resolution to critically examine all his opinions.

**FROM RENÉ DESCARTES**

*Meditations on First Philosophy*

Some years ago I was struck by the large number of falsehoods that I had accepted as true in my childhood, and by the highly doubtful nature of the whole edifice that I had subsequently based on them. I realized that it was necessary, once in the course of my life, to demolish everything completely and start again right from the foundations if I wanted to establish anything at all in the sciences that was stable and likely to last. But the task looked an enormous one, and I began to wait until I should reach a mature enough age to ensure that no subsequent time of life would be more suitable for tackling such inquiries. This led me to put the project off for so long that I would now be to blame if by pondering over it any further I wasted the time still left for carrying it out. So today I have expressly rid my mind of all worries and arranged for myself a clear stretch of free time. I am here quite alone, and at last I will devote myself sincerely and without reservation to the general demolition of my opinions.

**STOP AND THINK**

What do you think of Descartes’s radical program for revising his belief system? The following questions will help you formulate your response.

(continued . . .)
When Descartes finds that he can doubt a belief, he does not mean that he has reasons to believe it is false, merely that it is possible for it to be false. If he discovers the possibility of falsity, he will neither continue to embrace the belief nor disbelieve it; instead, he will suspend judgment concerning it.

In the next passage, Descartes realizes that it would be impossible to examine all his beliefs one by one. What alternative strategy does he employ?

But to accomplish this, it will not be necessary for me to show that all my opinions are false, which is something I could perhaps never manage. Reason now leads me to think that I should hold back my assent from opinions which are not completely certain and indubitable just as carefully as I do from those which are patently false. So, for the purpose of rejecting all my opinions, it will be enough if I find in each of them at least some reason for doubt. And to do this I will not need to run through them all individually, which would be an endless task. Once the foundations of a building are undermined, anything built on them collapses of its own accord; so I will go straight for the basic principles on which all my former beliefs rested.

As the first step of his methodological skepticism, Descartes examines his general sense experiences (such as statements 1 and 2 in the previous thought experiment). Our senses are imperfect instruments and can be led astray by optical illusions or other causes of mistaken judgments. Hence, they cannot provide an indubitable base on which to build our knowledge. However, having said this, are there any sense experiences that are so vivid that they can provide us with certainty?

Whatever I have up till now accepted as most true I have acquired either from the senses or through the senses. But from time to time I have found that the senses deceive, and it is prudent never to trust completely those who have deceived us even once.

Yet although the senses occasionally deceive us with respect to objects which are very small or in the distance, there are many other beliefs about which doubt is quite impossible, even though they are derived from the senses—for example, that I am here, sitting by the fire, wearing a winter dressing-gown, holding this piece of paper in my hands, and so on. Again, how could it be denied that these hands or this whole body are mine? Unless perhaps I were to liken myself to madmen, whose brains are so damaged by the persistent vapours of melancholia that they firmly maintain they are kings when they are paupers, or say they are dressed in purple when they are naked, or that their heads are made of earthenware, or that they are pumpkins, or made of glass. But such people are insane, and I would be thought equally mad if I took anything from them as a model for myself.

(. . . continued)

- What are some beliefs that you once held that you abandoned in recent years?
- What factors caused you to reject those beliefs?
- What are the psychological (and other) advantages of simply hanging on tenaciously to your beliefs and not raising any questions about them?
- Do you agree or disagree with Descartes that it is better to examine and question your beliefs? Why?
You may find yourself agreeing with Descartes that although you have been deceived by your senses on some occasions, other sense experiences seem so real that you would think only a lunatic would doubt them. For example, it would be hard to doubt your belief that you are now surrounded by various real, physical objects (such as books, chairs, a floor). However, in the next passage, Descartes finds it possible to doubt even these sorts of beliefs.

- Can you guess Descartes’s reason for doubting these sorts of vivid sense experiences?

A brilliant piece of reasoning! As if I were not a man who sleeps at night, and regularly has all the same experiences while asleep as madmen do when awake—indeed sometimes even more improbable ones. How often, asleep at night, am I convinced of just such familiar events—that I am here in my dressing-gown, sitting by the fire—when in fact I am lying undressed in bed! Yet at the moment my eyes are certainly wide awake when I look at this piece of paper; I shake my head and it is not asleep; as I stretch out and feel my hand I do so deliberately, and I know what I am doing. All this would not happen with such distinctness to someone asleep. Indeed! As if I did not remember other occasions when I have been tricked by exactly similar thoughts while asleep! As I think about this more carefully, I see plainly that there are never any sure signs by means of which being awake can be distinguished from being asleep. The result is that I begin to feel dazed, and this very feeling only reinforces the notion that I may be asleep.

