Part I

General Introduction: The Theory of Knowledge

What can we really know? How can we be certain that we have the truth? How can we be certain that we know anything at all? What is knowledge, and how is it different from belief? If we know something, must we know that we know it?

The theory of knowledge—or *epistemology* (from the Greek, "the science of knowing")—inquires into the nature of knowledge and justification of belief. Many philosophers believe it is the central area of philosophy, for if philosophy is the quest for truth and wisdom, then we need to know how we are to obtain the truth and justify our beliefs. We need to know how to distinguish the true from the false and justified beliefs from unwarranted beliefs.

If we consult the *Oxford English Dictionary*, we find the following definition of the verb *to know:* "to recognize, to identify, to distinguish, to be acquainted with, to apprehend or comprehend as a fact or truth." This sort of definition gives us a ballpark understanding of the term, but it is still too broad for philosophical purposes. So let us note some typical uses of the verb *to know:*

1. "I know my friend John very well."
2. "I know how to speak English."
3. "I know that Washington, DC, is the capital of the United States."

The three sentences illustrate three different types of knowledge: knowledge by acquaintance, competence knowledge, and descriptive or propositional knowledge. We may characterize each of them this way:

1. *Knowledge by acquaintance.* A person S knows something or someone *X* (where *X* is the direct object of the verb). We are familiar in this way with the objects in the world and with our thoughts and sensations. We have acquaintance knowledge of our pains, our beliefs, our friends, the town in which we grew up, and so forth.

2. *Competence knowledge (sometimes called skill knowledge).* Person S knows how to *D*

(where *D* stands for a verb infinitive). This is *knowhow*. You know how to speak English and get around campus (or at least your room, when it isn't too cluttered). You may know how to ride a bicycle or play the piano or swim.

3. *Propositional knowledge (or descriptive knowledge)*. Person S knows that *p* (where *p* is some statement or proposition). Propositions have truth value; that is, they are true or false. They are the objects of propositional knowledge. When we claim to know that *p* is the case, we are claiming that *p* is true. Here are three examples of propositional knowledge: "I know that the sun will rise tomorrow," "I know that I have a mind," and "I know that Columbus discovered America in 1492."

Epistemology is primarily interested in this third kind of knowledge, propositional knowledge, and it is the kind of knowledge we shall be examining in this work. But this statement of purpose only scratches the surface of what we are concerned with in the theory of knowledge.

The field of epistemology seeks to throw light on the following kinds of questions:

1. What is knowledge? That is, what are the essential characteristics of this concept?
2. Can we know anything at all? Or are we doomed to ignorance about the most important subjects in life?
3. How do we obtain knowledge? Through the use of our senses, or our intellect, or both?

Let us examine each of these questions.

What is knowledge? As mentioned, propositional knowledge is knowledge of true propositions. To claim to know something is to claim to possess a truth. If you claim to know that $10 \times 10 = 100$, you implicitly claim that the statement $10 \times 10 = 100$ is true. It would be a misuse of language to make a statement such as "I know that $10 \times 10 = 13$, but it is false," for knowledge claims are claims about grasping the truth. Of course, we may be wrong about our knowledge claims. The drunk claims to know that there are pink elephants in the room, the child claims to know that Santa Claus exists, and two witnesses may make contradictory knowledge claims in reporting an accident. We often believe falsely that we know. Sometimes the evidence on which our knowledge claim is based is inadequate or misleading, or we misremember or misperceive. Sometimes our knowledge claims are contradicted by those of others, as when two people of different religious faiths each claims that his or hers is the only true religion or when one person claims with certainty that abortion is morally wrong and the other person claims with equal certainty that it is morally permissible.

Knowledge involves possessing the truth but includes more than having a true belief. Imagine that I am holding up four cards so that I can see their faces but you can only see their backs. I ask you to guess what types of cards I am holding. You feel a hunch (have a weak belief) that I am holding up four aces and correctly announce, "You are holding four aces in your hands." Although we both possess the truth, I have something you don't—an adequate justification for my belief that there are four aces in my hand. So knowledge differs from mere true belief in that the knower has an adequate justification for claiming truth.

Now the question shifts to the nature of justification. What exactly does it mean to be justified in believing some proposition? Are we justified when the evidence is undeniable, such as when we believe that $2 + 2 = 4$ or when we feel pain and cannot help believing that we are in pain? Can we have sufficient evidence to justify belief in physical objects? Our belief in other minds? Beliefs about metaphysical propositions such as the existence of God or freedom of the will? How much evidence must one have before one can claim to know a belief is true? Questions of justification will occupy us in most of this work, especially Parts V, VI, VIII, IX, and X.

Let us turn to the second question: Can we know anything at all? Or are we doomed to ignorance about the most important subjects in life? What do we really know? Could it be that we really know nothing at all? *Skepticism* is the theory that we do not have any knowledge. We cannot be completely certain that any of our beliefs are true. Radical skepticism goes even further and claims that *we cannot even be certain of the belief that we cannot be completely certain that any of our beliefs are true.* We cannot even know that we cannot have knowledge. Skepticism can also differ with regard to the skeptical thesis; for example, some skeptics claim that we cannot have empirical knowledge but allow mathematical knowledge.

Skepticism does not deny that we should not act from the best evidence available, but it insists that we can never be sure that we are correct in our truth claims. For all we know, that universe and everything in it could have been created ten minutes ago, and all our apparent memories created with it. Or the universe and everything in it may have doubled in size last night while we were sleeping. How could we check on this? It wouldn't help to use a ruler to measure our height to see if we doubled in size, would it?

Can you defeat the skeptic? Arguments for and against skepticism are examined in Part II.

Let's turn to the third question: How do we obtain knowledge? through our senses, or our intellect, or both? There are two classic theories on the acquisition of knowledge. They are called *rationalism* and *empiricism*. "Rationalism" may be a misleading name for the first theory, because both theories use reason in acquiring knowledge. It is simply that rationalists believe that reason is sufficient to discover truth, whereas empiricists hold that all knowledge originates through sense perception (through seeing, hearing, touching, tasting, and smelling).

In the first reading, Plato's "The Ascent to Knowledge," we encounter a classic expression of rationalism and idealism (or "Idea-ism"). Plato distinguishes two approaches to knowledge: sense perception and reason. Sense perception cannot be adequate for possessing the truth because its objects are subject to change and decay. All one gets in this way of apprehending things is beliefs about particular objects. Knowledge, however, goes beyond the particular and grasps universal *Ideas* or *Forms*. Plato argues that all knowing is the knowing of objects, so these Ideas must exist in the *really* real world, the world of being. The philosopher is a person who works his or her way through the world of becoming, the empirical world, to this higher reality. Plato uses the allegory of the cave to illustrate his doctrine.

The bridge between the world of being and the world of becoming is *innate ideas*. In the second selection from Plato (the *Meno*), Socrates claims to demonstrate, by teaching an uneducated slave geometry, that all learning comes about through recollection of innate ideas. The slave learns to double the size of a square simply by being prodded to consult his own native understanding. Plato believed in reincarnation, that in a previous existence we saw all essential truths but have lost awareness of them through birth. Education should be a stimulation of the soul so that a person recalls what he or she really possesses but has forgotten.

Plato thought that all knowledge was a priori knowledge, knowledge one has independently of sense experience—as opposed to "empirical knowledge," which comes to us from experience through the five senses. Empirical beliefs, according to Plato, are not knowledge, but simply unstable appearance. An example of a priori knowledge is the following mathematical equation: $5 + 7 = 12$. You don't have to appeal to experience in order to see that this equation is true. The mind alone can discover its truth. René Descartes (1596–1650) in Reading II.1 and Immanuel Kant (1724–1804) in Reading VIII.1 argue for the reality of a priori knowledge. The whole of Part VIII considers that issue.

Empiricism is the doctrine that all knowledge originates in the senses. In Part III, we examine two classical empiricist philosophers,

John Locke and Bishop George Berkeley. John Locke (1632–1704) systematically attacked the notions of innate ideas and a priori knowledge, arguing that if our claims to knowledge are to make sense they must be derived from the world of sense experience:

> Let us then suppose the mind to be, as we say, white paper, void of all characters, without any ideas; how comes it by that vast store, which the busy and boundless fancy of man has painted on it with an almost endless variety? Whence has it all the materials of reason and knowledge? To this I answer, in one word, from experience: in that all our knowledge is founded.

Locke goes on to set forth a representational theory of knowledge, which claims that the core of what we know is caused by the world itself, although some qualities are the products of the way our perceptual mechanisms are affected by the world. The former qualities—called *primary qualities,* such as motion, size, shape, and number—are the true building blocks of knowledge because these qualities are accurate representatives of the objective features of the world. The *secondary qualities* are modes of apprehending the primary qualities; examples are taste, color, odor, and sound. Because the color or taste of the same object can appear differently to different people or to the same person at different times, secondary qualities are subjective, even though they are caused by the objective primary qualities.

The difference between rationalism and empiricism may be illustrated by the following schema with regard to two important questions:

Question 1. How do we acquire ideas?

Answer A. Rationalism: Some *nonanalytic propositions** are innate or known a priori (independent of experience).

Answer B. Empiricism: All propositions are acquired from experience. No nonanalytic propositions are known a priori.

Question 2. How is knowledge organized in the mind?

Answer A. Rationalism: The mind brings to experience principles of order from the mind's own nature.

Answer B. Empiricism: The mind arranges and stores materials that are given in experience.

The two selections of Plato in this part, as well as the two selections of Descartes's writings (II.1 and V.1), illustrate rationalism. Selections from the work of Locke (III.1), Berkeley (III.2), and Hume (II.1) illustrate classical empiricism. The rest of this book considers nine perennial epistemological topics:

Part II, "Skepticism": Can we have any knowledge at all?

Part III, "Perception": Can we have knowledge of the external world?

Part IV, "The Analysis of Knowledge": Is knowledge true justified belief?

Part V, "Theories of Justification (I)": Is the structure of justification foundational or coherentist or neither?

Part VI, "Theories of Justification (II)": Is the correct account of the justification process one of externalism or of internalism?

Part VII, "A Priori Knowledge": Is there synthetic a priori truth? Is the analytic–synthetic distinction itself valid?

Part VIII, "Induction": Which is the correct solution to the problem of inductive knowledge?

* An *analytic proposition* is one in which the predicate term is contained in the subject—for example, "All mothers are women"—whereas a *nonanalytic* or *synthetic* proposition is one where the predicate adds something to the subject—for example, "Mary Smith has just become a mother." The nonanalytic propositions referred to by the rationalists typically are metaphysical propositions such as "God exists," "I have a free will," and "All things have sufficient reasons to explain them." See Part VII for more on this subject.

Part IX, "Other Minds": How do we justify our beliefs that others experience mental events, have beliefs and feelings?

Part X, "The Ethics of Belief": Are there epistemic obligations? Are there moral obligations to seek the truth or to have the best set of justified beliefs?

Part XI "Challenges and Alternatives to Contemporary Epistemology": Is knowledge essentially social or individualistic? Is the Cartesian ("egocentric") paradigm the correct model of knowing? Are truth and reality relative to agents or communities? Is all justification intrinsically perspectival or contextual, or can we transcend social contexts and understand the world impartially? Is the sex of the knower relative to the process of acquiring knowledge or is it irrelevant? Is knowledge political?

These topics and the questions that surround them form the heart of the philosophical enterprise. Nearly everything in philosophy refers to them. Although, first of all, they are purely theoretical, an understanding of their significance promises to make one a more enlightened human being, more aware of the structures of the cognitive dimension of existence.

Part II

Skepticism

What can we really know? How can we be certain that we have the truth? How can we be certain that we know anything at all? If we know something, must we know that we know it? Is the skeptic right in claiming that we know almost nothing at all?

Can we know anything at all? Or are we doomed to ignorance about the most important subjects in life? What do we really know? Could it be that we really know nothing at all? Could it be that either none of our beliefs are completely true or that none of our true beliefs are sufficiently justified to constitute knowledge? How can we show that we really do know anything at all?

Skepticism is the theory that we do not have any knowledge. We cannot be completely certain that any of our beliefs are true. There are two classic types of skepticism, both originating in ancient Greek philosophy: Academic skepticism and Pyrrhonian skepticism. Academic skepticism was first formulated by Arcesilaus (about 315 to about 240 B.C.), a philosopher in Plato's Academy, and builds on Socrates' confession in the *Apology,* "All that I know is that I know nothing." It argues that the only thing we can know is that we know nothing. The Academics argued that there is no criterion by which we can distinguish veridical perceptions from illusions and that at best we have only probable true belief.

Pyrrhonian skepticism, named after Pyrrho of Elis (about 360 to 270 B.C.), flourished in Alexandria in the first century B.C. The Pyrrhonians rejected Academic skepticism and dogmatism, the view that we could have knowledge, and set forth "tropes," skeptical arguments leading to *equipollence,* the balancing of reasons on both sides of an issue that led to *epoche,* the suspension of judgment. Whereas the Academics claimed to know one thing (that they didn't have any other knowledge), the Pyrrhonians denied that we could know even that. The Greek Pyrrhonist, Sextus Empiricus (second century A.D.), said that Pyrrhonism was like a purge that eliminates everything, including itself.

