

None of us would be so presumptuous as to claim that we know everything, but we all are quite sure that we know *some* things. But what do we mean when we say that we know something? Does knowing something imply that we have verified it for ourselves? If we have not verified it, do we have *belief* rather than knowledge? If I have never been to India, can I legitimately say that I *know* India exists? Is it more accurate to say that I *believe* that it exists because I trust publishers who sell atlases that label a certain region “India,” newspapers that print stories about India, teachers who lecture about India, and friends who tell me about their travels there and show me photographs? Perhaps one kind of verification is *sight*: If I see it, I know it is true. If so, do I know that the print on this page is black because I am looking at it and it appears black? Is it possible that even though the print *appears* black, it is really some other color? But how can print have any color *at all* if it is made up of colorless atoms? Is it more accurate to say that the print causes me to *experience* a color, but that the print itself is colorless? To carry this questioning even further, how can I even be sure that I am looking at a printed page right now? Could I really be home sleeping and simply *dreaming* that I am reading a book? Can I be absolutely certain of anything at all? Is absolute certainty necessary for knowledge? Assuming that I can attain knowledge, is the ultimate source of my knowledge sensation, reason, intuition, or some combination of these and/or other factors?

These are some of the questions addressed by *epistemology*, the study of the nature and grounds of knowledge. This section presents eight readings that address these and related epistemological issues.

Plato in the *Republic* contrasts knowledge and opinion. The objects of knowledge are the forms—immaterial and unchanging realities, such as the beautiful itself. The objects of opinion are the Many—material and changing things, such as beautiful trees and horses. The forms are fully real and grasped by the mind, whereas the Many are partly real and partly unreal and are grasped by the senses.

René Descartes argues that genuine knowledge requires absolute certainty. Trying to achieve certainty by using a “method of doubt,” he refuses to accept as true anything about which he could possibly be deceived. Descartes discovers that he can be sure that he exists, because he could not even be deceived if he did not exist. This discovery leads him to claim that anything that he perceives very clearly and distinctly is true. He also holds that the mind contains innate ideas, including the idea of God.

Descartes’ theory of knowledge is considered a form of *rationalism* (derived from *ratio*, Latin for “reason”) because it emphasizes knowledge attained through the mind (innate ideas, intuition, relations among ideas, logical inference, and so on). The next two theories, by contrast, are forms of *empiricism* (derived from *empeiria*, Greek for “experience”) because they emphasize knowledge attained through sense experience.

John Locke rejects Descartes’ rationalist doctrine that the mind is furnished with innate ideas. Locke claims that the mind is originally blank, like a sheet of white paper; all of our ideas come either from experiencing external objects or from experiencing the operations of our mind. He distinguishes two kinds of qualities that objects cause us to experience: *primary qualities*, which really exist in things (three-dimensionality and shape, for example), and *secondary qualities*, which do not exist in things but are only in our mind (color and taste, for example). The second empiricist theory is that of David Hume. Hume holds that all knowledge begins with “impressions” (direct sense experiences) and that impressions give rise to “ideas” (copies of impressions). When we attempt to extend our knowledge beyond that provided by impressions and ideas, we rely on the notion of cause and effect. But we cannot *know* that causality exists because we have no impression of a “cause” linking two events: All we experience is the temporal succession of the two events.

Immanuel Kant proposes a theory of knowledge that combines elements of rationalism and empiricism. He accepts the empiricist claim that our knowledge begins with experience, but also accepts the rationalist contention that part of the content of knowledge comes from our mind. Both points are correct, Kant argues, because our mind is constructed in such a way that we necessarily experience objects in certain ways (for example, as being caused and as existing in space and time). Therefore, although we know that objects will invariably *appear to us* to possess certain attributes, we do not experience objects as they are *in themselves*. It would be an error, for example, to say that things themselves are caused, spatial, or temporal.

Our final reading is from Alison M. Jaggar, who points out that most theories of knowledge exalt dispassionate reason as the sole path to knowledge and see emotion as subverting the knowing process. Jaggar argues that emotion in fact plays a helpful and necessary role in attaining knowledge. She contends that an important avenue to knowledge is the exploration of the emotional responses of members of subordinate groups in society.

Republic

Plato

A biography of Plato appears on p. 5.

Our reading is from the *Republic*, a work cast as a report by Socrates of a conversation he had the previous day with several people, including Glaucon and Adeimantus (Plato's older brothers). In the dialogue, Socrates presents his views on a number of topics, but scholars agree these views are Plato's own, not those of the historical Socrates. Our readings are taken from exchanges between Socrates and Glaucon in Books V, VI, and VII.

In Book V, Glaucon asks Socrates who the true philosophers are. Socrates, alluding to the etymology of the word ("lovers of wisdom"), says that they are "lovers of seeing the truth." Expanding on this notion, Socrates explains that philosophers are those who love the One rather than the Many. For example, a philosopher goes beyond the love of individual beautiful things to love the beautiful itself (the *form* of beauty—that which all beautiful things have in common, and makes them beautiful). The forms are fully real and are the objects of genuine knowledge, whereas the Many lie between being and not-being and are the objects of mere opinion.

In Book VI, Socrates explains that the Many belong to the visible world, which is seen by the eye, whereas the forms reside in the intelligible world, which is grasped by the mind. He illustrates the two worlds by describing a line divided into two main parts, with each of these parts subdivided into two parts. Each of the resulting four segments of the line represents a type of object of cognition. Corresponding to each of the four types of object of cognition is a distinct condition of the soul. (See the diagram of the divided line on p. 137.)

Socrates further illustrates this theory of knowledge in Book VII through the famous allegory of the cave. We are like prisoners who live their entire lives inside a cave. Just as such prisoners would think that shadows on the cave wall were real and would be unaware of the real world outside the cave, so we think that the visible world of the Many is real, ignorant of the intelligible world of forms. (See the diagram of the cave on p. 139.)

BOOK V

. . . GLAUCON: Who do you think . . . are the true philosophers?

SOCRATES: The lovers of seeing the truth.

GLAUCON: That . . . is no doubt correct, but what exactly do you mean by it?

SOCRATES: It would not be easy to explain to someone else. But you, I imagine, will agree to the following.

SOCRATES: What?

SOCRATES: That since beautiful is the opposite of ugly, they are two things.

GLAUCON: Of course.

SOCRATES: And since they are two things, each of them is also one?

GLAUCON: That's true too.

SOCRATES: And the same argument applies, then, to just and unjust, good and bad, and all the forms:¹ Each of them is itself one thing, but because they appear all over the place in partnership with actions and bodies, and with one another, each of them appears to be many things.

GLAUCON: That's right.

SOCRATES: Well, then, that is the basis of the distinction I draw: On one side are the lovers of seeing, the lovers of crafts . . . ; on the other, the only ones it is correct to call philosophers.

GLAUCON: How do you mean?

SOCRATES: The lovers of listening and seeing are passionately devoted to beautiful sounds, colors, shapes, and everything fashioned out of such things. But their thought is unable to see the nature of the beautiful itself or to be passionately devoted to it.

GLAUCON: That's certainly true.

SOCRATES: On the other hand, won't those who *are* able to approach the beautiful itself, and see it by itself, be rare?

GLAUCON: Very.

SOCRATES: What about someone who believes in beautiful things but does not believe in the beautiful itself, and would not be able to follow anyone who tried to lead him to the knowledge of it? Do you think he is living in a dream, or is he awake? Just consider: Isn't it dreaming to think—whether asleep or awake—that a likeness is not a likeness, but rather the thing itself that it is like?

GLAUCON: I certainly think that someone who does that is dreaming.

SOCRATES: But what about someone who, to take the opposite case, does believe in the beautiful itself, is able to observe both it and the things that participate² in it, and does not think that the participants are it, or that it is the participants—do you think he is living in a dream or is awake?

GLAUCON: He is very much awake.

SOCRATES: So, because this person knows these things, we would be right to describe his thought as knowledge; but the other's we would be right to describe as opinion, because he opines?

GLAUCON: Certainly. . . .

SOCRATES: Now that all that has been established, I want him to tell me this—the excellent fellow who believes that there is no beautiful itself, no form of beauty itself that remains always the same in all respects, but who does believe that there are many beautiful

¹*forms*: A *form* is that which all things included under the same *concept* have in common, and makes them fall under that concept. For example, two just actions are just because they have the just itself (the form of justice) in common. [D. C. ABEL]

²*participate*: Particular instantiations of a form (see footnote 1) are said to participate ("take part") in that form. For example, a beautiful tree participates in the beautiful itself (the form of beauty). [D. C. ABEL]

things—I mean, that lover of seeing who cannot bear to hear anyone say that the beautiful is one thing, or the just, or any of the rest—I want him to answer this question: “My very good fellow,” we will say, “of all the many beautiful things, is there one that won’t also seem ugly? Or any just one that won’t seem unjust? Or any pious one that won’t seem impious?”

GLAUCON: There is not. On the contrary, it is inevitable that they would somehow seem both beautiful and ugly; and the same with the other things you asked about.

SOCRATES: What about the many things that are doubles? Do they seem to be any the less halves than doubles?

GLAUCON: No.

SOCRATES: And again, will things that we say are big, small, light, or heavy be any more what we say they are than they will be the opposite?