At this point, Descartes’s doubts become deeper and more severe. By thinking of his experiences in dreams he came up with a way to doubt the contents of his current experience. When Descartes wrote the previous passage, he was not claiming that he actually was dreaming, but merely that dreams can be so real that he had no way of knowing if he was dreaming or awake.

Even though dreams can confuse us about where we are and what we are doing, the simple truths of arithmetic and geometry seem to elude these doubts (statements 7 and 8 in the previous thought experiment).

Arithmetic, geometry and other subjects of this kind, which deal only with the simplest and most general things, regardless of whether they really exist in nature or not, contain something certain and indubitable. For whether I am awake or asleep, two and three added together are five, and a square has no more than four sides. It seems impossible that such transparent truths should incur any suspicion of being false.

So, has Descartes finally found his bedrock of certainty? Unfortunately, he has not, for he finds a reason to doubt even mathematical truths. At the end of Meditation I, Descartes stretches his imagination to come up with a universal belief falsifier that would make it possible to be mistaken even about seemingly obvious truths.

I will suppose therefore that . . . some malicious demon of the utmost power and cunning has employed all his energies in order to deceive me. I shall think that the sky, the
air, the earth, colours, shapes, sounds and all external things are merely the delusions of
dreams which he has devised to ensnare my judgement. I shall consider myself as not
having hands or eyes, or flesh, or blood or senses, but as falsely believing that I have all
these things.

Once again, Descartes did not necessarily believe that such an evil demon exists but
merely that its existence is logically possible. If the demon is possible, then it is possible
that \(2 + 3 = 17\frac{1}{2}\) (contrary to what we and Descartes believe), and it is possible that we
and Descartes do not have bodies but that our minds are deluded into thinking we do. For
example, the trilogy of \textit{Matrix} films is based on the notion that evil but intelligent
machines have trapped humans in a dream world that is indistinguishable from reality. The story of Ludwig discussed at the beginning of the previous section presents a similar scenario of a virtual reality. We could also imagine we are being victimized by a malicious psychologist who has injected us with a hallucinatory drug or that we are under the spell of a very skillful hypnotist. Hence, the deceiver hypothesis seems to be conceivable.

The End of Doubt

Descartes had hoped to use this method of doubt to distinguish beliefs that were certain from those that could be doubted. But now he seems to be overwhelmed by a flood of doubt from which he cannot recover. Ironically, at this point Descartes finds a lifeboat of certainty within his sea of doubt.

- Can you anticipate how Descartes will find certainty at this point?

FROM RENÉ DESCARTES

Meditations on First Philosophy

So serious are the doubts into which I have been thrown as a result of yesterday’s meditation that I can neither put them out of my mind nor see any way of resolving them. It feels as if I have fallen unexpectedly into a deep whirlpool which tumbles me around so that I can neither stand on the bottom nor swim up to the top. Nevertheless I will make an effort and once more attempt the same path which I started on yesterday. Anything which admits of the slightest doubt I will set aside just as if I had found it to be wholly false; and I will proceed in this way until I recognize something certain, or, if nothing else, until I at least recognize for certain that there is no certainty. Archimedes used to demand just one firm and immovable point in order to shift the entire earth; so I too can hope for great things if I manage to find just one thing, however slight, that is certain and unshakeable.

I will suppose then, that everything I see is spurious. I will believe that my memory tells me lies, and that none of the things that it reports ever happened. I have no senses. Body, shape, extension, movement and place are chimeras. So what remains true? Perhaps just the one fact that nothing is certain. . . .

I have convinced myself that there is absolutely nothing in the world, no sky, no earth, no minds, no bodies. Does it now follow that I too do not exist? No: if I convinced myself of something then I certainly existed. But there is a deceiver of supreme power and cunning who is deliberately and constantly deceiving me. In that case I too undoubtedly exist, if he is deceiving me; and let him deceive me as much as he can, he will never bring it about that I am nothing so long as I think that I am something. So after considering everything very thoroughly, I must finally conclude that this proposition, I am, I exist, is necessarily true whenever it is put forward by me or conceived in my mind.

Descartes’s great discovery is that if he tries to doubt that he is doubting, then he is necessarily confirming the fact that he is doubting. Even the evil deceiver could not make him mistaken about this. Furthermore, if doubting or deception is occurring, someone has to do the doubting and be the victim of deception. None of this doubting could take place unless Descartes existed. Hence, Descartes’s method of doubt led him to the bedrock certainty of the belief that “I am, I exist.” In other writings, Descartes expressed this certitude as cogito ergo sum, or “I think, therefore I am.”
Obviously, if the only thing he was certain about was his own existence, Descartes had not gotten very far beyond total skepticism. In a later section on rationalism, however, we will see how Descartes attempts to build on this foundation to recover many of his former beliefs, but this time to acquire them in the form of genuine knowledge (true justified beliefs). My purpose for discussing Descartes here is to focus on the skeptical arguments that served as the first step in his project of reconstructing his belief system.