One other distinction regarding skepticism needs to be made: that between global and local skepticism. Global skeptics maintain universal doubt. They deny that we know that there is an external world, that there are other minds, that we can have knowledge of metaphysical truths, such as whether we have free will, whether God exists, whether we have souls, and so forth. Some superglobal skeptics even deny that we can know simple mathematical truths or that the laws of logic are valid (an evil genius could be deceiving us). In the following readings, René Descartes (1596–1650) and Keith Lehrer both represent global skepticism. The other type of skepticism is local skepticism, which admits that we can have mathematical and empirical knowledge but denies that we can have metaphysical knowledge (God's existence, the nature of matter, whether all events have antecedent causes, whether there are other minds, and so forth). David Hume (1711–1776) entertains the possibility of both forms of skepticism. As Richard Popkin accurately puts it,

> Hume sometimes held a most extreme skeptical position . . . questioning even the knowledge claims of science, mathematics, and logical reasoning, and sometimes held a limited mitigated skepticism allowing for probabilistic standards for evaluating beliefs about what is beyond immediate experience. When Hume examined the general nature of all beliefs, he tended toward complete skepticism. When he examined metaphysics and theology, in contrast with science, he tended toward a positivistic, limited skepticism. And when he developed his own views about human nature and conduct, his doubts tended to recede and his positive views became more pronounced.[1]

Skepticism does not deny that we should act from the best evidence available, but it insists that we can never be sure that we are correct in our truth claims. For all we know, the universe and everything in it could have been created ten minutes ago, and all our apparent memories created with it. Or the universe and everything in it may have doubled in size last night while we were sleeping. How could we check on this? It wouldn't help to use a ruler to measure our height to see if we have doubled in size, would it?

How do you know that you are not the only person who exists and that everyone else is a robot who is programmed to speak and smile and write exams? Can you prove that other people have consciousness? Have you ever felt their consciousness, their pain, or their sense of the color green? In fact, come to think of it, how do you know that you are not just dreaming right now? All you are experiencing is part of a dream. Soon you will awake and be surprised to discover that what you thought were dreams were really minidreams within your maxidream. How can you prove that you are not dreaming? Or perhaps you are simply a brain suspended in a tub full of a chemical solution in a scientist's laboratory and wired to a computer that is causing you to have the simulated experiences of what you now seem to be experiencing? If you are under the control of an ingenious scientist, you would never discover it, for he has arranged that you will only be able to compare your beliefs to experiences that he simulates. Your tub is your destiny!

In the first reading, from the *Meditations,* Descartes begins by rejecting all sensory perception, arguing that the senses are not reliable witnesses because they sometimes deceive. Essentially, we do not have a criterion by which to distinguish illusory experience from veridical perception. His argument may be formulated thus:

1. To have knowledge we need to be able to tell the difference between a hallucination (deception) and a perception. (Where there is no relevant difference, no epistemological distinction can be made.)

2. It is impossible to distinguish between an hallucination (or deception) and a normal perception.

3. Therefore, we do not know whether any of our perceptual beliefs are true.

But Descartes goes on to doubt even our mathematical judgments. He imagines that an ingenious demon is deceiving him about everything, even about the most secure mathematical sums, so that it is possible that he is mistaken about adding 2 plus 3.

In the second selection, David Hume admits that we can know mathematical truths but claims that we cannot have empirical knowledge. He supposes that all our beliefs (or ideas) are caused by impressions (both internal and external, the passions and the perceptions). But we cannot get behind the impressions to check whether the world is really like what we are experiencing, so we can never know to what extent our impressions and ideas resemble the world. Hume goes on to argue that since all our beliefs are founded on these insecure impressions, we can have no metaphysical knowledge. We cannot even trace our belief in cause and effect, the self, the existence of God, or free will to impressions; hence, they are entirely without justification. In the fourth reading, Keith Lehrer argues that knowledge entails complete justification of belief, but that if it is possible that the skeptical hypothesis is true, no one is completely justified in any belief. Hence, no one knows anything at all.

Can you defeat the skeptic? Two attempts are offered in this part of the book. In the third reading, G. E. Moore claims we *can* know there is an external world, for we can know we have bodies. There are many empirical beliefs that we can be absolutely certain of, so that skepticism may justly be refuted. In the fifth reading, Norman Malcolm distinguishes two types of knowledge, weak and strong. When I use the weak sense of knowledge, I am prepared to let an investigation determine whether my knowledge claim is true or false, whereas when I use the strong sense I will not concede that anything whatsoever could prove me mistaken.

Note

[1]Richard Popkin, "Skepticism," *Encyclopedia of Philosophy,* Vol. 7 (New York: Macmillan, 1967), p. 455.

Part III

Perception: Our Knowledge of the External World

In daily life, we assume as certain many things which, on a closer scrutiny, are found to be so full of apparent contradictions that only a great amount of thought enables us to know what it is that we really may believe. In the search for certainty, it is natural to begin with our present experiences, and in some sense, no doubt, knowledge is to be derived from them. But any statement as to what it is that our immediate experience makes us know is very likely to be wrong. It seems to me that I am now sitting in a chair, at a table of a certain shape, on which I see sheets of paper with writing or print. . . . I believe that, if any other normal person comes into my room, he will see the same chairs and tables and books as I see, and that the table which I see is the same as the table which I feel pressing against my arm. All this seems to be so evident as to be hardly worth stating, except in answer to a man who doubts whether I know anything. Yet all this may be reasonably doubted, and all of it requires much careful discussion before we can be sure that we have stated it in a form that is wholly true.

BERTRAND RUSSELL
Problems of Philosophy

What do we really know? Assuming that skepticism is false and that we do know something of the external world, what exactly do we know and how do we know it? Do we ever really see the book that appears in front of us, the table that it rests on, the floor on which we stand, the walls that surround us? What is the direct object of awareness when we perceive? Three answers have traditionally been given to that question: (1) direct realism (sometimes called "naive realism" or "commonsense realism"), (2) representationalism, and (3) phenomenalism. Direct realism claims that the immediate object of perception is a physical thing that exists independently of our awareness of it. Representationalism and phenomenalism answer that the immediate object of perception is a sense datum or sense impression—which cannot exist apart from our awareness of it. But representationalism and phenomenalism divide over the relationship of sense data to the physical world. For the representationalist, the physical world exists indepen-

dently of and is the cause of our perceptions. Physical objects give rise to sense data that we perceive, so we only have mediate knowledge of the external world. For phenomenalism, physical objects are simply constructions of sense data. They do not exist independently of sense impressions.

Common sense tells us that we—through our five senses: sight, hearing, touch, taste, and smell—do directly perceive the real world. It tells us that the physical world exists independently of our awareness of it and that the things we perceive are pretty much the way we perceive them. They exist here and now. Common sense supports naive or direct realism.

Science casts doubt on common sense. As Bertrand Russell succinctly says, "Naive realism leads to physics, and physics, if true, shows that naive realism is false. Therefore, naive realism, if true, is false; therefore it it false."[1] Science tells us that the physical objects we perceive are not what they seem to be, nor do we ever see things in the present. Colors are not in the objects but are the way objects appear as they reflect light. Since light takes time to reach our eyes, all that we see really existed in the past. It takes eight minutes for the light from the sun to reach us and hundreds of years for the light from distant stars to reach us, so when we look (through the proper filtered lenses) at the sun or at distant stars we are not seeing them as they exist in the present but as they existed eight minutes or hundreds of years ago. In fact, there is nothing we see as it presently exists but only as it existed in the past (near or far).

Likewise, science tells us that the sounds we hear, the flavors we taste, the sensations of touch, and the odors we smell are not what they seem to be. They are mediated through our ways of perceiving so we seldom or never experience them as they really are in themselves.

So representationalism seems to succeed in giving an explanation of perception that is more faithful to science than is direct realism. Representationalism holds that the real world causes our appearances or perceptions by representing the physical world through sense data, mental entities that are private to individual perceivers.

In the following readings, John Locke (1632–1704) sets forth the classic expression of this view. Attacking the notion that we have innate knowledge of metaphysical truths, Locke argues that all our knowledge derives ultimately from sense experience:

> Let us then suppose the mind to be, as we say, white paper, void of all characters, without any ideas; how comes it to be furnished? Whence comes it by that vast store which the busy and boundless fancy of man has painted on it with an almost endless variety? Whence has it all the materials of reason and knowledge? To this I answer, in one word, from experience; in all that our knowledge is founded, and from that it ultimately derives itself.

Locke held a causal theory of perception in which processes in the external world impinge on the perceiver's sense organs, which in turn send messages to the brain, where they are transformed into mental events. We may diagram Locke's causal theory of perception this way:

Objects and Events in the Real World

↓ (Energy coming to sense organs: insensible particles reflected from the object onto the sense organ or coming into contact with the sense organ)

Sense Organs

↓ (Signals to brain)

Brain Event

↓ (Transformation from physical to mental event)

Perceptual Experience

The mechanical input yields the nonmechanical idea in the mind. Although the process is physical and mechanistic, it yields a nonphysical result, a mental event, the perceptual experience, that subsequent philosophers describe as a *percept* or *sense datum* or *sense impression.*

Locke divides the qualities of physical objects into two basic classes: *primary qualities* and *secondary qualities.* Primary qualities are inseparable from their objects and so truly represent them. Such qualities are solidity (or bulk), extension, figure, movement (and rest), and number. These are the true building blocks of knowledge because they accurately represent features in the world. Secondary qualities are not in the things themselves but are caused by the primary qualities. These qualities include colors, sounds, smells, tastes, touch, and sensations. These secondary qualities are types of powers or potentialities or dispositions that reside in a physical object. Fire has the power to change liquids into gases, sugar is soluble in warm water, and glass is fragile. Solubility, flammability, and fragility are dispositional qualities in bodies. Dispositional qualities cause changes in the external world.

Secondary qualities are powers that produce sensations (that is, perceptions) in the perceiver. The primary qualities (motion or whatever) cause the secondary qualities that we perceive. When, under normal circumstances, we look at an object it looks a certain color—say, red. The redness we are acquainted with is not in the object itself but in the way the light reflects off the object into our eye and is communicated to our brain. Secondary qualities are the ways things have of appearing to us.

Underneath all the qualities is substance, the foundation of matter itself. Locke assumes that there must be an ultimate source of reality that underlies the ideas presented in experience. He describes it as "something I know not what."

There are problems with representationalism. If direct realism, via physics, leads to representationalism, representationalism, on philosophical reflection, seems to lead to phenomenalism.

In the second reading in this part of the book, George Berkeley (1685–1753) holds to a type of phenomenalism that has been called "immaterialism." Berkeley criticized Locke's representationalism on several counts. First, he argued that the primary–secondary qualities distinction was unsound. The primary qualities are no more "in" the objects of perception than are the secondary ones. Second, he argued that there were logical problems in the theory that our perceptions resembled physical objects ("an idea can be like nothing but an idea"). Third, he undermined the whole notion of substance that Locke needed to maintain his theory. What is the difference, Berkeley rhetorically asked, between a "something I know not what" (Locke's notion of substance) and nothing at all? Ultimately, Locke's representationalism leads back to skepticism.

Berkeley held that ideas exist in the mind alone. All perceived qualities are mental or subjective: their reality consists in being perceived ("To be is to be perceived"). There is no material world. Physical objects are simply mental events. "The table I write on, I say, exists, that is, I see and feel it; and if I were out of my study I should say it existed, meaning thereby that if I was in my study I might perceive it, or that some other spirit actually does perceive it." All physical objects are mental phenomena that would cease to exist if they were not perceived. Why do physical objects continue to exist when no one is perceiving them? Well, someone *is* always perceiving them: God's eye keeps the world from dissolving.[2]

Contemporary phenomenalism differs with Berkeley only in this last respect. It doesn't posit God as necessary to hold the physical world in existence. Instead, it views the physical world as a construct of ideas. In Mill's words, objects are "permanent possibilities of sensation," meaning that if one were to get into the appropriate condition, one would experience the sense data. In

the third reading for this part, W. T. Stace (1886–1967) argues that the realist's view of the world as containing material objects behind the perceived world is an unjustified faith. The world of scientific discourse (for example, such terms as "atoms," "gravity," and "conservation of energy") is not to be taken literally, but instrumentally, as providing useful fictions that help us to predict experiences.

The fourth reading, by C. H. Whiteley (1911–), provides a thorough critical assessment of the phenomenalist position, analyzing its strengths and weaknesses.

Two puzzles for sense data theories, whether representational or phenomenal, which Whiteley doesn't discuss, should be noted. The first is the paradox of the nontransitivity of perception. Take three pieces of red colored paper. Suppose we cannot distinguish between samples A and B. They seem exactly the same color. Likewise, samples B and C are indistinguishable. But say we *can* distinguish between A and C! On the sense data account, this is puzzling, since we should be able to distinguish our sense data from one another.

The second puzzle is that of indeterminateness. Suppose we see a speckled hen. How many speckles does our sense datum hold? If we say that the number is indeterminate, we seem to have a paradox between the indeterminate sense datum and the determinate objects that are supposed to be represented.