GLAUCON: No, each of them is always both.

SOCRATES: Then is each of the many things any more what one says it is than it is *not* what one says it is?

GLAUCON: No, they are like those puzzles one hears at parties, or the children’s riddle about the eunuch who threw something at a bat—the one about what he threw at it and what it was in.³ For these things, too, are ambiguous, and one cannot understand them as fixedly being or fixedly not-being, or as both, or as neither.

SOCRATES: Do you know what to do with them, then, or anywhere better to put them than in between being and not-being? Surely they cannot be more opaque than what is not, by not-being more than it; nor clearer than what is, by being more than it.

GLAUCON: That’s absolutely true.

SOCRATES: So, we have now discovered, it seems, that the majority of people’s many conventional views about beauty and the rest are somehow rolling around between what is not and what purely is.

GLAUCON: We have.

SOCRATES: And we agreed earlier that if anything turned out to be of that sort, it would have to be called an object of opinion, not an object of knowledge—a wandering, in-between object grasped by the in-between power.

GLAUCON: We did.

SOCRATES: As for those, then, who look at many beautiful things but do not see the beautiful itself and are incapable of following another who would lead them to it; or many just things but not the just itself; and similarly with all the rest—these people, we will say, have opinions about all these things but have no knowledge of what their opinions are about.

³The children’s riddle illustrates Socrates’s point about the same thing having opposite qualities. A eunuch is a man and not a man, a bat is a bird and not a bird, the pumice stone thrown by the eunuch is a stone and not a stone, and the tree that the poor-sighted eunuch thought the bat was in is not a tree but a piece of timber. [D. C. ABEL]

GLAUCON: That is what we would have to say.

SOCRATES: On the other hand, what about those who in each case look at the things themselves that are always the same in every respect? Won't we say that they have knowledge, not mere opinion?

GLAUCON: Once again, we would have to.

SOCRATES: Shall we say, then, that these people are passionately devoted to and love the things with which knowledge deals, as the others are devoted to and love the things with which opinion deals? We have not forgotten, have we, that the latter love and look at beautiful sounds, colors, and things of that sort, but cannot even bear the idea that the beautiful itself is a thing that is?

GLAUCON: No, we have not.

SOCRATES: Will we be striking a false note, then, if we call such people "philodoxers" (lovers of opinion) rather than "philosophers" (lovers of wisdom or knowledge)? Will they be very angry with us if we call them that?

GLAUCON: Not if they take my advice. It is not in accord with divine law to be angry with the truth.

SOCRATES: So, those who in each case are passionately devoted to the thing itself are the ones we must call, not "philodoxers," but "philosophers"?

GLAUCON: Absolutely.

BOOK VI

SOCRATES: We say that there are many beautiful, many good, and many other such things, thereby distinguishing them in words.

GLAUCON: We do.

SOCRATES: We also say there is a beautiful itself and a good itself. And so, in the case of all the things that we then posited as many, we reverse ourselves and posit a single form belonging to each, since we suppose there is a single one, and call it what each is.

GLAUCON: That's true.

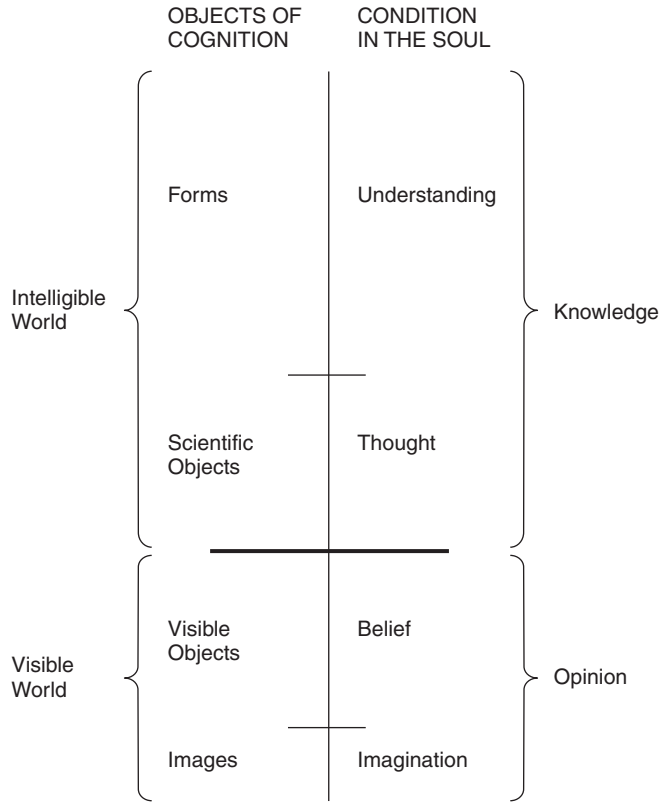
SOCRATES: And we say that the one class of things is visible but not intelligible, while the forms are intelligible but not visible.

GLAUCON: Absolutely. . . .

SOCRATES: Do you understand these two kinds, visible and intelligible?

GLAUCON: I do.

SOCRATES: Represent them, then, by a line divided into two unequal sections. Then divide each section—that of the visible kind and that of the intelligible—in the same proportion as the line. In terms now of relative clarity and opacity, you will have as one subsection of the visible, images. By images I mean, first, shadows, then reflections in bodies of water and in all close-packed, smooth, and shiny materials, and everything of that sort. Do you understand?



The Divided Line

GLAUCON: I do understand.

SOCRATES: Then, in the other subsection of the visible, put the originals of these images—that is, the animals around us, every plant, and the whole class of manufactured things.

GLAUCON: I will.

SOCRATES: Would you also be willing to say, then, that, as regards truth and untruth, the division is in this ratio: As what is opined is to what is known, so the likeness is to the thing it is like?

GLAUCON: Certainly.

SOCRATES: Next, consider how the section of the intelligible is to be divided.

GLAUCON: How?

SOCRATES: As follows: In one subsection, the soul, using as images the things that were imitated before, is forced to base its inquiry on hypotheses, proceeding not to a first principle but to a conclusion. In the other subsection, by contrast, it makes its way to an unhypothetical first principle, proceeding from a hypothesis but without the images used in the previous subsection, using forms themselves and making its investigation through them.

GLAUCON: I do not fully understand what you are saying.

SOCRATES: Let's try again. You see, you will understand it more easily after this explanation. I think you know that students of geometry, calculation, and the like hypothesize the odd and the even, the various figures, the three kinds of angles, and other things akin to these in each of their investigations, regarding them as known. These they treat as hypotheses and do not think it necessary to give any argument for them, either to themselves or to others, as if they were evident to everyone. And going from these first principles through the remaining steps, they arrive in full agreement at the point they set out to reach in their investigation.

GLAUCON: I certainly know that much.

SOCRATES: Then don't you also know that they use visible forms and make their arguments about them, although they are not thinking about them, but about those other things that they are like? They make their arguments with a view to the square itself and the diagonal itself, not the diagonal they draw, and similarly with the others. The very things they make and draw, of which shadows and reflections in water are images, they now in turn use as images in seeking to see those other things themselves that one cannot see except by means of thought.

GLAUCON: That's true.

SOCRATES: This, then, is the kind of thing that I said was intelligible. The soul forced to use hypotheses in the investigation of it, not traveling up to a first principle, since it cannot escape or get above its hypotheses, but using as images those very things of which images were made by the things below them, and that, by comparison to their images, were thought to be clear and to be honored as such.

GLAUCON: I understand that you mean what is dealt with in geometry and related crafts.

SOCRATES: Also understand, then, that by the other subsection of the intelligible I mean what reason itself grasps by the power of dialectical discussion,⁴ treating its hypotheses, not as first principles, but as genuine hypotheses (that is, stepping stones and links in a chain), in order to arrive at what is unhypothetical and the first principle of everything. Having grasped this principle, it reverses itself and, keeping hold of what follows from it, comes down to a conclusion, making no use of anything visible at all, but only of forms themselves, moving on through forms to forms, and ending in forms.

GLAUCON: I understand, though not adequately—you see, in my opinion you are speaking of an enormous task. You want to distinguish the part of what is and is intelligible, the part looked at by the science of dialectical discussion, as clearer than the part looked at by the so-called sciences—those for which hypotheses are first principles. And although those who look at the latter part are forced to do so by

⁴*dialectical discussion*: a process of inquiry in which one person, by asking a series of probing questions on a topic, leads the other person to reflect more deeply on the topic and understand it more fully. This process is illustrated clearly in Plato's *Euthyphro*, Reading 11 in this book. [D. C. ABEL]

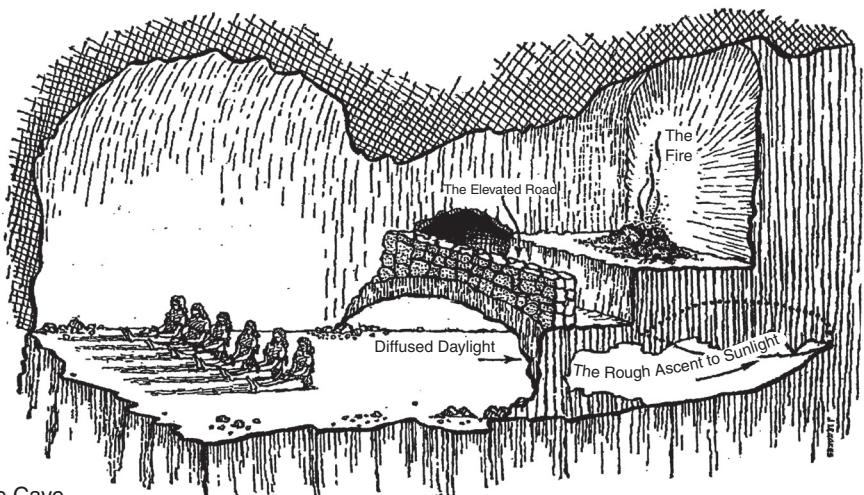
means of thought rather than sense perception, still, because they do not go back to a genuine first principle in considering it, but proceed from hypotheses, you do not think that they have true understanding of them, even though—given such a first principle—they are intelligible. And you seem to me to call the state of mind of the geometers—and the others of that sort—*thought* but not *understanding*; thought being intermediate between belief and understanding.