Descartes began his quest for knowledge with the assumption that if he had rational certainty concerning his beliefs, he necessarily had knowledge, and if he did not have certainty, he did not have knowledge. The skeptics who came after Descartes agreed with this assumption. However, as we will see in the next section, Descartes argues that there are a number of things of which we can be certain and, hence, we do have knowledge. On the other hand, the skeptics doubt whether Descartes or anyone can achieve such certainty. Lacking any grounds for certainty, the skeptics claim we cannot have knowledge about the real world. Thus, the skeptics think that Descartes's arguments for skepticism are stronger than his proposed answers. Such a philosopher was David Hume, whom we will encounter later when we examine empiricism.

LOOKING THROUGH THE SKEPTIC’S LENS

1. Human history is replete with wars being waged and people being killed in the name of dogmatic convictions that were allegedly “known” to be true. According to the skeptics, how would their view lead to a more tolerant society?

2. Is it possible to live our lives without certainty? If genuine knowledge is unattainable, should we just do nothing but curl up and die? Most skeptics would reply that skepticism is simply a reminder of the limitations of reason; it leaves us with a more modest view of ourselves and our powers. Accordingly, the early Greek skeptics prefaced all claims with the qualification, “It appears to me that . . .” Hence, in spite of their doubts, the skeptics still go about, living their practical lives. Is this practice objectionably inconsistent, or can one be a thoroughgoing skeptic and still be practical and enjoy life?

3. Even though the skeptics claim we cannot have genuine knowledge, could they still claim that some beliefs are more worthy of being embraced than others?

EXAMINING THE STRENGTHS AND WEAKNESSES OF SKEPTICISM

Positive Evaluation

1. Weeding a garden is not sufficient to make flowers grow, but it does do something valuable. In what way could the skeptics be viewed as providing a “philosophical weeding service” by undercutting beliefs that are naively taken for granted?
2. The skeptics are unsettling because they force us to reexamine our most fundamental beliefs. Is it better to live in naïve innocence, never questioning anything, or is it sometimes worthwhile to have your beliefs challenged?

Negative Evaluation

1. The skeptics make the following claim: “Knowledge is impossible.” But isn’t this claim itself a knowledge claim that they declare is true? Is the skeptic being inconsistent?

2. The skeptics use the argument from illusion to show that we cannot trust our senses. But could we ever know that there are illusions or that sometimes our senses are deceived unless there were occasions when our senses weren’t deceived?

3. Some skeptics would have us believe that it is possible that all our beliefs are false. But would the human race have survived if there was never a correspondence between some of our beliefs and the way reality is constituted? We believe that fire burns, water quenches thirst, vegetables nourish us, and eating sand doesn’t. If we didn’t have some sort of built-in mechanism orienting us toward true beliefs, how could we be as successful as we are in dealing with reality?

4. Is skepticism liveable? Try yelling to someone who claims to be a skeptic, “Watch out for that falling tree limb!” Why is it that a skeptic will always look up? Think of other ways in which skeptics might demonstrate that they do believe they can find out what is true or false about the world.

5. Is Descartes’s demand for absolute certainty unreasonable? Can’t we have justified beliefs based on inferences to the best explanation, probability, or practical certainty? Does certainty have to be either 100 percent or 0 percent?

2.2 RATIONALISM

LEADING QUESTIONS: Rationalism

1. Why don’t mathematicians need laboratories to discover mathematical truths about numbers the way chemists need laboratories to discover chemical truths? How do mathematicians make their discoveries?

2. You know that the following statement is true: “All triangles have angles that add up to 180 degrees.” What sort of method do we use to prove that this statement is true? Do we cut out hundreds of paper triangles and measure their angles? Why is it that we do not have to take a survey of numerous triangles to know the truth of this statement? Why do we believe that this property will necessarily be true of every possible triangle even though we can never examine every triangle?

3. Touch your nose. Now touch your ear. Now touch your rights. Why can’t you touch or see your rights? Is it because your eyes aren’t good enough? Is it because rights do not really exist? Most people believe that every person has basic rights and that entire cultures can be mistaken about what these rights are (think about Nazi Germany). If the judgments we make about human rights are not, in some sense, objective, then your rights are simply what your society decides they are. But if this conclusion is true, how could we ever accuse a society of violating human rights? On the other hand, if we do have basic, intrinsic rights, then they cannot be discovered in sensory experience. Rights have no shape, taste, sound, odor, or color. Is there any other alternative but to say that the truths about human rights are discovered through some sort of rational intuition?