The fifth reading, by Bertrand Russell, (1872–1970) is a defense of representational realism, developing Locke's causal theory of perception in the light of contemporary science. According to Russell, our knowledge of physical objects is inferred from percepts in our brain. One may ask why Russell does not simply accept phenomenalism, since he makes percepts primary to our knowledge. Russell concedes that phenomenalism is not impossible, but views it as implausible for reasons similar to Whiteley's.

The sixth reading contains a contemporary defense of direct realism. John Searle holds to the similarity between beliefs and perceptions. Both are intentional in structure. Perception gives us direct access to physical objects.

Searle's essay is important because it relates perception to other intentional states such as beliefs, desires, and memory. You need to decide whether Searle deals adequately with the main criticism against direct realism, the problem of illusion.

The final reading is in part a defense of representationalism by Charles Landesman, who argues that nothing in the world exemplifies color, that it is the impact of radiant energy on the nervous system that produces the appearance of color. Such illusions as color appearances have a biological function, helping us make closer discriminations in the world, but colors are features neither of the external world nor of the mind.

Notes

[1]Bertrand Russell, *Inquiry into Meaning and Truth* (London: Allen & Unwin, 1940), 15.

[2]According to Berkeley, there is no sound independent of our hearing it and no reality but a mind's experiencing it. Does this mean that when we leave our rooms, they disappear? There is an old Oxford limerick on this point:

> There was a young man who said, "God
> Must think it exceedingly odd
> If he finds that this tree
> Continues to be,
> When there's no one about in the quad."
>
> Dear Sir, your astonishment's odd
> I'm always about in the quad,
> And that's why the tree
> Continues to be,
> Since observed by,
>
> Yours faithfully,
> God

Part IV

The Analysis of Knowledge

What are the criteria of knowledge? Can we give an adequate definition of *knowledge*? That is, can we state exactly what the necessary and sufficient conditions of knowledge are? Does knowing entail absolute certainty? In order to know, must we be aware of the evidence on which our knowledge is based?

Jack sees Jill get on Flight 101 for Miami and believes correctly that Jill is now in Miami, but unknown to Jack Flight 101 has been hijacked and diverted to Havana. However, Jill has fortunately taken a boat back to Miami and, two days after her original flight, has just arrived in Miami. Under these circumstances, does Jack *know* that Jill is in Miami? Many would argue that he merely has a true justified belief of this fact. His belief that Jill is in Miami is justified because normally a flight bound to Miami will land in Miami. However, while Jack's belief that Jill is in Miami is true and justified, the reason on which his belief is based is false.

Jane truly believes that the United States dropped an atomic bomb on Hiroshima in August 1945. However, she received this information from her brother John who guessed it on a multiple-choice test and, without believing one way or another, told Jane what his answer was. Jane—falsely believing that John knows what he is talking about (John is usually a reliable witness about such matters)—truly believes John's testimony, but does she *know* that the United States dropped a bomb on Hiroshima in 1945?

Joe has read in two separate newspapers that the Boston Celtics beat the Los Angeles Lakers last night by a score of 100 to 99, so Joe believes that the Celtics won the game last night. The Celtics did win the game last night, only they beat the Detroit Pistons, not the Lakers. A drunken sports reporter made a mistake and wrote down the losing team as the Lakers rather than the Pistons and the score was 109 to 90. A second newspaper simply copied his official report. Does Joe *know* that the Celtics won last night?

On the basis of these reports, Joe also believes that the Lakers didn't win last night. He is right about that, for the Lakers were idle, but does Joe *know* that the Lakers didn't win last night, or does he merely have a justified true belief?

When I was about nine or ten, a day or two before Christmas I told my brother Vincent that I had snuck into my father's workroom (something forbidden) and had discovered his Christmas present, a railroad and train set. I actually had not gone into my father's room but had made up the story to mislead my brother. But I had guessed correctly, for Vincent was indeed to be given a train set that Christmas. Vincent told my father that he knew what he

was getting for Christmas, and my father, who regarded knowledge of Christmas presents as tantamount to knowledge uttered by the Oracle of Delphi and his workroom as Delphi itself, angrily spanked me for my sacrilege. While I was being spanked, I pleaded that I had not gone into my father's room and had not seen the Christmas presents. "How did you know Vincent was getting a train set?" he asked. "I didn't know it," I responded, "I just made up the story." The question is, did Vincent, on believing my lie two days before Christmas, *know* he was going to get a train set?

Before 1963, the concept of knowledge was either left unanalyzed or defined more or less as true justified belief. I said in the introduction to Part I that Plato offered a tripartite analysis of knowledge, defining it as true belief with a rational explanation or justification (Greek *logos*). Passages asserting the tripartite analysis can be found in C. I. Lewis, Roderick Chisholm, and A. J. Ayer with similar definitions. Roughly, Person S knows that *p* if and only if

a. S believes that *p*.
b. Belief *p* is true.
c. S's belief that *p* is justified.

These three conditions constitute the necessary and sufficient conditions of knowledge. If one of them was missing, S did not know that *p*. If all of them were present, S could not fail to know that *p*. Let us call this the "tripartite analysis" of knowledge.

Alvin Plantinga reports the following anecdote. In 1962 he was drinking a cup of coffee in the cafeteria of Wayne State University with his colleague Edmund Gettier, when Gettier mentioned that he was concerned that he would be coming up for tenure next year without a lot of publications. He did have an idea of setting forth a few minor counterexamples to the traditional definition of knowledge, but he considered that a minor matter. The next year Gettier's two-and-a-half-page article on the definition of knowledge was published in *Analysis,* and epistemology has never been the same.

Gettier's analysis was based on two counterexamples to the tripartite analysis. The first is as follows. Smith and Jones have applied for a certain job, and Smith has strong evidence for conjunctive proposition (d): "Jones is the man who will get the job, and Jones has ten coins in his pocket."

Proposition (d) entails (e): "The man who will get the job has ten coins in his pocket." We may suppose that Smith sees the entailment and believes (e).

But unknown to Smith, he himself will get the job and happens to have ten coins in his pocket. So, while (d) is false, (e) is true and Smith truly and justifiably believes (e), but we would not say that Smith *knows* that the man who will get the job has ten coins in his pocket.

So the tripartite analysis fails, for he knows neither that he will get the job nor that he has ten coins in his pocket.

Keith Lehrer offers the following variation of Gettier's second counterexample.

A pupil in S's office, Mr. Nogot, has given S evidence *e* that justifies S in believing "Mr. Nogot, who is in the office, owns a Ford," from which S deduces *p:* "Someone in the office owns a Ford." But unsuspected by S, Mr. Nogot has been shamming and *p* is only true because another person in the office, Mr. Havit, owns a Ford.[1] Again the tripartite analysis seems to fail, since the true, justified belief is based on a false proposition.

Gettier's counterexamples have the following form:

1. S believes that *p*.
2. Belief *p* is true.
3. S's belief that *p* is justified.
4. Belief *p* is based on or entailed by some proposition *q*.
5. S is justified in believing *q*.
6. Belief *q* is false.
7. Therefore, S doesn't know that *p*.

Several proposals have been offered to meet the Gettier-type counterexamples. Four prominent attempts are included in this part of this book. Of course, you could conclude that the traditional concept of knowledge is hopelessly confused and in need of total revision. You may finally choose that alternative, but before you do, you should consider the other four strategies, which consist in supplementing the tripartite analysis with a fourth condition. The four strategies are (1) the no-false-belief condition, (2) the conclusive reasons analysis, (3) the causal condition, and (4) the defeasibility condition.

The No-False-Belief Condition

Early on it was thought that the Gettier counterexamples could be defeated by simply stipulating that the belief that *p* must not be caused or based on a false belief. In the preceding examples, the belief that *p* is based on a false belief *q*. However, this attempt at a solution was soon found to be both too weak and too strong. It was too strong because we can think of instances of knowing where a false belief is present. For example, I believe that Joan will be elected president of the student body because I justifiably believe (1) all the fraternity members, constituting 30 percent of the student body, are committed to Joan; and (2) all the sorority members, constituting 30 percent of the student body, are committed to Joan; and (3) all the on-campus independents, constituting 30 percent of the student body, are committed to Joan. Only the off-campus independent students, constituting only 10 percent of the student body, are against Joan. But I may be wrong about item 3. A last-minute change causes the independents to switch their vote. Nevertheless, I may still know Joan will win the election based on my justified true belief. If my belief in *h* is based on evidence *a, b, c,* and *d,* where my combination of two will justify *h*, I may hold two false beliefs and still be said to know that *h*.

The no-false-belief condition was also shown to be too weak, and examples were soon forthcoming in which no false belief was present. One of the most famous was set forth by Carl Ginet (and appears in Alvin Goldman's essay in this section, Reading IV.5). Henry is driving in the country and correctly identifies a red barn in the distance. Unknown to Henry, someone has set forth a series of red barn façades in this vicinity so that Henry could not distinguish the real barn from the façades. Hence, Henry cannot be said to know that he is seeing a red barn even though he has a justified true belief. But Henry's failure to know is not attributed to any false proposition on which his belief is based. So the no-false-belief condition does not succeed in saving the tripartite analysis. Our final reading by Richard Feldman also deals with this issue.

The Conclusive Reasons Condition

Fred Dretske set forth an ingenious solution to the Gettier puzzle in offering an account that basically argued that S knows that *p* if S has a reason (R) for *p*, such that if *p* were not the case S would not have R.[2] Smith's believing that the man who will get the job has ten coins in his pocket is not based on a conclusive reason, for the man who gets the job would get it even if he were not known to have ten coins in his pocket.

But there are problems with the conclusive reasons condition. George Pappas and Marshall Swain argue that it is too strong. Suppose S were looking at a table on which there was a cup.[3] S truly and justifiably believes that a cup is before him on the table, but unknown to him he is seeing not the cup itself but a hologram caused by rays given off by the cup. So the conclusive reasons account fails, for S would not have the reason he does for believing *p* if *p* were not the case, but we would not want to say that S *knows* that a cup is on the table.

The Causal Condition

Goldman in "A Causal Theory of Knowing" (Reading IV.2) set forth a causal theory that based justification on the way it was caused. If S knows that *p*, then S's belief that *p* must be caused by the state of affairs corresponding to *p*. Returning to the Gettier example, Smith does not know that the person who will get the job has ten coins in his pocket because that belief is not caused in the right way. In knowledge, there must be proper causal connections between the evidence and the belief. This seems promising, and perhaps it can ultimately be refined to do the work Goldman intended, but others quickly pointed out that the notion of causality is very vague here and that explaining via causality is an explanation *obscurum per obscurum* (explaining the obscure by the obscure), for it is not clear how the numbers 2 and 3 cause us to believe that they make 5 or how the future fact that I will die causes me to know this fact or that the universal proposition that all humans are mortal causes me to know the truth.

In Reading IV.4, Gilbert Harman critically discusses problems connected with the causal theory of knowing. He seeks to replace it with a near relative, inference to the best explanation. We do not need to be able to reconstruct the causal chain that led to Event X in order to know X. Consider, says Harman, the case of the mad fiend. Omar suffers a fatal heart attack in the street. An hour later a mad fiend comes down the street and sees Omar lying in the gutter. He cuts off Omar's head. You walk down the street an hour later, see Omar lying there with his head detached, and immediately infer from that state of affairs that Omar is dead. Harman points out that there is no causal connection between Omar's being dead and his head being cut off. Having his head cut off did not cause Omar's death, the heart attack did. You know that Omar is dead not because of any causal relation between his death and your belief, but because of a correct explanatory inference: "Normally, if someone's head is cut off, that person is dead. This generalization accounts for the fact that Omar's head is cut off is being correlated here with Omar's being dead." Incidentally, this also serves as a counterexample to the no-false-belief condition, for you may believe that Omar is dead because someone cut off Omar's head, whereas in fact his head was cut off because he was dead. Even though you are mistaken about the cause of Omar's death, you still know that he is dead.

Harman sees his explanatory account of knowledge as an enlargement of Goldman's causal account. Inference to the best explanation is the general theory of knowledge within which the causal account functions as a special case.

In Reading IV.5, "Discrimination and Perceptual Knowledge," Goldman sets forth a descendent of his causal theory, which seeks to meet some of the criticisms of his main theory. In Goldman's revised theory, knowledge consists in the ability to discriminate between relevant alternatives. For example, in the case of Henry picking out a red barn in an area where there are barn façades, Henry, on Goldman's account, fails to know that he sees a barn, since he could not distinguish it from the façades.

4. The Defeasibility Condition

The defeasibility requirement, set forth in our readings by Lehrer and Paxson in Reading IV.3 and Harman in Reading IV.4, states that if there is no other truth (*q*) such that S's believing it would have destroyed his justification for believing that *p*, then this condition, along with the tripartite conditions, entails that S knows that *p*. Lehrer and Paxson set forth the following illustration of defeasibility. S sees a man named Tom Grabit steal a book. However, unknown to S, Tom's deranged mothers lies and testifies that Tom is a thousand miles away, so it must have been his twin brother Buck who stole the book. If S had known that Mrs. Grabit had testified the way she did, he would not have been justified in believing that Tom stole the book. The statement "Mrs. Grabit testified that Tom was a thousand miles away at the time in question" would have defeated knowledge. However, one can imagine a defeater to the defeater here. If S knew that Mrs. Grabit was a deranged liar, he would have warrant to dismiss her testimony and continue to hold to his original belief about Tom.