SOCRATES: You have grasped my meaning most adequately. Join me, then, in taking these four conditions in the soul as corresponding to the four subsections of the line: understanding dealing with the highest, thought dealing with the second; assign belief to the third, and imagination to the last. Arrange them in a proportion and consider that each shares in clarity to the degree that the subsection it deals with shares in truth.

GLAUCON: I understand, agree, and arrange them as you say.

BOOK VII

SOCRATES: Next, then, compare the effect of education and that of the lack of it on our nature to an experience like this. Imagine human beings living in an underground, cavelike dwelling, with an entrance a long way up that is open to the light and as wide as the cave itself. They have been there since childhood, with their necks and legs fettered, so that they are fixed in the same place, able to see only in front of them, because their fetter prevents them from turning their heads around. Light is provided by a fire burning far above and behind them. Between the prisoners and the fire, there is an elevated road stretching. Imagine that along this road a low wall has been built—like the screen in front of people that is provided by puppeteers, and above which they show their puppets.



The Cave

GLAUCON: I am imagining it.

SOCRATES: Also imagine, then, that there are people alongside the wall carrying multifarious artifacts that project above it—statues of people and other animals, made of stone, wood, and every material. And as you would expect, some of the carriers are talking and some are silent.

GLAUCON: It is a strange image you are describing, and strange prisoners.

SOCRATES: They are like us. I mean, in the first place, do you think these prisoners have ever seen anything of themselves and one another besides the shadows that the fire casts on the wall of the cave in front of them?

GLAUCON: How could they, if they have to keep their heads motionless throughout life?

SOCRATES: What about the things carried along the wall? Isn't the same true where they are concerned?

GLAUCON: Of course.

SOCRATES: And if they could engage in discussion with one another, don't you think they would assume that the words they used applied to the things they see passing in front of them?

GLAUCON: They would have to.

SOCRATES: What if their prison also had an echo from the wall facing them? When one of the carriers passing along the wall spoke, do you think they would believe that anything other than the shadow passing in front of them was speaking?

GLAUCON: I do not, by Zeus.

SOCRATES: All in all, then, what the prisoners would take for true reality is nothing other than the shadows of those artifacts.

GLAUCON: That's entirely inevitable.

SOCRATES: Consider, then, what being released from their bonds and cured of their foolishness would naturally be like, if something like this should happen to them. When one was freed and suddenly compelled to stand up, turn his neck around, walk, and look up toward the light, he would be pained by doing all these things and be unable to see the things whose shadows he had seen before, because of the flashing lights. What do you think he would say if we told him that what he had seen before was silly nonsense, but that now—because he is a bit closer to what is, and is turned toward things that *are* more—he sees more correctly? And in particular, if we pointed to each of the things passing by and compelled him to answer what each of them is, don't you think he would be puzzled and believe that the things he saw earlier were more truly real than the ones he was being shown?

GLAUCON: Much more so.

SOCRATES: And if he were compelled to look at the light itself, wouldn't his eyes be pained and wouldn't he turn around and flee toward the things he is able to see, and believe that they are really clearer than the ones he is being shown?

GLAUCON: He would.

SOCRATES: And if someone dragged him by force away from there, along the rough, steep, upward path, and did not let him go until he had dragged him into the light of the sun, wouldn't he be pained and angry at being treated that way? And when he came into the light, wouldn't he have his eyes filled with sunlight and be unable to see a single one of the things now said to be truly real?

GLAUCON: No, he would not be able to—at least not right away.

SOCRATES: He would need time to get adjusted, I suppose, if he is going to see the things in the world above. At first, he would see shadows most easily, then images of men and other things in water, then the things themselves. From these, it would be easier for him to go on to look at the things in the sky and the sky itself at night, gazing at the light of the stars and the moon, than during the day, gazing at the sun and the light of the sun.

GLAUCON: Of course.

SOCRATES: Finally, I suppose, he would be able to see the sun—not reflections of it in water or some alien place, but the sun just by itself in its own place—and be able to look at it and see what it is like.

GLAUCON: He would have to.

SOCRATES: After that, he would already be able to conclude about it that it provides the seasons and the years, governs everything in the visible world, and is in some way the cause of all the things that he and his fellows used to see.

GLAUCON: That would clearly be his next step.

SOCRATES: What about when he reminds himself of his first dwelling place, what passed for wisdom there, and his fellow prisoners? Don't you think he would count himself happy for the change and pity the others?

GLAUCON: Certainly.

SOCRATES: And if there had been honors, praises, or prizes among them for the one who was sharpest at identifying the shadows as they passed by; and was best able to remember which usually came earlier, which later, and which simultaneously; and who was thus best able to prophesy the future—do you think that our man would desire these rewards or envy those among the prisoners who were honored and held power? Or do you think he would feel with Homer that he would much prefer to “work the earth as a serf for another man, a man without possessions of his own”⁵ and go through any sufferings rather than share their beliefs and live as they do?

GLAUCON: Yes, I think he would rather suffer anything than live like that.

SOCRATES: Consider this too, then. If this man went back down into the cave and sat down in his same seat, wouldn't his eyes be filled with darkness, coming suddenly out of the sun like that?

GLAUCON: Certainly.

⁵Homer, *Odyssey*, Book XI, lines 489–90. [C. D. C. REEVE, TRANSLATOR] The words are spoken by the ghost of Achilles, the greatest Greek warrior of the Trojan War. Homer (8th century B.C.E.) was a Greek epic poet. [D. C. ABEL]

SOCRATES: Now, if he had to compete once again with the perpetual prisoners in recognizing the shadows, while his sight was still dim and before his eyes had recovered, and if the time required for readjustment was not short, wouldn't he provoke ridicule? Wouldn't it be said of him that he had returned from his upward journey with his eyes ruined, and that it is not worthwhile even to try to travel upward? And as for anyone who tried to free the prisoners and lead them upward, if they could somehow get their hands on him, wouldn't they kill him?⁶

GLAUCON: They certainly would.

SOCRATES: This image, my dear Glaucon, must be fitted together as a whole with what we said before. The realm revealed through sight should be likened to the prison dwelling, and the light of the fire inside it to the sun's power. And if you think of the upward journey and the seeing of things above as the upward journey of the soul to the intelligible realm, you won't mistake my intention—since it is what you wanted to hear about. Only the god knows whether it is true. But this is how these phenomena seem to me: In the knowable realm, the last thing to be seen is the form of the good, and it is seen only with toil and trouble. Once one has seen it, however, one must infer that it is the cause of all that is correct and beautiful in anything, that in the visible realm it produces both light and its source, and that in the intelligible realm it controls and provides truth and understanding; and that anyone who is to act sensibly in private or public must see it.

GLAUCON: I agree, so far as I am able.

SOCRATES: Come on, then, and join me in this further thought: You should not be surprised that the ones who get to this point are not willing to occupy themselves with human affairs, but that, on the contrary, their souls are always eager to spend their time above. I mean, that is surely what we would expect, if indeed the image I described before is also accurate here.

GLAUCON: It is what we would expect.

SOCRATES: What about when someone, coming from looking at divine things, looks to the evils of human life? Do you think it is surprising that he behaves awkwardly and appears completely ridiculous, if—while his sight is still dim and he has not yet become accustomed to the darkness around him—he is compelled, either in the courts or elsewhere, to compete about the shadows of justice,⁷ or about the statues of which they are the shadows; and to dispute the way these things are understood by people who have never seen justice itself?

GLAUCON: It is not surprising at all.

SOCRATES: On the contrary, anyone with any sense, at any rate, would remember that eyes may be confused in two ways and from two

⁶Plato alludes to the fate of Socrates, whom the Athenians convicted of impiety and the corruption of youth, and executed. [D. C. ABEL]

⁷Plato alludes to the trial of Socrates, which he recounts in *The Apology* (Reading 1 in this book). [D. C. ABEL]

causes: when they change from the light into the darkness, or from the darkness into the light. If he kept in mind that the same applies to the soul, then when he saw a soul disturbed and unable to see something, he would not laugh absurdly. Instead, he would see whether it had come from a brighter life and was dimmed through not having yet become accustomed to the dark, or from greater ignorance into greater light and was dazzled by the increased brilliance. Then he would consider the first soul happy in its experience and life, and pity the latter. But even if he wanted to ridicule it, at least his ridiculing it would make him less ridiculous than ridiculing a soul that had come from the light above.

GLAUCON: That's an entirely reasonable claim.

SOCRATES: Then here is how we must think about these matters, if that is true: Education is not what some people boastfully declare it to be. They presumably say they can put knowledge into souls that lack it, as if they could put sight into blind eyes.

GLAUCON: Yes, they do say that.

SOCRATES: But here is what our present account shows about this power to learn that is present in everyone's soul, and the instrument with which each of us learns: Just as an eye cannot be turned around from darkness to light except by turning the whole body, so this instrument must be turned around from what-comes-to-be together with the whole soul, until it is able to bear to look at what is and at the brightest thing that is—the one we call the good: Isn't that right?

GLAUCON: Yes.

Meditations on First Philosophy

René Descartes

René Descartes was born in La Haye (now called Descartes), France, in 1596. As a youth he was educated by the Jesuits at their college in La Flèche. Around 1614 he began studying at the University of Poitiers, receiving his law degree in 1616. Deciding to travel rather than practice law, he went to Holland in 1618 to serve in the army of the Dutch Prince Maurice of Nassau as a gentleman volunteer. One day in November 1619, while on a military tour of Germany, Descartes sat alone in a room reflecting on a new philosophical system that would unify all branches of knowledge and give them the certainty of mathematics. That night he had three dreams, which he interpreted as a divine commission to construct this new system of knowledge. He left the army shortly afterwards and traveled for several years. In 1628 he settled in Holland, where he lived for more than 20 years. There he did research in science and in mathematics (laying the foundations for analytic geometry) and developed his philosophy. In 1649, after much hesitation, Descartes acceded to the request of Queen Christina of Sweden to come to Stockholm to tutor her in philosophy. The harsh winter and the rigorous schedule imposed on him by the queen (philosophy lessons at five o'clock in the morning, for example) took their toll on his health: He died of pneumonia in 1650.

Descartes' major works are *Rules for the Direction of the Mind* (written in 1628, published posthumously), *Discourse on Method* (1637), *Meditations on First Philosophy* (1641), *Principles of Philosophy* (1644), and *The Passions of the Soul* (1649).

Our reading is from *Meditations on First Philosophy*. (By "first philosophy" Descartes means truths about the basic topics of philosophy, which for him are God, the soul [mind], and the external world.) In the First Meditation, Descartes explains his "method of doubt": He will not accept as true anything of which he cannot be absolutely certain. But practically everything seems open to doubt; Descartes reflects that he might even be deceived in his belief that there is an external world. For how can he be sure that there is not some powerful "malicious demon" who tricks him into thinking there is an external world by placing images directly in his mind?

In the Second Meditation, Descartes realizes that he can be absolutely certain of at least one thing—that he exists. For even if he is deceived about the existence of the external world, he could not be deceived unless he existed. As he formulates this argument elsewhere, "I think, therefore I am." This "I" that exists is "a thing that thinks." Descartes goes on to argue that if there are material things, their essential nature would be extension (three-dimensionality), and that extension is grasped by the mind, not by the senses.

In our selection from the Third Meditation, Descartes reflects on the certitude of his own existence and formulates a general criterion for truth: "Whatever I perceive very clearly and distinctly is true." He then presents a proof for the existence of God. He finds that his mind contains an idea of an infinite being, and reasons that he himself—who is merely a *finite* being—could not have invented such an idea. Descartes concludes that the idea of an infinite being must have been placed in his mind by the infinite being itself. Therefore this infinite being (God) exists.

FIRST MEDITATION. WHAT CAN BE CALLED INTO DOUBT

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

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

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

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

A brilliant piece of reasoning! As if I were not a man who sleeps at night, and regularly has all the same experiences while asleep as madmen do when awake—indeed sometimes even more improbable ones. How often, asleep at night, am I convinced of just such familiar events—that I am here in my dressing-gown, sitting by the fire—when in fact I am lying undressed in bed!

Yet at the moment my eyes are certainly wide awake when I look at this piece of paper; I shake my head and it is not asleep; as I stretch out and feel my hand I do so deliberately, and I know what I am doing. All this would not happen with such distinctness to someone asleep. Indeed! As if I did not remember other occasions when I have been tricked by exactly similar thoughts while asleep! As I think about this more carefully, I see plainly that there are never any sure signs by means of which being awake can be distinguished from being asleep. The result is that I begin to feel dazed, and this very feeling only reinforces the notion that I may be asleep.

Suppose then that I am dreaming, and that these particulars—that my eyes are open, that I am moving my head and stretching out my hands—are not true. Perhaps, indeed, I do not even have such hands or such a body at all. Nonetheless, it must surely be admitted that the visions that come in sleep are like paintings, which must have been fashioned in the likeness of things that are real, and hence that at least these general kinds of things—eyes, head, hands, and the body as a whole—are things that are not imaginary but are real and exist. For even when painters try to create sirens and satyrs¹ with the most extraordinary bodies, they cannot give them natures that are new in all respects; they simply jumble up the limbs of different animals. Or if perhaps they manage to think up something so new that nothing remotely similar has ever been seen before—something that is therefore completely fictitious and unreal—at least the colors used in the composition must be real. By similar reasoning, although these general kinds of things—eyes, head, hands, and so on—could be imaginary, it must at least be admitted that certain other even simpler and more universal things are real. These are as it were the real colors from which we form all the images of things, whether true or false, that occur in our thought.

This class appears to include corporeal nature in general, and its extension; the shape of extended things; the quantity, or size and number of these things; the place in which they may exist, the time through which they may endure, and so on.

So a reasonable conclusion from this might be that physics, astronomy, medicine, and all other disciplines that depend on the study of composite things, are doubtful; while arithmetic, geometry, and other subjects of this kind, which deal only with the simplest and most general things, regardless of whether they really exist in nature or not, contain something certain and indubitable. For whether I am awake or asleep, two and three added together are five, and a square has no more than four sides. It seems impossible that such transparent truths should incur any suspicion of being false.

And yet firmly rooted in my mind is the long-standing opinion that there is an omnipotent God who made me the kind of creature that I am. How do I know that he has not brought it about that there is no earth, no sky, no extended thing, no shape, no size, no place, while at the same time ensuring that all these things appear to me to exist just as they do now? What is more, just as I consider that

¹In Greek mythology, *sirens* are female, partly human creatures who lure sailors to their destruction with their beautiful singing; *satyrs* are woodland creatures with features of both a horse and a goat, fond of unrestrained revelry. [D. C. ABEL]

others sometimes go astray in cases where they think they have the most perfect knowledge, how do I know that God has not brought it about that I too go wrong every time I add two and three or count the sides of a square, or in some even simpler matter, if that is imaginable? But perhaps God would not have allowed me to be deceived in this way, since he is said to be supremely good. But if it were inconsistent with his goodness to have created me such that I am deceived all the time, it would seem equally foreign to his goodness to allow me to be deceived even occasionally; yet this last assertion cannot be made.

Perhaps there may be some who would prefer to deny the existence of so powerful a God rather than believe that everything else is uncertain. Let us not argue with them, but grant them that everything said about God is a fiction. According to their supposition, then, I have arrived at my present state by fate or chance or a continuous chain of events, or by some other means; yet since deception and error seem to be imperfections, the less powerful they make my original cause, the more likely it is that I am so imperfect as to be deceived all the time. I have no answer to these arguments, but am finally compelled to admit that there is not one of my former beliefs about which a doubt may not properly be raised; and this is not a flippant or ill-considered conclusion, but is based on powerful and well-thought-out reasons. So in the future I must withhold my assent from these former beliefs just as carefully as I would from obvious falsehoods, if I want to discover any certainty.

But it is not enough merely to have noticed this; I must make an effort to remember it. My habitual opinions keep coming back, and, despite my wishes, they capture my belief, which is as it were bound over to them as a result of long occupation and the law of custom. I shall never get out of the habit of confidently assenting to these opinions, so long as I suppose them to be what in fact they are, namely highly probable opinions—opinions that, despite the fact that they are in a sense doubtful, as has just been shown, it is still much more reasonable to believe than to deny. In view of this, I think it will be a good plan to turn my will in completely the opposite direction and deceive myself, by pretending for a time that these former opinions are utterly false and imaginary. I shall do this until the weight of preconceived opinion is counterbalanced and the distorting influence of habit no longer prevents my judgment from perceiving things correctly. In the meantime, I know that no danger or error will result from my plan, and that I cannot possibly go too far in my distrustful attitude. This is because the task now in hand does not involve action but merely the acquisition of knowledge.

I will suppose therefore that not God, who is supremely good and the source of truth, but rather some malicious demon of the utmost power and cunning has employed all his energies in order to deceive me. I shall think that the sky, the air, the earth, colors, shapes, sounds, and all external things are merely the delusions of dreams that he has devised to ensnare my judgment. I shall consider myself as not having hands or eyes, or flesh, or blood or senses, but as falsely believing that I have all these things. I shall stubbornly and firmly persist in this meditation; and, even if it is not in my power to know any truth, I shall at least do what is in my power, that is, resolutely guard against assenting to any falsehoods, so that the deceiver, however powerful and cunning

he may be, will be unable to impose on me in the slightest degree. But this is an arduous undertaking, and a kind of laziness brings me back to normal life. I am like a prisoner who is enjoying an imaginary freedom while asleep; as he begins to suspect that he is asleep, he dreads being woken up, and goes along with the pleasant illusion as long as he can. In the same way, I happily slide back into my old opinions and dread being shaken out of them, for fear that my peaceful sleep may be followed by hard labor when I wake, and that I shall have to toil not in the light, but amid the inextricable darkness of the problems I have now raised.