As you may suspect, the defeasibility criterion seems vague and open-ended. Harman argues that for any inductive belief there will always be some true proposition such that if the person knew of it, his or her justification would be defeated. For a large number of knowledge claims, we can imagine some true proposition that, if we believed it, would defeat our claim to knowledge, but then we can think of some further true belief that would defeat the defeater, and some other true belief that would defeat the antidefeater, and so on. One may suspect that this condition is really appealing to omniscience. Nonetheless, many epistemologists, like Lehrer and Paxson, believe we can distinguish between defeating and nondefeating conditions. Others, like Harman, hold that the best we can do is set forth as a requirement that if a person is justified in inferring that there is no defeating counterevidence to a true, justified belief, then that person *knows* the proposition in question.

These essays represent the tip of the iceberg with regard to the literature generated by Gettier's three-page article. All the positions described have received important criticisms that you may want to look into. A bibliography, including these critical essays, appears at the end of this part of the book. Parts V and VI also contain discussion of some of the ideas discussed in this section.

Let us turn to our readings.

Notes

[1] Keith Lehrer, "Knowledge, Truth and Evidence," *Analysis* 25.5 (1965), 169.

[2] Fred Dretske, "Conclusive Reasons," *Australasian Journal of Philosophy 49* (1971), reprinted in George Pappas and Marshall Swain, eds., *Essays on Knowledge and Justification* (Ithaca, NY: Cornell University Press, 1978).

[3] George Pappas and Marshall Swain, "Some Conclusive Reasons Against 'Conclusive Reasons,'" in Pappas and Swain, 1978.

Part V

Theories of Justification (I): Foundationalism and Coherentism

Now of the thinking states by which we grasp truth, some are unfailingly true; others admit of error-opinion, for example, and calculation, whereas scientific knowlege and intuition are always true; further, no other kind of thought except intuition is more accurate than scientific knowledge, whereas primary premises are more knowable than demonstrations, and all scientific knowledge is discursive. From these considerations it follows that there will be no scientific knowledge of the primary, and since, except intuition, nothing can be truer than scientific knowledge, it will be intuition that apprehends the primary premises.

ARISTOTLE
Posterial Analytics, II, 19

Until recently most epistemologists have held that some self-evident first principles are immediately known to the understanding and sufficient to build a complete system of knowledge. For Plato, these principles were the Forms, the knowledge of which was latent as innate Ideas within us. For Aristotle and Aquinas, they were the basic truths, such as the axioms of mathematics and logic, which are grasped immediately by the understanding. Aquinas wrote,

> Now a truth can come into the mind in two ways, namely, as known in itself, and as known through another. What is known in itself is like a principle, and is perceived immediately by the mind. And so the habit which perfects the intellect in considering such a truth is called "understanding"; it is a firm and easy quality of mind which sees into principles. A truth, however, which is known through another is understood by the intellect, not immediately, but through an inquiry of reason of which it is the terminus.
> (*Summa Theologica,* Ia. Q84, a. 2)

René Descartes, in the first reading in this part of the book, holds that knowledge of the existence and mental nature of the self is grasped noninferentially by the understanding. Furthermore, each person can have infallible knowledge of his or her psychological states, beliefs, and desires. For example, I can know

infallibly that I am in pain, that I seem to see a tree in front of me, and that I believe that there is a tree in front of me, although I cannot know that there really is a tree in front of me. In addition, Descartes thought we had immediate knowledge of certain metaphysical truths such as that there must be as much reality in the total cause as in the effect—a proposition that enabled him to deduce the existence of a perfect divine being, who in turn guaranteed the veracity of our empirical beliefs. Self-evident truths were "clear and distinct," having a luminous aura about them that the intuition could not fail to grasp as obvious truth.

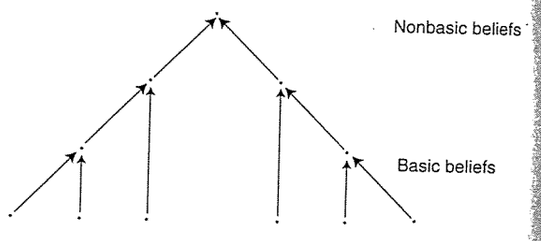
Empiricists such as John Locke believed we could have knowledge of physical objects, especially the primary qualities (as we saw in Part III).

What all these philosophers have in common is the theory that we can have immediate and infallible knowledge of first principles, or basic propositions, from which we can deduce further truths. The properly basic beliefs are known immediately through the *intuition* (sometimes called the "faculty of intuition"). All other knowledge is inferred deductively from these basic beliefs.

Two related notions are tied together in this notion of immediate and infallible or indubitable knowledge: self-evidence and incorrigibility. A proposition is self-evident just in the case that if one understands and considers it, one cannot help but believe and know it. It is obvious, luminous, certain. Examples of such propositions are the law of noncontradiction and basic truths of arithmetic such as $1 + 1 = 2$. A belief is incorrigible for someone S if and only if it's not possible for S to believe the proposition and the proposition be false. Examples are appearance statements such as "I seem to see a red object" and Descartes's *Cogito, ergo sum*, "I think, therefore I am." Both have been considered certain, but only propositions are self-evident. Incorrigibility is primarily a property of beliefs, but these terms often overlap. There is no clear consensus on their definitions.

This traditional view, that we may have infallible noninferential knowledge on which all other knowledge is based, we call *classical foundationalism*. Note the architectural metaphor "foundation." Descartes spoke of tearing down the superstructure and destroying the foundations of our epistemically unjustified house and of laying a new, infallible foundation with indubitable propositions, and thereupon erecting a solid and certain superstructure, a house of knowledge. As such, we may divide all beliefs into two kinds: basic beliefs and inferred beliefs. We may define the primary epistemic unit *properly basic belief* this way: "A belief that *p* is properly basic for a person S if and only if it is (1) basic (noninferential) for S and (2) properly so (justified noninferentially)." A nonbasic justified belief is one that is inferentially based on one or more properly basic beliefs.

The relationship is asymmetrical, in that the basic beliefs transfer justification and knowledge to the derived belief but not vice versa. The resulting treelike relationship is shown as follows:



From indubitable first premises, Descartes deduced the existence of God as an omnibenevolent being whose nature excluded deception. Since God implanted our perceptual mechanisms within us, it will follow that we can know we are not being deceived when we believe things about objects in the world. Normally, if I seem to see a tree, I really do see one. Only under abnormal circumstances will I be deceived about such matters. Yet, because I can be deceived, I should withhold the attribution

of knowledge to such empirical judgments. Induction can never be a means of knowledge, but only of belief.

Contemporary philosophers found problems with Descartes's (1) arguments for the existence of God, (2) notion that "there must be at least as much reality in the total cause as in the effect," (3) notion of clear and distinct ideas, and (4) notion of infallibility (or incorrigibility). Held by many philosophers, but denied by others, it is generally conceded that Descartes fails to establish (1), (2), and (3) and that (4) is controversial. Whether our appearance beliefs—for example "I am in pain," "I seem to see a red object," and "I have a hot sensation"—are really infallible (or incorrigible) is a matter of debate.

Consider the statement, "I am in pain," uttered by me. If I believe that I am in pain, is it necessarily so? Do I infallibly know that I am in pain when I believe that I am? Consider this counterexample adapted from Keith Lehrer. A gullible woman who is having shoulder pains sees her physician who, believing the woman to be a hypochondriac, informs her that she is mistaken about these pains. "They really are acute tickles," he avers. "Acute tickles sometimes resemble pains, but they are really more pleasurable." The gullible woman believes the physician and the next day tells her husband that she is having tickling sensations in her left shoulder. Has she merely misnamed her experience or does her confusion disqualify the experience from being infallible (or incorrigible)?

Consider the statement "I am having a hot sensation," uttered by one who believes it with infallible certainty. Plausible counter-examples are available to this belief too. I once heard the following story about a fraternity initiation. The pledge was told that he was to be branded on his buttocks with a branding iron containing the Greek letters of his fraternity. The inductee saw the red hot iron pulled from the stove and heard it sizzling. He removed his pants and bared his backside to the fraternity members in anticipation of the branding iron. Then an ice cold metal bar was applied to his backside. The pledge reported that for several seconds he felt an incredibly hot sensation.

Likewise, we may ask whether the appearance belief that I seem to see a red object is infallible or incorrigible. Could I be confused about colors so that I am really having an orange sensation? Or is seeming to see *X* sufficient to make such a belief incorrigible?

But even if these experiences can count as foundational in some sense, it would seem that classical foundationalism would restrict us to very little knowledge, for it can allow nothing but infallible or incorrigible beliefs in the foundations. Perhaps there are some self-evident, incorrigible truths, such as simple mathematical statements and truths of logic, as well as the *Cogito* (I think, therefore I am), but this doesn't give us enough of a foundation to build a sturdy superstructure. It doesn't even include empirical beliefs. For these and other reasons, most contemporary foundationalists have rejected classical foundationalism. However, in our readings Timothy McGrew (Reading 4) sets forth a defense of classical foundationalism.

Nevertheless, the trend has been for foundationalists to take on the label of "moderate" or "minimal" before "foundationalism." Such foundationalism accepts the foundational model of distinguishing basic from nonbasic beliefs but rejects the possibility of an infallible belief system and accepts fallibilism, the theory that many of our most cherished beliefs could be false.

The following are features of modest foundationalism:

1. An asymmetrical relationship exists between the foundations and the superstructure.

2. Doubts about any psychological beliefs (beliefs about our mental states, such as our desires) being indubitable or incorrigible are allowed.

3. Almost any belief can be basic for a person under certain circumstances. No particular type of content is required.

4. The foundational relationship is justification of belief rather than knowledge, although knowledge is the goal of believing.

5. Superstructure beliefs may be only inductively based on basic beliefs. That is, the transmission of justification from the basic to the nonbasic beliefs is more flexible than allowed by classical foundationalism.

6. Coherence is allowed some scope in the justification process. As an example, for Robert Audi, coherence plays a negative role in foundational structures. If someone shows that our belief set is incoherent, it cannot be justified. For Audi and Alston, a justification of a belief can be "overdetermined." That is, it may be justified by appeal to properly basic beliefs, and it may also be justified by its cohering within a whole system of beliefs.

7. One must distinguish between *having* a justification for a belief and being able to *show* that one has such a justification. Moderate foundationalists argue that for the justification to obtain it is not necessary for a person to be able to show that he or she is justified.

The two selections by Robert Audi contain many of these points.

The Regress Problem

A driving force behind contemporary foundationalists is the problem of stopping the regress of inferential justification. Suppose you believe that eating vegetables will promote your health. I ask you why you believe that. You answer that your belief is based on your beliefs about nutrition. Vegetables have the kind of vitamins necessary for the proper maintenance of the human body. But suppose I ask you why you believe that vegetables contain the kind of vitamins necessary for the proper maintenance of the human body. Well, you'd either appeal to "common knowledge" or start discussing chemistry and physiology. Where would the demand for a justification stop? Does it matter?

Structurally, your belief A that vegetables promote health is based on your belief B that vegetables contain necessary vitamins, which in turn is based on belief C having to do with chemistry and physiology. Or you could argue that A is based on D, inductive knowledge that vegetables generally promote physical health.

Another way of putting the matter is to say that we infer belief A from belief B and B from C and so on. Four kinds of such inference chains can be identified:

1. Belief A is itself inferred directly from belief B, which is unjustified.

2. Belief A owes its justification to belief B, which is based on belief C and so on *ad infinitum.*

3. Belief A owes its justification to belief B, which is based on belief C, which is based on belief A, doubling back in a circle.

4. Belief A owes its justification to belief B, which is based on a foundational or noninferential belief that needs no further justification.

There are problems with each type of chain.

Wittgenstein seems to have held the first option, because he remarked that "at the foundation of well-founded beliefs lies belief that is not founded." Perhaps contextualism (see the discussion later in this part introduction) fits this category, but it is hard to see, without more qualifications, how unjustified beliefs can yield a justified belief.

Regarding the infinite regress chain, it is difficult to believe that creatures like us have an infinite set of beliefs, and, even if we did, it would be impossible ever to show that such a justified belief was justified. Perhaps we have an infinite set of mathematical beliefs ("2 is greater than 1," "3 is larger than 2," and so forth), but it is doubtful whether the notion of an infinite set (or infinite sets of all our justified beliefs) has anything to commend it. No one has given a good argument for the infinite regress chain, though it hasn't been disproven, either.

The circular scheme is the model for coherentism. On the face of it, it seems to beg the question. For example, suppose you ask me why I believe in the Bible and I say, "Because it's inspired by God." Then you ask me why I believe in God, and I say, "I believe in God because the Bible says God exists." Arguing in a circle can be done by any fool and proves nothing. However, as we shall see, if the circle is big enough and the interrelations are intricate enough, many philosophers will accept something like the circular scheme. It is called *coherentism.*

The final pattern, which posits self-justified beliefs ("unmoved movers" to use Chisholm's phrase) at the base of every inferential chain, is the one foundationalists choose. Every justified belief either itself is a properly basic (justified) belief or ends in a chain of beliefs the last of which is self-justified. On the face of it, foundationalism seems the most satisfactory solution to the regress problem. It stops the chain of justification and does so in a way that does not beg the question.