SECOND MEDITATION. THE NATURE OF THE HUMAN MIND, AND HOW IT IS BETTER KNOWN THAN THE BODY

So serious are the doubts into which I have been thrown as a result of yesterday's meditation that I can neither put them out of my mind nor see any way of resolving them. It feels as if I have fallen unexpectedly into a deep whirlpool that tumbles me around so that I can neither stand on the bottom nor swim up to the top. Nevertheless I will make an effort and once more attempt the same path that I started on yesterday. Anything that admits of the slightest doubt I will set aside just as if I had found it to be wholly false; and I will proceed in this way until I recognize something certain, or, if nothing else, until I at least recognize for certain that there is no certainty. Archimedes² used to demand just one firm and immovable point in order to shift the entire earth; so I too can hope for great things if I manage to find just one thing, however slight, that is certain and unshakable.

I will suppose then, that everything I see is spurious. I will believe that my memory tells me lies, and that none of the things that it reports ever happened. I have no senses. Body, shape, extension, movement, and place are chimeras.³ So what remains true? Perhaps just the one fact that nothing is certain.

Yet apart from everything I have just listed, how do I know that there is not something else that does not allow even the slightest occasion for doubt? Is there not a God, or whatever I may call him, who puts into me the thoughts I am now having? But why do I think this, since I myself may perhaps be the author of these thoughts? In that case am not I, at least, something? But I have just said that I have no senses and no body. This is the sticking point: What follows from this? Am I not so bound up with a body and with senses that I cannot exist without them? But I have convinced myself that there is absolutely nothing in the world, no sky, no earth, no minds, no bodies. Does it now follow that I too do not exist? No: If I convinced myself of something, then I certainly existed. But there is a deceiver of supreme power and cunning who is deliberately and constantly deceiving me. In that case I too undoubtedly exist, if he is deceiving me; and let him deceive me as much as he can, he will never bring it about that I am nothing so long as I think that I am something. So after considering everything

²Archimedes (about 287–212 B.C.E.) was a Greek mathematician and inventor. [D. C. ABEL]

³*chimeras*: mental fabrications. [D. C. ABEL]

very thoroughly, I must finally conclude that this proposition "I am, I exist" is necessarily true whenever it is put forward by me or conceived in my mind.

But I do not yet have a sufficient understanding of what this "I" is, that now necessarily exists. So I must be on my guard against carelessly taking something else to be this "I," and so making a mistake in the very item of knowledge that I maintain is the most certain and evident of all. I will therefore go back and meditate on what I originally believed myself to be, before I embarked on this present train of thought. I will then subtract anything capable of being weakened, even minimally, by the arguments now introduced, so that what is left at the end may be exactly and only what is certain and unshakable.

What then did I formerly think I was? A man. But what is a man? Shall I say "a rational animal"? No; for then I should have to inquire what an animal is, what rationality is, and in this way one question would lead me down the slope to other harder ones, and I do not now have the time to waste on subtleties of this kind. Instead I propose to concentrate on what came into my thoughts spontaneously and quite naturally whenever I used to consider what I was. Well, the first thought to come to mind was that I had a face, hands, arms, and the whole mechanical structure of limbs that can be seen in a corpse, and which I called the body. The next thought was that I was nourished, that I moved about, and that I engaged in sense-perception and thinking; and these actions I attributed to the soul. But as to the nature of this soul, either I did not think about this or else I imagined it to be something tenuous, like a wind or fire or ether, that permeated my more solid parts. As to the body, however, I had no doubts about it, but thought I knew its nature distinctly. If I had tried to describe the mental conception I had of it, I would have expressed it as follows: By a body I understand whatever has a determinable shape and a definable location and can occupy a space in such a way as to exclude any other body; it can be perceived by touch, sight, hearing, taste, or smell, and can be moved in various ways, not by itself but by whatever else comes into contact with it. For, according to my judgment, the power of self-movement, like the power of sensation or of thought, was quite foreign to the nature of a body; indeed, it was a source of wonder to me that certain bodies were found to contain faculties of this kind.

But what shall I now say that I am, when I am supposing that there is some supremely powerful and, if it is permissible to say so, malicious deceiver, who is deliberately trying to trick me in every way he can? Can I now assert that I possess even the most insignificant of all the attributes that I have just said belong to the nature of a body? I scrutinize them, think about them, go over them again, but nothing suggests itself; it is tiresome and pointless to go through the list once more. But what about the attributes I assigned to the soul? Nutrition or movement? Since now I do not have a body, these are mere fabrications. Sense-perception? This surely does not occur without a body, and besides, when asleep I have appeared to perceive through the senses many things that I afterwards realized I did not perceive through the senses at all. Thinking? At last I have discovered it: thought—this alone is inseparable from me. I am, I exist—that is certain. But for how long? For as long as I am thinking. For it could be that were I totally to cease from thinking, I should totally cease to exist. At present I am not admitting anything except what is necessarily true.

I am, then, in the strict sense, only a thing that thinks; that is, I am a mind, or intelligence, or intellect, or reason—words whose meaning I have been ignorant of until now. But for all that, I am a thing that is real and that truly exists. But what kind of a thing? As I have just said—a thinking thing.

What else am I? I will use my imagination. I am not that structure of limbs that is called a human body. I am not even some thin vapor that permeates the limbs—a wind, fire, air, breath, or whatever I depict in my imagination; for these are things that I have supposed to be nothing. Let this supposition stand; for all that, I am still something. And yet may it not perhaps be the case that these very things that I am supposing to be nothing, because they are unknown to me, are in reality identical with the “I” of which I am aware? I do not know, and for the moment I shall not argue the point, since I can make judgments only about things that are known to me. I know that I exist; the question is, what is this “I” that I know? If the “I” is understood strictly as we have been taking it, then it is quite certain that knowledge of it does not depend on things of whose existence I am as yet unaware; so it cannot depend on any of the things that I invent in my imagination. And this very word “invent” shows me my mistake. It would indeed be a case of fictitious invention if I used my imagination to establish that I was something or other; for imagining is simply contemplating the shape or image of a corporeal thing. Yet now I know for certain both that I exist and at the same time that all such images and, in general, everything relating to the nature of body, could be mere dreams <and chimeras>.⁴ Once this point has been grasped, to say “I will use my imagination to get to know more distinctly what I am” would seem to be as silly as saying “I am now awake, and see some truth; but since my vision is not yet clear enough, I will deliberately fall asleep so that my dreams may provide a truer and clearer representation.” I thus realize that none of the things that the imagination enables me to grasp is at all relevant to this knowledge of myself that I possess, and that the mind must therefore be most carefully diverted from such things if it is to perceive its own nature as distinctly as possible.

But what then am I? A thing that thinks. What is that? A thing that doubts, understands, affirms, denies, is willing, is unwilling, and also imagines and has sensory perceptions. . . .

Let us consider the things that people commonly think they understand most distinctly of all; that is, the bodies that we touch and see. I do not mean bodies in general—for general perceptions are apt to be somewhat more confused—but one particular body. Let us take, for example, this piece of wax. It has just been taken from the honeycomb; it has not yet quite lost the taste of the honey; it retains some of the scent of the flowers from which it was gathered; its color, shape, and size are plain to see; it is hard, cold, and can be handled without difficulty; if you rap it with your knuckles it makes a sound. In short, it has everything that appears necessary to enable a body to be known as

⁴Words placed in angle brackets appear in the French version of *Meditations on First Philosophy* but not in the original Latin version. Louis-Charles d’Albert, Duc de Luyens (1620–1690), published a French translation that included some alterations from the original text. Descartes approved the translation, but scholars do not consider it as authoritative as the original Latin text. [D. C. ABEL]

distinctly as possible. But even as I speak, I put the wax by the fire, and look: The residual taste is eliminated, the smell goes away, the color changes, the shape is lost, the size increases; it becomes liquid and hot; you can hardly touch it, and if you strike it, it no longer makes a sound. But does the same wax remain? It must be admitted that it does; no one denies it, no one thinks otherwise. So what was it in the wax that I understood with such distinctness? Evidently none of the features that I arrived at by means of the senses; for whatever came under taste, smell, sight, touch, or hearing has now altered—yet the wax remains.