Nonetheless, as noted in the readings, foundationalism has several problems. First, strong foundationalism contains too little content to sustain the edifice of knowledge; weaker foundationalism is too compromising to offer us justification. That is, classical foundationalism with its appeal to infallible knowledge doesn't seem adequate to yield much inferred knowledge or justified belief but tends toward skepticism about the external world, other minds, induction, and the like. Moderate or weak foundationalism, however, doesn't give us the strong justification, let alone knowledge, that we would like to have. In fact, as it compromises and accepts coherence constraints, it tends to become indistinguishable from moderate coherentism.

Second, the epistemic ascent argument set forth by Wilfrid Sellars and Laurence BonJour (see the third reading in this part) maintains that foundationalism cannot explain, without appealing to an unwarranted stipulation, how a justification terminates. Let A represent the property of being a properly basic belief; then for a belief B to qualify as properly basic, the premises of the following justificatory argument must themselves be justified:

1. S's belief B has property A.

2. Beliefs having property A are highly likely to be true.

3. Therefore, S's belief B is highly likely to be true.

BonJour argues that for foundationalists to be justified in believing that B is properly basic, they must depend on this argument, so that their justification is not immediate or basic but inferential.

Foundationalists have attempted to set forth reasons why the ascent argument is not decisive against them.[1]

Coherentist Theories of Justification

There have always been coherence theories of truth, theories that claim that the truth resides in the absolute system of knowledge. Hegel, F. H. Bradley, and Brand Blanshard held the view that truth was defined not as correspondence of propositions with facts but as integrated and absolute wholes in which individual propositions received justification and relative truth credentials. Every true belief is entailed by every other proposition in the coherent system.

However, most contemporary coherentists, such as W. V. Quine, Wilfrid Sellars, Gilbert Harman, Keith Lehrer, and Laurence BonJour, reject the coherence theory of truth as an implausible metaphysical doctrine and adhere instead to a coherentist theory of justification. Individual beliefs are justified by the entire system of beliefs in which they cohere.

All justification is inferential, so the notion of proper basicality is a contradiction in terms.

There are several versions of coherentism, but one important objection has been applied against all forms: the isolation objection. This objection states that the coherence of a theory is an inadequate justification of the theory, because by itself it doesn't supply the necessary criteria to distinguish it from illusory but consistent theories. Fairytales may sometimes be coherent, as may dreams and hallucinations. Astrology may be as coherent as astronomy, Newtonian physics as coherent as Einsteinian physics, but surely, the objection runs, we want to connect our theories with empirical data. Consistency may, generally, be a necessary condition for justification (although see Fumerton's critique in Reading V.6), but it is not a sufficient condition for justification.

In our readings, Jonathan Dancy defends both a coherence theory of truth and justification. He argues that coherentism gains in importance if it can connect truth and justification. Indeed, what is so great about justifying our beliefs if they do not connect with truth? According to Dancy, a proposition is true if and only if (iff) it is a member of a coherent set of propositions. Against the correspondence theory of truth, Dancy argues that there is no theory-free external point of view. He goes on to admit a certain apparent asymmetry between empirical observation and the resulting sensory beliefs. Nevertheless, what gives sensory beliefs their security is their internal coherence within one's belief-set.

Three insightful discussions end the section on the foundationalist-coherentist debate. Ernest Sosa's "The Raft and the Pyramid" closely analyzes the strengths and weaknesses of various forms of each of these theories. Robert Audi's "Fallible Foundationalism and Holistic Coherentism" outlines a moderate foundationalism sympathetic to the insights of coherentism. Susan Haack's "A Foundherentist Theory of Empirical Justification" attempts to combine foundational virtues—namely, the importance of experience for justification—with the virtues of coherentism, namely, the mutual support of our beliefs in the structure of justification.

Contextualism

Finally, an alternative to the foundationalist-coherentist controversy has recently been set forth by several philosophers, including Thomas Kuhn, Keith DeRose, David Lewis, and David Annis. Annis, whose reading concludes this part of the book, gives the most lucid description of this theory, called *contextualism,* and argues that justification is relative to social practices with differing norms. He distinguishes an issue context from an objector context. The *issue context* of a belief is the specific concern someone raises about it; the *objector context* refers to the group that raises objections to the believer about the belief in question. A belief is contextually basic for a person relative to an appropriate objector group at a specific time if that group lets the person hold the belief without supporting reasons. In different contexts, different beliefs take on proper basicality, but there is no general epistemic criterion for justifying beliefs independent of those arising from social practices and social approval.

Still in its infancy, contextualism has already been criticized as being unduly relativistic. We shall encounter another version of contextualism in David Lewis's "Elusive Knowledge" in Part VI of this work. Related epistemic theories appear in Part XI ("Challenges and Alternatives to Contemporary Epistemology").

Note

[1]See Roderick Chisholm, *Theory of Knowledge,* 3d ed. (Englewood Cliffs, NJ: Prentice-Hall, 1985), and Paul Moser, *Epistemic Justification* (Dordrecht, Netherlands: Reidel, 1985), chap. 4.

Part VI

Theories of Justification (II): Externalism and Internalism

Bishop James Ussher (1581–1656), Primate of All Ireland, calculated the genealogies in the Bible and determined that the creation of the heavens and Earth, as well as the first humans, took place in the year 4004 B.C. (October 23 at noon), about 6,000 years ago. Modern science totally rejects Ussher's theory. The fossil record, the dating of the age of rocks that posits the Earth is about 5 billion years old, the evidence from astronomy that the universe is at least 15 billion years old, our best evidence for evolutionary theory—all purport to refute Bishop Ussher's conclusions. But suppose Ussher is right about the age of the universe and the Genesis account of Creation is accurate so that all our evidence for evolution and the longevity of the universe is systematically misleading. The carbon 14 test for dating organic materials does not function reliably after about 5,500 years. The fossils of dinosaurs were hidden in Earth by a malicious demon to mislead unbelievers. Our evidence for an ancient universe is fraudulent but is such that finite minds like ours could never comprehend the truth unaided by revelation. If we had not sinned, our noetic devices would have processed all this information reliably, but as it is, sin has corrupted our belief-forming mechanisms so that they are unreliable about such matters. Only through conversion wherein divine grace sets our mechanisms back in proper working order can we become knowledgeable of the hidden truth.

According to internalists, or *justificationists*, as long as we are following the best evidence available to us, we are justified in believing the evolutionary account and the creationists are unjustified in their lucky true belief. The externalists (*reliabilists*) argue that this is not the case. As long as a reliable process caused creationists to believe the way they did, they have knowledge as well as justification.

Actually, there are two kinds of externalists: reliabilists and naturalists, the former (D. M. Armstrong, and Alvin Goldman in the first reading of this part of the book) hold that reliable processes are justifactory. Naturalists, such as W. V. Quine in the third reading, reject the notion of justification altogether. Knowledge is a matter of having beliefs caused in the proper way. The idea of justification implies normativity, but we are not responsible for our beliefs, so the idea of evaluation is misplaced.

There are several advantages to externalism. It defeats the skeptic, dissolves the problems of induction and other minds, and makes sense of perceptual knowledge.

It defeats skepticism. Since knowledge is defined as true beliefs caused in the proper man-

ner, it doesn't matter whether the subject can give an account of his or her beliefs or is even conscious of those beliefs. In a similar vein, externalism dissolves the problem of induction and other minds because these beliefs are seen as being caused by reliable processes (see Levin, Reading IX.5).

With regard to perception, we often cannot give an account of our beliefs. We may not even know why we hold them. Suppose you come to dinner at my home, and after dinner I take you into another room and give you a quiz. "Do you know what color the walls in the dining room were and what pictures were hanging on them?" I ask. You pause, for you don't remember even noticing the walls or the pictures, but you correctly say, "The walls were red and a couple of pictures of Oxford were on one wall and a Renoir picture was on the other." "How did you know that?" I ask. You admit that you don't know how you knew. Your perceptual mechanisms picked up the information, stored it in your mind or brain, and let you retrieve it at the appropriate moment. Were you justified in believing that the walls were red and that pictures of Oxford were on one wall? What if you thought you were only guessing? What if you didn't really believe what you said, but only said what came to your mind unbidden via the unconscious?

The externalist says you knew the color of the walls and what pictures were hanging there, just as long as a reliable mechanism caused your beliefs. The internalist has trouble with this sort of case and either says it is a borderline case of justification or is an unjustified true belief.

But there are weaknesses with externalism. First of all, exactly what is to count as a reliable belief-forming mechanism is vague. What percentage of true beliefs must the process be able to produce before it is admitted to be reliable? The major problem, however, is that it seems to dissolve the notion of normativity. Knowledge is more than simply having true beliefs or properly caused beliefs. A long tradition, going back to Plato in the *Theaetetus,* holds that knowledge requires the ability to give reasons, a justification. Appropriate causation of a belief seems necessary but not sufficient for justification, for we can imagine counterexamples where a belief that p has been properly caused, but where we would not want to say that the subject knew p. Laurence BonJour offers the following counterexample:

> Samantha believes herself to have the power of clairvoyance, though she has no reason for or against this belief. One day she comes to believe, for no apparent reason, that the President is in New York City. She maintains this belief, appealing to her alleged clairvoyance power, even though she is at the same time aware of a massive amount of apparently cogent evidence, consisting of news reports, press releases, allegedly live television pictures, and so on, indicating that the President is at that time in Washington, D.C. Now the President is in fact in New York City, the evidence to the contrary being part of a massive official hoax mounted in the face of an assassination threat. Moreover, Samantha does in fact have completely reliable clairvoyant power under the conditions which were then satisfied, and her belief about the President did result from the operation of that power.[1]

In this case the reliability requirement is met, but we would hesitate to say that Samantha knows that the president is in New York or is justified in her belief.

Likewise, even if it turned out that Bishop Ussher was right in dating the creation of the heavens and Earth to the year 4004 B.C. and that present-day creationists had their correct beliefs formed in reliable ways (their belief-forming mechanisms were unconsciously tied into information patterns going back to Creation, though they didn't have good reasons to believe this), as long as they weren't able to give good reasons for their beliefs, we would deny that they were epistemically justified in their beliefs.

Finally, reliabilists seem to be driven to giving counterfactual accounts of knowing and so are heirs to all the problems inherent in such accounts, as well as specifying the relevant belief-forming mechanism in specific cases.

In the first reading, Alvin Goldman develops a causal account of foundational justification called "historical reliabilism," in contrast with the traditional "current time slice" theories of justification. Current time slice or synchronic theories view the justificatory status of a belief as a function of what is true for the believer at the time of the believing. Historical reliabilism holds that the justificatory status is a function of the belief's prior history, specifically of whether it was produced in the right way. Goldman's theory is objectivist and externalist.

In the second reading, Keith Lehrer nicely maps out the geography of the internalist–externalist debate and argues against Goldman's account and for internalism.

In the third reading, W. V. Quine argues for a more radical version of externalism than Goldman and the reliabilists. According to Quine, normative epistemology is an outmoded enterprise that must be turned over to psychology. With the failure of Rudolf Carnap's project for constructing a foundational system of knowledge and with our understanding of the indeterminacy of translation, all hope of reviving the "old epistemology" is fruitless. What is left is a descriptive inquiry into the relationship between sensory inputs and the "torrential output," our picture of the world.

In the fourth reading, Earl Conee and Richard Feldman examine the central thesis of reliability theories: that a belief is justified if and only if it is produced by a process that reliably leads to true beliefs. They argue that such a theory must clearly identify the nature of these reliable processes. However, it turns out that seemingly insuperable problems attend any attempt to identify these processes. In particular, any given token process may be assessed under many types. So process reliabilism, the most prominent of externalist theories, turns out to be at best incomplete.

But if externalism has problems, so does internalism, as our fifth reading, Alvin Plantinga's "A Critique of Internalism" points out. Plantinga argues that the classical version of internalism, exemplified in Descartes and Locke, which links justification with duties and closely relates it to knowledge, is incoherent, and he suggests a replacement in terms of properly functioning belief-forming mechanisms. Regarding Ussher's estimated dating of the creation of the heavens and Earth, Plantinga would very likely say that Ussher and creationists were *warranted* in their beliefs and have knowledge of these propositions just in case the propositions are true and the beliefs were formed in a suitable way, even if they cannot give reasons for these beliefs. Plantinga further develops his position in his work *Warrant and Proper Function* (1993).

Plantinga's critique of the notion of epistemic duties overlaps this part of the book and Part X, "The Ethics of Belief." His position is also challenged by Matthias Steup in our next reading. Steup defends an account of internalism that, directly opposed to Plantinga's externalism, is both deontological and evidentialist. Contrary to Plantinga, Steup holds that we do have epistemic duties and that believing does have a volitional element.

In our seventh reading, Hilary Kornblith's "Naturalistic Epistemology and Its Critics," is valuable for two reasons. First, it sums up and assesses the current debate between naturalistic epistemologists and their critics. Second, it provides an account of how naturalism can preserve the goals of traditional epistemology: describing justification and knowledge, meeting the skeptical challenge, and providing advice on how to enlarge the set of true beliefs and knowledge while minimizing the set of false ones.

Our final reading, "Elusive Knowledge," is a subtle defense of externalist contextualism. David Lewis deals with the frustration of applying our normal epistemic standards to commonsense knowledge claims, noting that our

standards seem to dissolve clear instances of knowledge. He proposes a solution that would solve this problem.

Let us turn to our first reading, the groundbreaking article by Alvin Goldman, "Reliabilism: What Is Justified Belief?"

Note

[1]Laurence BonJour, *The Structure of Empirical Knowledge* (Cambridge, MA: Harvard University Press, 1985), 38.

duces, or would produce, at least as much net happiness as any alternative open to the agent. These necessary and sufficient conditions clearly involve no ethical notions. Analogously, I want a theory of justified belief to specify in non-epistemic terms when a belief is justified. This is not the only kind of theory of justifiedness one might seek, but it is one important kind of theory and the kind sought

belief, he knows that it is justified and knows what the justification is. It is further assumed that the person can state or explain what his justification is. On this view, a justification is an argument, defense, or set of reasons that can be given in support of a belief. Thus, one studies the nature of justified belief by considering what a person might *say* if asked to defend, or justify, his belief. I make none

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This is not the kind of principle for the predicate "is a justified belief" to appear in

Pojman Louis P. *What Can We Know? An Introduction to the Theory of Knowledge.* Belmont, CA: Wadsworth, 1995. Chapters 8–10.

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Van Inwagen, Peter. "When Is the Will Free?" In T. O'Connor (ed.), *Agents, Causes, and Events.* Oxford: Oxford University Press, 1985.

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Part VII

A Priori Knowledge

Classifications and Definitions

The problem of synthetic a priori knowledge involves epistemological, metaphysical, and semantic considerations. The terms *a priori* and *a posteriori* are Latin expressions developed by scholastic philosophers in the Middle Ages. A priori literally means "from what is prior," and a posteriori means "from what is posterior." Leibniz (1646–1716) used a posteriori to signify contingent truths of fact, truths about what is discoverable by experience, and used a priori to signify truths of reason, truths that depend on the principle of identity (A = A), which the mind could discover without the aid of the senses. Immanuel Kant (1724–1804) further refined these notions to refer to judgments depending on empirical experience and judgments that do not, respectively. He further combined a priori knowledge with synthetic propositions giving rise to the present problem: is there synthetic a priori knowledge? For Kant, synthetic a priori knowledge is knowledge that is not derived from particular sensations but is presupposed in all our experience. It is logically necessary (that is, it could not be otherwise; it is true in all possible worlds), whereas synthetic a posteriori knowledge is contingent (that is, it could have been otherwise and is not true in all possible worlds).

A classification of the relevant concepts is as follows:

A. Epistemological categories
  1. *A priori* knowledge does not depend on evidence from sense experience (Plato's innate Ideas and Leibniz's "truths of reason"); for example, mathematics and logic.
  2. *A posteriori* knowledge depends on evidence from sense experience (Plato's appearance and Leibniz's "truths of fact")—empirical knowledge.

B. Metaphysical categories
  1. *Necessary truths* "are" true in all possible worlds (for example, the statement that "God exists" according to the ontological argument).
  2. *Contingent truths* "are" true in the actual world but not in all possible worlds (for example, the fact that you exist and were born after January 1, 1800).

C. Semantical categories
  1. *Analytic*—predicate is *contained* in the subject, explicative, not ampliative (for example, "All mothers are women").

2. *Synthetic*—predicate is not contained in the subject but adds something to the subject, ampliative, not explicative (for example, "Mary is a mother").

Combinations

If we combine these categories, using the epistemological and the semantic as the dominant ones (and subordinating the metaphysical categories), we arrive at the chart at the bottom of the page.

Kant rejected the idea of analytic a posteriori knowledge because the very idea of an analytic judgment depends solely on the relations of the concepts involved and is discoverable by determining whether its denial entails a contradiction. That is, the analytic makes no reference to experience, whereas the a posteriori depends on experience.

Generally, rationalists assert, while empiricists deny, the existence of synthetic a priori knowledge. That is, while empiricists believe experience is the basis of all our knowledge, except analytic truths, the rationalist holds that reason can discover truths that are neither empirical nor analytic. For a radical rationalist such as Kant, all knowledge is grounded in self-evident, a priori nonempirical knowledge.

The essential claim of those who hold to synthetic a priori knowledge is that *the mind can grasp connections between ideas (concepts) that are not strictly analytically related.*

The Kantian Theory About Synthetic A Priori Knowledge

The primary question of Kant's *Critique of Pure Reason* is, How are synthetic a priori judgments possible? Ewing has shown that Kant makes four claims about synthetic a priori judgments:

1. They are logically necessary—wholes that determine their own parts.

	Analytic	Synthetic
	Entailments Identity statements Tautologies Definitions	**Mathematics** 5 + 7 = 12 **Exclusionary** Nothing red is green.
	Examples "All bachelors are unmarried." "All bodies are extended."	**Presuppositions of Experience** Space, time, and causality
A Priori		**Moral Judgments** The categorical imperative "It is always wrong to torture for the fun of it."
		The Laws of Logic The principle of noncontradiction
		Metaphysical God's existence Freedom of the will
		Examples
A Posteriori	None	All empirical statements: "All bodies are heavy." "All copper conducts electricity." "John is a bachelor."

2. They are not derivable from particular sensations (although empirical experience is the trigger to cause them to arise).

3. They are presupposed in all of our experience.

4. They are contributed by our minds.

Our synthetic a priori "knowledge" is merely of the presuppositions or conditions of experience, and, as such, only of the *appearance* of the world to us, constructed as we are. We can have no a priori knowledge of the reality (the *Ding an Sich*). As red-tinted glasses cause us to see the world in shades of red, so the constraints of synthetic a priori categories cause us to experience the world causally, temporally, and spatially.

As mentioned earlier, all a priori knowledge is necessary and has universal application. It is true in all possible worlds, whereas statements known a posteriori are contingent. They could have turned out to be false rather than true.

In the second reading in this part of the book, A. J. Ayer gives a conventionalist critique of the notion of the synthetic a priori. He argues that all the supposed a priori knowledge can be reduced to analytic truths.

Nevertheless, there is reason to hold to the idea of synthetic a priori knowledge. A. C. Ewing sets forth some considerations in its favor in the third reading. Knowledge of mathematical, logical, and other statements can best be construed as a priori. Furthermore, there is a transcendental argument in its favor: Ayer's very statement that "there can be no synthetic *a priori* truths" is itself a synthetic a priori statement, so that if it's true, it's false. Even if all other cases are doubtful, the laws of logic seem to function as synthetic a priori truths. The principle of noncontradiction is necessary for the very possibility of thought, including the thought of the principle itself. Its denial is self-refuting, because to deny the principle depends on the very principle it is denying: If the principle of noncontradiction is not true, then the denial of its denial is just as valid as the denial itself.

A key to the distinction between analytic and synthetic a priori judgments is found in the notion of *containment*. When I say all bachelors are unmarried, we understand that the idea of "unmarried" is already present or contained in the notion of "bachelor," so I have not added anything to the concept of "bachelor." But when I say that if something is red it is not green, the notion of "not being green" does not seem to be contained in the concept "red," yet I do not need to look and see that the proposition is true. I can understand it immediately, using reason alone. The proposition "If something is red, it is not green" is not an analytic proposition but neither is it an empirical proposition. It is a necessary truth, known a priori. It is a *synthetic* a priori judgment.

But some philosophers doubt that the notion of *containment* is sturdy enough to bear the weight of the analytic-synthetic distinction. W. V. Quine in his classic essay "Two Dogmas of Empiricism (Reading VII.4) argues that *containment* is a vague metaphor, and that its vagueness spreads over the entire analytic-synthetic distinction. The separating line between the analytic and the a priori is so unclear that we might well throw out the analytic-synthetic distinction itself.

H. P. Grice and P. F. Strawson take issue with Quine's rejection of the analytic-synthetic distinction, arguing that there is a presumption in its favor. They argue both that the rejection of the distinction leads to absurd consequences and that we don't need a formal definition of synonymy for it to make sense.

In our next reading, Roderick Chisholm surveys and defends the traditional theses about synthetic a priori and analytic knowledge.

Our final reading by Saul Kripke breaks with the long tradition of identifying a priori knowledge with necessary truth. Kripke argues that we can have a posteriori necessary truth and nonnecessary a priori knowledge.

Actually, Hesperus is Phospho planet seen in this position in
circumstances under which at is not a situation in which
have been Phosphorus? Supp hosphorus. It might also, if
is Phosphorus, let's try to des names "Hesperus" and
ation in which it would not se planets, be a situation in
easy. Someone goes by and h ther than Hesperus was called
stars "Hesperus" and "Phosp n so, it would not be a situa-
be under the same condition us itself was not Phosphorus.[9]
we introduced the names blems which bother people in
"Phosphorus." But are thos have said, come from an iden-
which Hesperus is not Phosp would put it, a confusion,
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are not. Certain statements—and the
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they're not, by saying th f true at all must be necessar-
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the planet Venus, let's say whe
body he called "Phosphorus."
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Phosphorus.

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y that language contains a name
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les can be used as rigid designators
f course when we specify a coun-
do not describe the whole possible
tion which interests us.

ions, §50.

may see the key to the problem in
is a "cluster concept." I am asking
y to suppose that the "definition"
d used to determine the metric sys-
n would still arise.

ws is contingent, I choose *not* to
itively requiring analytic truths to
priori.

Modalities and Intensional
by W. V. Quine, plus discussion),
ilosophy of Science (Dordrecht:
116.

rate discussion of this point in the
g and Necessity, where its relation
nterpart theory is also mentioned.

e the situation in our language, not
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se the terms "Hesperus" and
same reference as in the actual
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scriptions as we did to fix their ref-

p. "Aprioricity and Necessity."
sian Journal of Philosophy 58 (1988).

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K., ed. *A Priori Knowledge*. Oxford:
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in. *The Nature of Necessity*. Oxford:
n Press, 1974.

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ıs. *An Introduction to*
rary Epistemology. Upper Saddle
Prentice Hall, 1996. Chapter 3.

ı, ed. *Innate Ideas*. Berkeley:
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Part VIII

The Justification of Induction

From a single experience, we sometimes make an inductive leap to the many; from *some* experiences of a certain kind, we often make a leap to judgments about *all* experiences of that kind. A child puts a hand on a red-hot stove and pulls away in pain and thereby learns never to put a hand on such a stove again. Another child forgets to look to the left when crossing a street and barely misses getting run down by a speeding vehicle, thereby learning never to cross the street without looking in both directions first. People who get food poisoning from eating a certain kind of mushroom learn never to eat that variety again. From the fact that some people have died, we infer that all people eventually die. From experiencing vegetables nourishing and cigarettes causing cancer, we generalize that vegetables always nourish and cigarettes always tend to cause cancer. From limited past experience, we generalize that water always boils at sea level at 100 degrees Celsius, that the Sun continues to rise, that the laws of motion and gravity always function.

From limited experiences, we generalize about future experiences. The food we eat, the friends we keep, the chairs we unthinkingly trust to support us, the way we walk, the buildings and trees we steer clear of, the clothes we wear, the sentences we speak, the cars we drive and the ways we drive them, the rules we obey, and the laws of nature we rely on all bear testimony to our faith in the principle of induction with its probability functions. Probability, said Locke, is the guide to life. We cannot, experience tells us, live without it. Our existence as well as science itself is based on the principle of induction that tells us to reason from past frequencies to future likelihoods, from the limited known of the past and present to the unknown of the past, present, and future.

But though inductive probability is psychologically inescapable, we have trouble providing a rational justification for it. What argument is there for our belief that the laws of motion and the law of gravity will continue to exist next year or the year after? Why don't the laws of nature die or grow old and fragile like people or the laws of society? How do we know that the Sun will rise tomorrow or the week after? or that vegetables will continue to nourish us and cigarettes continue to cause cancer, rather than just the reverse? Why do we assume that the future will be like the past and present?

It was David Hume (1711–1776) who first raised the problem of *induction,* although he never used that term. Hume pointed out that the contrary of every matter of fact is always logically possible, because, unlike the truths of rea-

son (logic and mathematics), it is never contradictory to deny a matter of fact. It is not logically necessary that Earth is now rotating or revolving around the Sun, nor that it will do so tomorrow. These are mere contingent truths. "That the Sun will not rise tomorrow is no less intelligible a proposition, and implies no more a contradiction than the affirmation that it will rise." And if the Sun's not rising is possible, what reason do we have for thinking it won't actually happen?

What is our justification for our belief regarding matters of fact? Hume asks. He replies that we justify that belief by our belief in causal laws and relationships. We believe that a causal order rooted in nature's laws operates to produce all that is. But what is the foundation of all our reasoning concerning cause and effect? "Experience," Hume replies. All our experience corroborates such relations. But, Hume relentlessly continues, "What is the foundation of all conclusions from experience?" His reply: "In reality, all arguments from experience are founded on the similarity which we discover among natural objects, and by which we are induced to expect effects similar to those which we have found to follow from such objects." Only a fool or a lunatic would pretend to dispute this faith in causality based on experience.