Perhaps the answer lies in the thought that now comes to my mind—namely, the wax was not after all the sweetness of the honey, or the fragrance of the flowers, or the whiteness, or the shape, or the sound, but was rather a body that presented itself to me in these various forms a little while ago, but that now exhibits different ones. But what exactly is it that I am now imagining? Let us concentrate, take away everything that does not belong to the wax, and see what is left: merely something extended, flexible, and changeable. But what is meant here by “flexible” and “changeable”? Is it what I picture in my imagination: that this piece of wax is capable of changing from a round shape to a square shape, or from a square shape to a triangular shape? Not at all; for I can grasp that the wax is capable of countless changes of this kind, yet I am unable to run through this immeasurable number of changes in my imagination, from which it follows that it is not the faculty of imagination that gives me my grasp of the wax as flexible and changeable. And what is meant by “extended”? Is the extension of the wax also unknown? For it increases if the wax melts, increases again if it boils, and is greater still if the heat is increased. I would not be making a correct judgment about the nature of wax unless I believed it capable of being extended in many more different ways than I will ever encompass in my imagination. I must therefore admit that the nature of this piece of wax is in no way revealed by my imagination, but is perceived by the mind alone. (I am speaking of this particular piece of wax; the point is even clearer with regard to wax in general.) But what is this wax that is perceived by the mind alone? It is of course the same wax that I see, that I touch, that I picture in my imagination, in short the same wax that I thought it to be from the start. And yet, and here is the point, the perception I have of it is a case not of vision or touch or imagination—nor has it ever been, despite previous appearances—but of purely mental scrutiny; and this can be imperfect and confused, as it was before, or clear and distinct as it is now, depending on how carefully I concentrate on what the wax consists in.

But as I reach this conclusion I am amazed at how <weak and> prone to error my mind is. For although I am thinking about these matters within myself, silently and without speaking, nonetheless the actual words bring me up short, and I am almost tricked by ordinary ways of talking. We say that we see the wax itself, if it is there before us, not that we judge it to be there from its color or shape; and this might lead me to conclude without more ado that knowledge of the wax comes from what the eye sees, and not from the scrutiny of the mind alone. But then if I look out of the window and see men crossing the square, as I just happen to have done, I normally say that I see the men themselves, just as I say that I see the wax. Yet do I see any more than hats and coats that could conceal automatons? I *judge* that they are men. And so something that I thought

I was seeing with my eyes is in fact grasped solely by the faculty of judgment that is in my mind. . . .

THIRD MEDITATION. THE EXISTENCE OF GOD

I will now shut my eyes, stop my ears, and withdraw all my senses. I will eliminate from my thoughts all images of bodily things, or rather, since this is hardly possible, I will regard all such images as vacuous, false, and worthless. I will converse with myself and scrutinize myself more deeply; and in this way I will attempt to achieve, little by little, a more intimate knowledge of myself. I am a thing that thinks—that is, a thing that doubts, affirms, denies, understands a few things, is ignorant of many things, is willing, is unwilling, and also that imagines and has sensory perceptions. For, as I have noted before, even though the objects of my sensory experience and imagination may have no existence outside me, nonetheless the modes of thinking that I refer to as cases of sensory perception and imagination, insofar as they are simply modes of thinking, do exist within me—of that I am certain.

In this brief list I have gone through everything I truly know, or at least everything I have so far discovered that I know. Now I will cast around more carefully to see whether there may be other things within me that I have not yet noticed. I am certain that I am a thinking thing. Do I not therefore also know what is required for my being certain about anything? In this first item of knowledge there is simply a clear and distinct perception of what I am asserting; this would not be enough to make me certain of the truth of the matter if it could ever turn out that something that I perceived with such clarity and distinctness was false. So I now seem to be able to lay it down as a general rule that whatever I perceive very clearly and distinctly is true. . . .

Among my ideas, some appear to be innate, some to be adventitious,⁵ and others to have been invented by me. My understanding of what a thing is, what truth is, and what thought is, seems to derive simply from my own nature. But my hearing a noise, as I do now, or seeing the sun or feeling the fire, comes from things that are located outside me, or so I have hitherto judged. Lastly, sirens, hippogriffs,⁶ and the like are my own invention. But perhaps all my ideas may be thought of as adventitious, or they may all be innate, or all made up; for as yet I have not clearly perceived their true origin.

But the chief question at this point concerns the ideas that I take to be derived from things existing outside me: What is my reason for thinking that they resemble these things? Nature has apparently taught me to think this. But in addition I know by experience that these ideas do not depend on my will, and hence that they do not depend simply on me. Frequently I notice them even when I do not want to. Now, for example, I feel the heat whether I want to or not, and this is why I think that this sensation or idea of heat comes to me from

⁵*adventitious*: coming from an external source. [D. C. ABEL]

⁶*hippogriffs*: mythical animals that are part horse and part griffin (a griffin itself is a mythological animal that is part eagle and part lion). [D. C. ABEL]

something other than myself, namely the heat of the fire by which I am sitting. And the most obvious judgment for me to make is that the thing in question transmits to me its own likeness rather than something else.

I will now see if these arguments are strong enough. When I say "Nature taught me to think this," all I mean is that a spontaneous impulse leads me to believe it, not that its truth has been revealed to me by some natural light. There is a big difference here. Whatever is revealed to me by the natural light—for example that from the fact that I am doubting it follows that I exist, and so on—cannot in any way be open to doubt. This is because there cannot be another faculty both as trustworthy as the natural light and also capable of showing me that such things are not true. But as for my natural impulses, I have often judged in the past that they were pushing me in the wrong direction when it was a question of choosing the good, and I do not see why I should place any greater confidence in them in other matters.

Then again, although these ideas do not depend on my will, it does not follow that they must come from things located outside me. Just as the impulses that I was speaking of a moment ago seem opposed to my will even though they are within me, so there may be some other faculty, not yet fully known to me, that produces these ideas without any assistance from external things; this is, after all, just how I have always thought ideas are produced in me when I am dreaming.

And finally, even if these ideas did come from things other than myself, it would not follow that they must resemble those things. Indeed, I think I have often discovered a great disparity <between an object and its idea> in many cases. For example, there are two different ideas of the sun that I find within me. One of them, which is acquired as it were from the senses and which is a prime example of an idea that I reckon to come from an external source, makes the sun appear very small. The other idea is based on astronomical reasoning, that is, it is derived from certain notions that are innate in me (or else it is constructed by me in some other way), and this idea shows the sun to be several times larger than the earth. Obviously both these ideas cannot resemble the sun that exists outside me; and reason persuades me that the idea that seems to have emanated most directly from the sun itself has in fact no resemblance to it at all.

All these considerations are enough to establish that it is not reliable judgment but merely some blind impulse that has made me believe up till now that there exist things distinct from myself that transmit to me ideas or images of themselves through the sense organs or in some other way. . . .

Among my ideas, apart from the idea that gives me a representation of myself, which cannot present any difficulty in this context, there are ideas that variously represent God, corporeal and inanimate things, angels, animals, and finally other men like myself.

As far as concerns the ideas that represent other men, or animals, or angels, I have no difficulty in understanding that they could be put together from the ideas I have of myself, of corporeal things and of God, even if the world contained no men besides me, no animals and no angels.

As to my ideas of corporeal things, I can see nothing in them that is so great <or excellent> as to make it seem impossible that it originated in myself. . . .

So there remains only the idea of God; and I must consider whether there is anything in the idea that could not have originated in myself. By the word "God" I understand a substance that is infinite, <eternal, immutable,> independent, supremely intelligent, supremely powerful, and that created both myself and everything else (if anything else there be) that exists. All these attributes are such that, the more carefully I concentrate on them, the less possible it seems that they could have originated from me alone. So from what has been said it must be concluded that God necessarily exists.

It is true that I have the idea of substance in me in virtue of the fact that I am a substance. But this would not account for my having the idea of an infinite substance, when I am finite, unless this idea proceeded from some substance that really was infinite.

And I must not think that, just as my conceptions of rest and darkness are arrived at by negating movement and light, so my perception of the infinite is arrived at not by means of a true idea but merely by negating the finite. On the contrary, I clearly understand that there is more reality in an infinite substance than in a finite one, and hence that my perception of the infinite—that is, God—is in some way prior to my perception of the finite—that is, myself. For how could I understand that I doubted or desired (that is, lacked something) and that I was not wholly perfect, unless there were in me some idea of a more perfect being that enabled me to recognize my own defects by comparison? . . .

It only remains for me to examine how I received this idea from God. For I did not acquire it from the senses; it has never come to me unexpectedly, as usually happens with the ideas of things that are perceivable by the senses, when these things present themselves to the external sense organs—or seem to do so. And it was not invented by me either; for I am plainly unable either to take away anything from it or to add anything to it. The only remaining alternative is that it is innate in me, just as the idea of myself is innate in me.⁷

⁷In his Fifth Meditation, Descartes gives an additional proof for the existence of God. The argument appears on pp. 206–207 of this book. [D. C. ABEL]

An Essay Concerning Human Understanding

John Locke

John Locke was born in Wrington, England, in 1632. After attending Westminster School, he enrolled in Oxford University, receiving his bachelor's degree in 1656 and his master's degree two years later. He then taught Latin and Greek at Oxford. In 1661 he began the study of medicine. He was appointed censor of moral philosophy in 1664, but two years later he left Oxford to become the personal physician of influential politician Anthony Ashley Cooper, Earl of Shaftesbury. He completed his medical degree in 1674. Locke then spent four years in France (1675–1679), where he explored the philosophical ideas of René Descartes, Pierre Gassendi, and others. The England to which Locke returned was in political turmoil, and Shaftesbury fled to Holland in 1682. The next year, Locke, who was under suspicion because of his close association with Shaftesbury, also fled to Holland. He returned to England in 1689, and the next year published two major philosophical works that were the fruit of many years of thought: *An Essay Concerning Human Understanding* and *Two Treatises of Government*. Locke continued to write and publish, his final project (published posthumously) being a series of commentaries on the epistles of Paul. He died in Oates in 1704 at the age of 72.

Locke's main works, in addition to the *Essay* and the *Two Treatises*, are *A Letter Concerning Toleration* (1689), *Some Thoughts Concerning Education* (1693), and *The Reasonableness of Christianity* (1695).

Our selection is from the *Essay Concerning Human Understanding*. Locke begins by rejecting the view, popular in his day, that the mind is endowed with innate principles—the view that the mind by its very nature, prior to any experience, knows such truths as “it is impossible for the same thing to be and not to be.” He argues that such principles cannot be innate because some people (“children and idiots”) have no knowledge of them. Locke then proceeds to present his own theory of how ideas enter the mind. The mind is originally blank, like a sheet of white paper; ideas are imprinted through experience. All ideas arise either through sensation (experience of external objects) or reflection (experience of the operations of our mind). According to Locke, “we have nothing in our minds which did not come about in one of these two ways.” After experience has furnished the mind with simple ideas, the mind can go on to combine them into complex ideas that are not the direct objects of experience.

Locke then explains how ideas are related to qualities. By “quality” he means the power by which an object can produce an idea in our mind. For example, to say that a snowball has the qualities of being round and white means that it can create these ideas in us. Locke proceeds to distinguish two kinds of qualities. *Primary qualities* (which Locke also calls *original qualities*) are those that can produce ideas that resemble the object and really exist in it; examples of these qualities are figure, extension, and motion or rest. Secondary qualities, by contrast, can produce ideas that do *not* resemble the object and do *not* exist in it; examples of such qualities are color, sound, and taste. So although we experience a snowball as both round and white, it really is round but really is not white. Locke goes on to explain *how* qualities produce ideas in us.

BOOK I

Chapter II. No Innate Speculative Principles¹

1. It is an established opinion among some men that there are in the understanding certain innate principles—some primary notions, *koinai ennoiai*,² characters, as it were, stamped upon the mind of man, which the soul receives in its very first being and brings into the world with it. It would be sufficient to convince unprejudiced readers of the falseness of this supposition, if I should only show (as I hope I shall in the following parts of this discourse) how men, barely³ by the use of their natural faculties, may attain to all the knowledge they have without the help of any innate impressions, and may arrive at certainty without any such original notions or principles. For I imagine anyone will easily grant that it would be impertinent to suppose the ideas of colors innate in a creature to whom God has given sight and a power to receive them by the eyes from external objects. And no less unreasonable would it be to attribute several truths to the impressions of nature and innate characters, when we may observe in ourselves faculties fit to attain as easy and certain knowledge of them as if they were originally imprinted on the mind.

But because a man is not permitted without censure to follow his own thoughts in the search of truth when they lead him ever so little out of the common road, I shall set down the reasons that made me doubt of the truth of that opinion, as an excuse for my mistake, if I be in one—which I leave to be considered by those who, with me, dispose themselves to embrace truth wherever they find it.

2. There is nothing more commonly taken for granted than that there are certain principles, both speculative and practical (for they speak of both), universally agreed upon by all mankind; which therefore, they argue, must needs⁴ be the constant impressions which the souls of men receive in their first beings, and which they bring into the world with them, as necessarily and really as they do any of their inherent faculties.

3. This argument, drawn from universal consent, has this misfortune in it, that if it were true in matter of fact, that there were certain truths wherein all mankind agreed, it would not prove them innate, if there can be any other way shown how men may come to that universal agreement in the things they do consent in, which I presume may be done.

4. But, which is worse, this argument of universal consent, which is made use of to prove innate principles, seems to me a demonstration that there are none such, because there are none to which all mankind give an universal assent. I shall begin with the speculative, and instance in those magnified principles of demonstration, "Whatsoever is, is" and "It is impossible for the same thing to be and not to be"—which, of all others, I think have the most allowed title to innate. These have so settled a reputation of maxims universally received

¹The chapter numbers vary from edition to edition. The numbering here follows the edition of Peter H. Nidditch (New York: Oxford University Press, 1975, 2nd ed., 1979). [D. C. ABEL]

²*koinai ennoiai*: (Greek) "common conceptions." [D. C. ABEL]

³*barely*: merely. [D. C. ABEL]

⁴*needs*: necessarily. [D. C. ABEL]

that it will no doubt be thought strange if anyone should seem to question it. But yet I take liberty to say that these propositions are so far from having an universal assent, that there are a great part of mankind to whom they are not so much as known.

5. For first it is evident that all children and idiots have not the least apprehension or thought of them. And the want⁵ of that is enough to destroy that universal assent which must needs be the necessary concomitant of all innate truths—it seeming to me near a contradiction to say that there are truths imprinted on the soul, which it perceives or understands not; imprinting, if it signify anything, being nothing else but the making certain truths to be perceived. For to imprint anything on the mind without the mind's perceiving it seems to me hardly intelligible. If therefore children and idiots have souls, have minds, with those impressions upon them, they must unavoidably perceive them and necessarily know and assent to these truths; which since they do not, it is evident that there are no such impressions. For if they are not notions naturally imprinted, how can they be innate? And if they are notions imprinted, how can they be unknown? To say a notion is imprinted on the mind, and yet at the same time to say that the mind is ignorant of it and never yet took notice of it, is to make this impression nothing. No proposition can be said to be in the mind which it never yet knew, which it was never yet conscious of. For if any *one* [proposition] may, then, by the same reason, *all* propositions that are true and the mind is capable ever of assenting to, may be said to be in the mind, and to be imprinted: Since, if any one can be said to be in the mind, which it never yet knew, it must be only because it is capable of knowing it; and so the mind is of all truths it ever shall know. Nay, thus truths may be imprinted on the mind which it never did nor ever shall know; for a man may live long, and die at last in ignorance of many truths which his mind was capable of knowing, and that with certainty. So that if the capacity of knowing be the natural impression contended for, all the truths a man ever comes to know will, by this account, be every one of them innate; and this great point will amount to no more, but only to a very improper way of speaking—which, while it pretends to assert the contrary, says nothing different from those who deny innate principles. For nobody, I think, ever denied that the mind was capable of knowing several truths. The capacity, they say, is innate; the knowledge acquired. But then to what end such contest for certain innate maxims? If truths can be imprinted on the understanding without being perceived, I can see no difference there can be between any truths the mind is capable of knowing in respect of their original:⁶ They must all be innate or all adventitious;⁷ in vain shall a man go about to distinguish them. He therefore that talks of innate notions in the understanding cannot (if he intend thereby any distinct sort of truths) mean such truths to be in the understanding as it never perceived, and is yet wholly ignorant of. For if these words “to be in the understanding” have any propriety, they signify to be understood. So that to be in the understanding and not to be understood, to be

⁵*want*: lack. [D. C. ABEL]

⁶*original*: origin. [D. C. ABEL]

⁷*adventitious*: coming from an external source. [D. C. ABEL]

in the mind and never to be perceived, is all one as to say anything is and is not in the mind or understanding. If therefore these two propositions, "Whatsoever is, is" and "It is impossible for the same thing to be and not to be," are by nature imprinted, children cannot be ignorant of them: Infants and all that have souls must necessarily have them in their understandings, know the truth of them, and assent to [them]

BOOK II

Chapter I. Of Ideas in General, and Their Original

1. Every man being conscious to himself that he thinks, and that which his mind is applied about while thinking being the ideas that are there, it is past doubt that men have in their minds several ideas—such as are those expressed by the words whiteness, hardness, sweetness, thinking, motion, man, elephant, army, drunkenness, and others. It is in the first place then to be inquired, how he comes by them. I know it is a received doctrine that men have native ideas and original characters stamped upon their minds in their very first being. This opinion I have at large examined already; and I suppose what I have said in the foregoing Book will be much more easily admitted when I have shown whence the understanding may get all the ideas it has, and by what ways and degrees they may come into the mind—for which I shall appeal to everyone's own observation and experience.

2. 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 that all our knowledge is founded; and from that it ultimately derives itself. Our observation, employed either about external sensible⁸ objects or about the internal operations of our minds perceived and reflected on by ourselves, is that which supplies our understandings with all the materials of thinking. These two are the fountains of knowledge from whence all the ideas we have, or can naturally have, do spring.

3. First, our senses, conversant about particular sensible objects, do convey into the mind several distinct perceptions of things, according to those various ways wherein those objects do affect them. And thus we come by those ideas we have of yellow, white, heat, cold, soft, hard, bitter, sweet, and all those which we call sensible qualities; which when I say the senses convey into the mind, I mean, they from external objects convey into the mind what produces there those perceptions. This great source of most of the ideas we have, depending wholly upon our senses, and derived by them to the understanding, I call *sensation*.