But experience "only shows us a number of uniform effects, resulting from certain objects and teaches us that those particular objects, at that particular time, were endowed with such powers and forces, when a new object, endowed with similar sensible qualities, is produced, we expect similar powers and forces, and look for a like effect. From a body of like color and consistence with bread we expect like nourishment and support. But this surely is a step or progress of the mind, which wants to be explained."

Reasoning from the proposition "I have always found so and so to happen in the past" to the proposition "So and so will continue to happen in the future" is a great leap that stands in need of justification.

We must admit, contends Hume, "that the inference is not intuitive; neither is it demonstrative. Of what nature is it then? To say it is experiential is begging the question. For all inferences from experience suppose, as their foundation, that the future will resemble the past. . . . It is impossible, therefore, that any argument from experience can prove this resemblance of the past to the future; since all these arguments are founded on the supposition of that resemblance."

Why may not the future turn out to be quite different from the past? "What logic, what processes of argument secure you against this supposition?"

Hume shows that our belief that the future would be like the past was based on our belief in the uniformity of nature, which in turn was based on our past experience, which is an inadequate premise for arguing for the future. The argument "The uniformity of nature has been reliable in the past so it will likely be reliable in the future" is not a sound deductive argument, because the conclusion contains more information than the premises. Inductive generalizations are, in the words of C. E. Peirce, "amplitative"—adding more data than the premises contain.

Hume's point is that we cannot justify the principle of induction via either a deductive or an inductive argument. Here is what he has in mind. Suppose we attempt to justify the principle of induction by means of a deductive argument. What premises should we use? Well, whatever they are, they must be known to be true. But because we do not know the future, the premises must be confined to the present and past. And because a valid deductive argument may not include in the conclusion any claims or information not already implicit in the premises, this argument can only include statements about the past and the present, not the future. But it is just the future that we are concerned with, so deductive arguments all fail to justify the principle of induction.

Suppose we try to justify the principle of induction by means of an inductive argument. We argue that the principle of induction has had a high probability of success until now, so we may conclude that it probably will continue to have a high probability of success in the future. But, the skeptic asks, what justifies us making the leap from the past to the future? A belief in the uniformity of nature? But, he (or she) continues, how do we know that the uniformity of nature will function in the future? Because it always has in the past, we respond. But now we are going around in circles, for we are appealing to the very principle that we would establish through induction—the principle of induction—and thus are begging the question.

Therefore neither a deductive nor an inductive argument establishes the principle of induction.

Since Hume's time there have been many attempts to justify induction. The general consensus says Hume is correct that no deductive argument can establish the truth of induction. But three other types of argumentation *have* enjoyed popularity: *sophisticated inductivism, pragmatic arguments,* and the *dissolution argument.* Each is represented in the readings in this part of the book. In "Will the Future Be Like the Past?" Frederick Will uses the metaphor of a contained expanse that successfully moves on to new territory to argue that there is something correct about using higher-order inductivism to establish lower-order induction. Hans Reichenbach in "The Pragmatic Justification of Induction" argues that the principle of induction is the only game in town. If this principle doesn't bring successful predictions, nothing will. In "Dissolving the Problem of Induction," Peter Strawson argues that it is a mistake to try to justify what is presupposed by the idea of justification itself.

In the final reading, Nelson Goodman goes one up on Hume. Instead of solving Hume's riddle, he sets forth a new riddle of induction, that of distinguishing between proper and improper projectable properties; that is, properties we are warranted in projecting into the future. To illustrate his problem, Goodman asks us to imagine a new color word *grue,* which is defined in terms of our old color words *green* and *blue.* An object is grue if and only if it is green at some time t before the year 2000 or blue at some time t during or after the year 2000.

All the emeralds we have so far observed have been observed before 2000, and so are grue. So, using the principle that the future will be like the past, we conclude that the emeralds we see after 2000 will be grue. But a grue emerald after 2000 is, by definition, blue. So the greenness of emeralds so far inductively supports the nongreenness of emeralds in the future, but that is a paradox.

We might protest that the grue and the green emerald seem exactly the same and that we see no reason whatsoever for imagining the property grue. But, avers Goodman, the point is that this intuitive judgment needs to be justified in terms of distinguishing between legitimate projectable regularities and illegitimate ones. Inductive logic itself doesn't do that for us. What does? Goodman's challenge is for new rules by which to sort out what is justifiably projectable and what is not.

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Part IX

Other Minds

By what evidence do I know, or by what considerations am I led to believe, that there exist other sentient creatures; that the walking and speaking figures which I see and hear, have sensations and thoughts, or in other words, possess Minds?

JOHN STUART MILL[1]
An Examination of Sir William Hamilton's Philosophy

We are certain that other people have conscious states of mind and feelings like ourselves. Most of us are also certain that some animals—such as dogs, cats, chimpanzees, apes, and gorillas—have feelings. We normally take these things for granted. But can we justify our certainty about conscious states and feelings in others?

The traditional view is that a form of the argument from analogy can be used to justify our belief in other minds. The classic expression of this view is Mill's brief discussion in *An Examination of Sir William Hamilton's Philosophy* (1865): "I conclude it from certain things, which my experience of my own states of feeling proves to me to be marks of it." These marks or evidences are of two sorts: antecedent and subsequent bodily states. The antecedent states are necessary for the feelings, and the subsequent states are effects of feelings.

> I conclude that other human beings have feelings like me, because, first, they have bodies like me, which I know, in my own case, to be the antecedent condition of feelings; and because, secondly, they exhibit the acts, and other outward signs, which in my own case I know by experience to be caused by feelings. I am conscious in myself of a series of facts connected by an uniform sequence, of which the beginning is modification of my body, the middle is feelings, the end is outward demeanor. In the case of other human beings I have the evidence of my senses for the first and last links of

> the series, but not for the intermediate link. I find, however, that the sequence between the first and last is as regular and constant in those other cases as it is in mine. In my own case I know that the first link produces the last through the intermediate link, and could not produce it without. Experience, therefore, obliges me to conclude that there must be an intermediate link; which must either be the same in others as in myself, or a different one: I must either believe them to be alive, or to be automatons: and by believing them to be alive, that is, by supposing the link to be of the same nature as in the case of which I have experience, and which is in all other respects similar, I bring other human beings, as phenomena, under the same generalizations which I know by experience to be the true theory of my own existence.[2]

The argument may be stated as follows: There are three causal states in myself: (1) the initial modification in my body (as when I step on a nail), (2) my feeling (the pain) caused by stepping on a nail, and (3) my subsequent bodily change (a scream, the contorted facial expression, the sudden lifting of my foot). When other people step on nails, I behold the first and third conditions but not the second. I see the same kind of physical states I experience in myself, but I do not experience the other person's feelings. But I can infer that the other person has feelings from the fact that he (or she) behaves the same way I behave in similar circumstances. Although I cannot prove the other being has feelings, this argument from analogy allows me to conclude it is probable that he (or she) has feelings.

There are problems with the argument from analogy, some of which are discussed in the readings in this part of the book. One problem is that it is impossible to check up on the correctness of the conclusion that the other body is experiencing feelings like my own. I can introspect into my own mind to see whether I am angry or fearful, but I can't "extrospect" into my neighbor's mind to see whether he or she is angry or fearful. Another problem is that the argument from analogy only gives us probability, yet we feel certain other people have minds. Proponents of the traditional view have responses to these objections, some of which you will discover in the readings.

However, the main one is that the argument from analogy seems to be a generalization from only one particular. Normally, inductive reasoning goes from many particular instances to an inductive generalization, but the argument from analogy regarding other minds proceeds from only one instance, my own, to a generalization about all other living animals and human beings. This generalization seems unwarranted, as though a primitive being who had only seen one tree, an apple tree, generalized that all trees are probably apple trees.

An opposite strategy, the behaviorist argument, is to discount consciousness altogether and to concentrate on an organism's behavior. If a human or a dog engages in behavior similar to mine when stepping on a nail, I infer that it is in pain. The problem of other minds is thus solved by reducing mental states to physical states.

But the behaviorist argument has serious problems, among them being the fact that we can feign behavior. I may be in pain and *not* show it, as when I have a headache, or I may pretend to be in pain to get sympathy from the school nurse as I ask for permission to leave school early. I may smile when I am sad, and good actors can cry when they have nothing in the world about which to be sad. So behavior is neither a necessary nor a sufficient condition for mental states.

Furthermore, the statement "He has a pain" may seem to be about pain behavior when said by someone else about me, but the statement "I have a pain" when said by me is not about behavior but about a feeling. Yet the first statement refers to what I am avowing when I say, "I have a pain." Hence, the apparent behavioral statement "He has a pain" in fact refers to a feeling, not merely behavior. Note that "He does not have a pain," when said by someone else of me, contradicts "I have a pain" when said by me. First-person avowals such as "I have a pain" are self-evidently primary here, so behaviorism is to be rejected. However, it may be, as modified behaviorists such as Wittgenstein and Malcolm argue, that behavioral criteria are necessary requirements for our attributions of psychological phenomena. In Wittgenstein's words, "An 'inner process' stands in need of outward criteria."

In the first reading in this part of the book, Bertrand Russell defends a version of the traditional argument from analogy.

H. H. Price sets forth a sophisticated version of the analogical argument, based not on bodily states but on *language understanding*. It is by being able to verify meaningful utterances that I infer that others have minds like my own. If, while lost on a mountain, I hear a voice saying there is a sheep path behind the rock on my right, I will infer that there is another mind in the vicinity. I would do so even if the voice were coming from a tree or a gorse bush (a spiny yellow-flowered shrub, called Scotch broom in the United States).

In the third reading, Norman Malcolm criticizes both the analogical argument and Price's language-understanding argument, the latter of which is detached from the requisite criteria. Under no circumstances would we believe that just because meaningful utterances came from trees or gorse bushes these objects had minds. Malcolm rejects a pure behaviorist theory but contends that behavioral criteria are central to our belief in other minds, that we learn about pain by noticing others crying, grimacing, limping, or holding their legs. These features continue to be natural expressions of such behavior, so it would not make sense to suppose a tree or gorse bush could have pain.

In the final reading, Michael Levin examines the problem of other minds from a reliabilist perspective, explaining how the belief has come about and why it is an intractable problem. We believe in other minds because evolution has selected this survival-oriented feature in us. A full explication of other minds eludes us because the nature of consciousness eludes us.

Notes

[1]John Stuart Mill, *An Examination of Sir William Hamilton's Philosophy* (London: Longmans, 1889), pp. 243–244.

[2]Ibid.

minds in their philosophic vocation when they are shown that all the characteristics of mental states are characteristics of physical states (or some appropriate kind of state).

Notes

[1] *God and Other Minds* (Ithaca: Cornell University Press, 1967).

[2] *Brainstorms* (Cambridge: MIT Press, 1978), especially pp. 172–73.

[3] *Mind and Its Place in Nature* (Boston: Routledge and Kegan Paul, 1925), 318. Broad actually calls this "a necessary part" of the basis, chiefly because of his phenomenalism. Broad is aware that nobody comes to believe in other minds by inference from this basis, and he takes quite seriously the idea of instinctive beliefs cued by these "characteristic expressions." However, he does not develop this point along Darwinian lines, as I do below, and he embraces the assumption that if belief in other minds is to be justified, there must *be* a sound argument from the basis to the indicated conclusion, even if no one uses it. I reject this in IV below.

[4] In 1979 the American Museum of Natural History mounted an exhibit entitled *Ice Age Art: Man's Earliest Masterpieces,* which contained paintings, shallow relief and sculpture done over 35,000 years ago. It is impossible to view these items or the exhibit catalogue without remarking on their "fidelity" and naturalistic "realism," even though their creators plainly did not share with us any tradition of training or representational convention. I take it as *obvious* that there is something non-conventional and innate about how humans represent the world. Anyone who finds this anthropological material compatible with Goodman's theory must be so defining "intrinsic" as to *make* "intrinsic representationality" impossible.

[5] There is controversy over whether evolution selects for fitness in organisms or in genes, where "gene" is understood to denote the shortest stretch of a chromosome capable of self-reproduction. After all, a gene's best evolutionary strategy is to instruct its host organism to sacrifice itself whenever so doing can save a bunch of its host's siblings, and hence a bunch of partial copies of itself. This ill-named "selfish gene theory" does make it clear that what favors survival may not favor the survival of organisms. However, under most circumstances what helps me reproduce is precisely what helps my genes reproduce, so it does no harm in the present context to adopt the popular picture of more and less fit *organisms* in competition.

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Part X

The Ethics of Belief

Our passional nature not only lawfully may, but must, decide an option between propositions, whenever it is a genuine option that cannot by its nature be decided on intellectual grounds; for to say under such circumstances, "Do not decide, but leave the question open," is itself a passional decision,—just like deciding yes or no,—and is attended with the same risk of losing truth.

WILLIAM JAMES
The Will to Believe

It is wrong always, everywhere, and for anyone, to believe anything upon insufficient evidence.

W. K. CLIFFORD
"The Ethics of Belief," *Lectures and Essays*

Do we have a moral duty to believe propositions to the degree that the evidence supports them? What sorts of duties are there in relation to believing? To have a duty to do something implies we *can* do it—but is believing within our power? Or is it forced on us? More generally, what is the relationship between the will and belief? Can we obtain beliefs directly on willing to have them? Can we only obtain beliefs indirectly via the will: willing a belief and then actively participating in a process that will be likely to bring about that belief?

The readings in this part of the book deal with the various sorts of duties we may be said to have regarding belief acquisition. Three types of duties are found in the literature. First, there are *epistemic duties,* duties to believe according to the evidence or duties to inculcate the sort of belief-forming mechanisms that will ensure justified beliefs. This is echoed in John Locke's dictum in our first reading that "the one unerring mark by which a man may know whether he is a lover of truth for truth's sake is the not entertaining any proposition with

greater assurance than the proofs it is built upon will warrant."

Second, there is the view that holds that we have *moral duties* to believe according to the available evidence. There is something morally wrong about violating an epistemic duty to believe according to the evidence. This view is put forward by Clifford in the second reading: "It is wrong always, everywhere, and for anyone, to believe anything upon insufficient evidence."

Finally, there are *pragmatic* or *prudential* duties, duties to believe propositions insofar as they lead to the best outcomes. Hume, Mill, James, and H. H. Price hold this view. Price sets forth the thesis this way:

> Even if it were in our power to be wholly rational all of the time, it still would not follow that there is anything morally blameworthy about assenting unreasonably (against the evidence or without regard to the evidence) or that we ought to be chastised for doing so. There is nothing wicked about such assents. It is however true, and important, that unreasonable assent is contrary to our *long term interest*. It is to our long term interest to believe true propositions rather than false ones. And if we assent reasonably (i.e. in accordance with the evidence), it is likely that in the long run the propositions we believe will be more often true than false (*Belief*, p. 238).

The only "ought" regarding belief acquisition is a prudential one. A person is free to seek whatever goals he or she desires: happiness, salvation, convenience, esthetic pleasure, and so forth. It is simply in one's long-term interest generally to seek to have true beliefs.

The question whether we *ought* to believe propositions for such and such reasons raises the prior question of whether we *can* believe propositions simply by willing to do so. The doctrine that we can obtain beliefs directly on willing to believe them is called "volitionalism" or "voluntarism." I generally use the former term. In the readings, Clifford, James, and Meiland all accept volitionalism, whereas I doubt it. But even if we reject volitionalism, this does not entail a rejection of the view that we have epistemic duties or moral duties with regard to doxastic states, for we may be able to influence or obtain beliefs *indirectly* via certain processes, such as autosuggestion, hypnotism, focusing on aspects of evidence, developing better belief-forming mechanisms, and the like. We have already mentioned our first reading, Locke's critique of enthusiasm, in which he argues that we ought never believe anything against the light of reason.

In the second reading, "The Ethics of Belief," the British philosopher W. K. Clifford (1845–1879) assembles reason's roadblock to pragmatic justifications for acquiring beliefs not fully supported by the evidence. Clifford argues that there is an ethics to believing that makes all believing without sufficient evidence immoral. Pragmatic justifications are not justifications at all but counterfeits of genuine justifications, which must always be based on evidence.

Clifford illustrates his thesis with the example of a shipowner who sends an emigrant ship to sea. He knows that the ship is old and not well built, but he fails to have the ship inspected. Dismissing from his mind all doubts and suspicions of the unseaworthiness of the vessel, he trusts in Providence to care for it. In this way, the shipowner acquires a sincere and comfortable conviction of its safety. After the ship sinks, killing all the passengers, he collects his insurance money without a trace of guilt.

Clifford comments that although the shipowner sincerely believed that all was well with the ship, his sincerity in no way exculpates him because "he had no right to believe on such evidence as was before him." We have an obligation to get ourselves in a position where we will only believe propositions on sufficient evidence. Furthermore, it is not a valid objection to say that what the shipowner had an obligation to do was *act* in a certain way (inspect the ship), not *believe* in a certain way. Although he *does* have an obligation to inspect the ship, the objection overlooks the function of believing as action guiding. "No man holding a strong belief on one side of a question, or even wishing to hold a belief on one side, can investigate it with such fairness and completeness as if he were really in doubt and unbiassed; so that the existence of a belief not founded on fair inquiry unfits a man for the performance of this necessary duty." The general conclusion is that it is always wrong for anyone to believe anything on insufficient evidence.

The classic response to Clifford's ethics of belief is William James's "The Will to Believe" (1896), the third reading in this part of the book. James argues that life would be greatly impoverished if we confined our beliefs to such a Scrooge-like epistemology as Clifford proposes. In everyday life, where the evidence for important propositions is often unclear, we must live by faith or cease to act at all. Although we may not make leaps of faith just anywhere, sometimes practical considerations force us to make a decision regarding propositions that do not have their truth value written on their faces.

In "The Sentiment of Rationality" (1879), James defines "faith" as "a belief in something concerning which doubt is still theoretically possible; and as the test of belief is willingness to act, one may say that faith is the readiness to act in a cause the prosperous issue of which is not certified to us in advance." In "The Will to Believe," he speaks of "belief" as a live, momentous hypothesis, on which we cannot avoid a decision, for not to choose is in effect to choose against the hypothesis. There is a good illustration of this notion of faith in "The Sentiment of Rationality." A mountain climber in the Alps finds himself in a position from which he can only escape by means of an enormous leap. If he tries to calculate the evidence, only believing on sufficient evidence, he will be paralyzed by emotions of fear and mistrust, and hence be lost. Without evidence of being able to perform this feat successfully, the climber would be better off getting himself to believe that he can and will make the leap. "In this case . . . the part of wisdom clearly is to believe what one desires; for the belief is one of the indispensable preliminary conditions of the realization of its object. *There are then cases where faith creates its own verification.*"

James claims that religion may be just such a genuine option for many people, and where it is, the individual has the right to believe the better story rather than the worse. To do so, one must will to believe what the evidence alone is inadequate to support.

In the fourth reading, "What Ought We to Believe?" Jack Meiland argues that pragmatic reasons may override epistemic reasons in belief formation, so it is sometimes permissible and even our moral duty to believe against the evidence. Loyalty to a friend or fear of disastrous psychological consequences may be sufficient reasons for rejecting the available evidence in forming beliefs.

In the final reading, I first argue against volitionalism on two grounds: First, it is psychologically aberrant and conceptually incoherent, so our ability to obtain beliefs directly on willing to have them is at best a rare phenomenon. Second, in opposition to Meiland, I argue that we do have moral duties to believe according to the best evidence in the sense that we can indirectly get ourselves in the position where the best justified belief is likely to obtain.

theological." The statement is ambiguous, seeming to conflate the right to be protected from doxastic coercion and the right to manipulate our minds as we see fit.

[6]Jack Meiland, "What Ought We to Believe, or the Ethics of Belief Revisited," *American Philosophical Quarterly 17* (January 1980), 15–24. Reprinted in this anthology (the preceding reading).

[7]Chisholm, "Lewis' Ethics of Belief"; Stephen Nathanson, "The Ethics of Belief," in *Philosophy and Phenomenological Research,* 1982.

[8]W. K. Clifford, "The Ethics of Belief," in *Lectures and Essays,* 2d ed. (London: Macmillan, 1866) (Reading X-1 in this anthology).

[9]Bernard Williams, "Deciding to Believe," in *Problems of the Self* (Cambridge, England: Cambridge University Press, 1972).

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Part XI

Challenges and Alternatives to Contemporary Epistemology

Is knowledge essentially social or individualistic? Is the Cartesian ("egocentric") paradigm a false model of knowing? Are truth and reality relative to agents or communities? Is all justification intrinsically perspectival or contextual, or can we transcend social contexts and understand things impartially? Is the sex of the knower relevant to the process of acquiring knowledge, or is it irrelevant? Is knowledge political? These are some of the questions asked in the writings included in this part of our book.

In the past twenty or thirty years, the paradigms of traditional epistemology have been called into question. The Cartesian model of the solitary individual constructing a house of truth upon the foundations of clear and distinct ideas has been attacked and rejected by a large segment of the epistemic community. In its place a model has arisen wherein our cognitive interdependence puts individuality in doubt altogether. Our community is part of our noetic structures, deeply rooted in our unconscious, if not conscious minds. Social knowledge—the product of group effort, which no one person may completely understand—replaces the egocentric quest for certainty. Even knowledge of good and evil are transformed by the group. The feminist epistemologist Anne Seller illustrates this with regard to her experience with the question of the morality of abortion in the 1970s:

> For example, as the abortion debate developed in the seventies, women developed an understanding that they, rather than their biology, could determine their roles in society. This gave the issue a new symbolic importance in terms of who controls our lives, changed the terms of the debate from one about crime to one about rights, and led reformers to identify themselves as women rather than reformers. None of this could have happened if the unspeakable had not become speakable:
>
> > As one early activist put it: "I was alone at first, but every time I gave a speech I was no longer alone because people came from everywhere saying, 'You've said what I felt, but I didn't know how to say it.'" (Luker, 1984)
>
> She might have added that she was no longer mad or bad, although she was not necessarily right.[1]

For Seller, beliefs are valid and become knowledge, relative to one's political community. She does not want to leave things there, allowing for the Nazi and sexist to vindicate their beliefs via their groups, but she has no argument, except faith that they would live better lives if they altered those beliefs.

As a feminist epistemologist, Seller represents a growing number of women who seek to

fuse the political with the epistemic. On the surface, it seems that those two subjects are incompatible. The political has to do with gaining power, with changing social arrangements, whereas epistemology has to do with the search for truth and justification. Politics are partial, whereas the condition for pursuing truth is impartiality. As Seller puts it, "My philosophical education taught me to follow reason wherever it went and to distrust political considerations. My experience as a feminist has taught me to stick by my political commitments even when I appear to have lost the argument."[2] Similarly, rejecting a notion of strong objectivity, Sandra Harding has developed the notion of *standpoints,* social perspectives from which we view the world in nonhierarchical modes.[3]

Philosophers have always recognized a social aspect to knowledge. Our parents and teachers condition and educate us to see things in certain ways and to ignore others. Language itself biases our perspective. We rely on testimony for our knowledge of the past and on experts for our knowledge of material beyond our grasp. But the traditional picture was that of the egocentric knower using reason to decide on when to defer to authority or the testimony of others. He or she was, in the last analysis, responsible for his or her beliefs.[4]

This position is under attack from oppositional epistemologists and thinkers, including three of the philosophers in our readings—Helen Longino, Lorraine Code, and Richard Rorty. It is defended by the other two, Susan Haack and Margarita Garcia Levin.

Feminist epistemology is the vector where diverse values of oppositional epistemology converge. In our readings, Longino calls into question the traditional epistemic virtues of consistency, simplicity, explanatory power and generality, impartial search for pure knowledge, and fruitfulness of experiment and in their place erects a loose confederation of oppositional virtue, novelty, ontological heterogeneity, complexity or mutuality of interaction, applicability to human need, decentralization of power, and universal empowerment, which is democratic and egalitarian. Rejecting the god's-eye view of a comprehensive or global metaphysic, she opts for *local* epistemology, that which serves the cognitive needs of women and the oppressed in special communities.

Code, in our first reading, supports epistemological relativism to the extent that knowledge, truth, and reality "can be understood only in relation to particular sets of cultural or social circumstances, to a theoretical framework, a specifiable range of perspectives, a conceptual scheme, or a form of life." She seeks to separate this from *subjectivism,* which asserts that knowledge and truth are relative to individuals (rather than culture). However, her position is that the sex of the knower is one of a set of "*subjective* factors constitutive of received conceptions of knowledge and of what it means to be a knower." She argues that we can never identify the necessary and sufficient conditions for knowledge in the formula "S knows that *p*" until we pay as much attention to S as we pay to *p*.

On the other hand, in our third reading Haack argues that feminist epistemology is at best a mere passing fad and at worst a dangerous intellectual apartheid of the sexes. There is no special feminist knowledge or way of knowing. Confusing politics and epistemology is a version of confusing facts with values.

Rorty in our fourth reading seeks to dissolve the very notions of objective truth, as some kind of correspondence with reality, and science, as the systematic attempt to know reality. Ultimately, there is no separation between the sciences and the humanities.

In our final reading, Levin defends the case for traditional rational objectivity against the attacks by oppositional thinkers.

Notes

[1]Anne Seller, "Realism Versus Relativism: Towards a Politically Adequate Epistemology," in *Feminist Perspectives in Philosophy,* eds., M. Griffiths and M. Whitford (Bloomington: Indiana University Press, 1988). Seller defines relativism as the view "that every woman's experience is valid, not false, illusory or mistaken, and that all ways of making sense of the world are equally valid." She modifies this, relativizing truth claims to groups.

[2]Seller.

[3]Sandra Harding, *The Science Question in Feminism* (Ithaca, NY: Cornell University Press, 1986).

[4]See Richard Foley, "Egoism in Epistemology," in *Socializing Epistemology,* ed. Frederick Schmitt (Lantham, MD: Rowman and Littlefield, 1994) for a defense of this position.

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