4. Secondly, the other fountain from which experience furnishes the understanding with ideas is the perception of the operations of our own mind within us, as it is employed about the ideas it has got—which operations, when the soul

⁸*sensible*: able to be sensed. [D. C. ABEL]

comes to reflect on and consider, do furnish the understanding with another set of ideas, which could not be had from things without.⁹ And such are perception, thinking, doubting, believing, reasoning, knowing, willing, and all the different actings of our own minds—which we being conscious of, and observing in ourselves, do from these receive into our understandings as distinct ideas as we do from bodies affecting our senses. This source of ideas every man has wholly in himself; and though it be not sense, as having nothing to do with external objects, yet it is very like it, and might properly enough be called *internal sense*. But as I call the other sensation, so I call this *reflection*, the ideas it affords being such only as the mind gets by reflecting on its own operations within itself. By reflection, then, in the following part of this discourse, I would be understood to mean, that notice which the mind takes of its own operations, and the manner of them, by reason whereof there come to be ideas of these operations in the understanding. These two, I say—namely, external material things, as the objects of *sensation*, and the operations of our own minds within, as the objects of *reflection*—are to me the only originals from whence all our ideas take their beginnings. The term *operations* here I use in a large sense, as comprehending not barely the actions of the mind about its ideas, but some sort of passions¹⁰ arising sometimes from them, such as is the satisfaction or uneasiness arising from any thought.

5. The understanding seems to me not to have the least glimmering of any ideas which it does not receive from one of these two. External objects furnish the mind with the ideas of sensible qualities, which are all those different perceptions they produce in us; and the mind furnishes the understanding with ideas of its own operations.

These, when we have taken a full survey of them and their several modes, combinations, and relations, we shall find to contain all our whole stock of ideas; and that we have nothing in our minds which did not come in one of these two ways. Let anyone examine his own thoughts and thoroughly search into his understanding; and then let him tell me, whether all the original ideas he has there, are any other than of the objects of his senses, or of the operations of his mind, considered as objects of his reflection. And how great a mass of knowledge soever he imagines to be lodged there, he will, upon taking a strict view, see that he has not any idea in his mind but what one of these two have imprinted—though perhaps, with infinite variety compounded and enlarged by the understanding, as we shall see hereafter.

6. He that attentively considers the state of a child at his first coming into the world, will have little reason to think him stored with plenty of ideas that are to be the matter of his future knowledge. It is by degrees he comes to be furnished with them. And though the ideas of obvious and familiar qualities imprint themselves before the memory begins to keep a register of time or order, yet it is often so late before some unusual qualities come in the way, that there are few men that cannot recollect the beginning of their acquaintance with them. And if it were worthwhile, no doubt a child might be so ordered as to have but

⁹*without*: outside. [D. C. ABEL]

¹⁰*passions*: states of being acted upon (being “passive”); contrasted with *actions*. [D. C. ABEL]

a very few, even of the ordinary ideas, till he were grown up to a man. But all that are born into the world, being surrounded with bodies that perpetually and diversely affect them—[a] variety of ideas, whether care be taken of it or not, are imprinted on the minds of children. Light and colors are busy at hand everywhere, when the eye is but open; sounds and some tangible qualities fail not to solicit their proper senses and force an entrance to the mind—but yet, I think, it will be granted easily that if a child were kept in a place where he never saw any other but black and white till he were a man, he would have no more ideas of scarlet or green, than he that from his childhood never tasted an oyster or a pineapple has of those particular relishes.

7. Men then come to be furnished with fewer or more simple ideas from without, according as the objects they converse with afford greater or less variety; and from the operations of their minds within, according as they more or less reflect on them. For, though he that contemplates the operations of his mind cannot but have plain and clear ideas of them, yet, unless he turn his thoughts that way and considers them attentively, he will no more have clear and distinct ideas of all the operations of his mind and all that may be observed therein, than he will have all the particular ideas of any landscape, or of the parts and motions of a clock, who will not turn his eyes to it and with attention heed all the parts of it. The picture or clock may be so placed that they may come in his way every day, but yet he will have but a confused idea of all the parts they are made up of, till he applies himself with attention to consider them each in particular.

8. And hence we see the reason why it is pretty late before most children get ideas of the operations of their own minds, and [why] some have not any very clear or perfect ideas of the greatest part of them all their lives. Because, though they pass there continually, yet, like floating visions, they make not deep impressions enough to leave in their mind clear, distinct, lasting ideas, till the understanding turns inward upon itself, reflects on its own operations, and makes them the objects of its own contemplation. Children, when they come first into it, are surrounded with a world of new things which, by a constant solicitation of their senses, draw the mind constantly to them, forward to take notice of new—and [they are] apt to be delighted with the variety of changing objects. Thus the first years are usually employed and diverted in looking abroad.¹¹ Men's business in them is to acquaint themselves with what is to be found without, and so, growing up in a constant attention to outward sensations, seldom make any considerable reflection on what passes within them, till they come to be of riper years—and some scarce ever at all. . . .

Chapter II. Of Simple Ideas

1. The better to understand the nature, manner, and extent of our knowledge, one thing is carefully to be observed concerning the ideas we have; and that is, that some of them are *simple* and some *complex*.

Though the qualities that affect our senses are, in the things themselves, so united and blended that there is no separation, no distance between them; yet it

¹¹*abroad*: about. [D. C. ABEL]

is plain, the ideas they produce in the mind enter by the senses simple and unmixed. For, though the sight and touch often take in from the same object, at the same time, different ideas—as a man sees at once motion and color, the hand feels softness and warmth in the same piece of wax—yet the simple ideas thus united in the same subject are as perfectly distinct as those that come in by different senses. The coldness and hardness which a man feels in a piece of ice [are] as distinct ideas in the mind as the smell and whiteness of a lily, or as the taste of sugar and smell of a rose. And there is nothing can be plainer to a man than the clear and distinct perception he has of those simple ideas; which, being each in itself uncompounded, contains in it nothing but one uniform appearance, or conception in the mind, and is not distinguishable into different ideas.

2. These simple ideas, the materials of all our knowledge, are suggested and furnished to the mind only by those two ways above mentioned, namely sensation and reflection. When the understanding is once stored with these simple ideas, it has the power to repeat, compare, and unite them, even to an almost infinite variety, and so can make at pleasure new complex ideas. But it is not in the power of the most exalted wit or enlarged understanding, by any quickness or variety of thought, to invent or frame one new simple idea in the mind, not taken in by the ways before mentioned; nor can any force of the understanding destroy those that are there. The dominion of man in this little world of his own understanding [is] much the same as it is in the great world of visible things; wherein his power, however managed by art and skill, reaches no farther than to compound and divide the materials that are made to his hand, but can do nothing towards the making the least particle of new matter or destroying one atom of what is already in being. The same inability will everyone find in himself, who shall go about to fashion in his understanding one simple idea not received in by his senses from external objects or by reflection from the operations of his own mind about them. I would have anyone try to fancy any taste which had never affected his palate, or frame the idea of a scent he had never smelled, and when he can do this, I will also conclude that a blind man has ideas of colors, and a deaf man true distinct notions of sounds. . . .

Chapter VIII. Some Further Considerations Concerning Our Simple Ideas

1. Concerning the simple ideas of sensation, it is to be considered that whatsoever is so constituted in nature as to be able, by affecting our senses, to cause any perception in the mind, does thereby produce in the understanding a simple idea; which, whatever be the external cause of it, when it comes to be taken notice of by our discerning faculty, it is by the mind looked on and considered there to be a real positive idea in the understanding, as much as any other whatsoever; though, perhaps, the cause of it be but a privation of the subject.

2. Thus the ideas of heat and cold, light and darkness, white and black, motion and rest, are equally clear and positive ideas in the mind; though, perhaps, some of the causes which produce them are barely privations in those subjects from whence our senses derive those ideas. These the understanding, in its view of them, considers all as distinct positive ideas, without taking notice of the causes

that produce them—which is an inquiry not belonging to the idea, as it is in the understanding, but to the nature of the things existing without us. These are two very different things and carefully to be distinguished, it being one thing to perceive and know the idea of white or black, and quite another to examine what kind of particles they must be, and how ranged in the superficies,¹² to make any object appear white or black

7. To discover the nature of our ideas the better, and to discourse of them intelligibly, it will be convenient to distinguish them as they are ideas or perceptions in our minds, and as they are modifications of matter in the bodies that cause such perceptions in us, that so we may not think (as perhaps usually is done) that they are exactly the images and resemblances of something inherent in the subject—most of those of sensation being in the mind no more the likeness of something existing without us, than the names that stand for them are the likeness of our ideas, which yet upon hearing they are apt to excite in us.

8. Whatsoever the mind perceives in itself, or is the immediate object of perception, thought, or understanding, that I call *idea*; and the power to produce any idea in our mind, I call *quality* of the subject wherein that power is. Thus a snowball having the power to produce in us the ideas of white, cold, and round, the power to produce those ideas in us as they are in the snowball, I call qualities; and as they are sensations or perceptions in our understandings, I call them ideas; which ideas, if I speak of sometimes as in the things themselves, I would be understood to mean those qualities in the objects which produce them in us.

9. Qualities thus considered in bodies are: First, such as are utterly inseparable from the body, in what state soever it be; and such as in all the alterations and changes it suffers, all the force can be used upon it, it constantly keeps; and such as sense constantly finds in every particle of matter which has bulk enough to be perceived; and the mind finds inseparable from every particle of matter, though less than to make itself singly be perceived by our senses. For example, take a grain of wheat, divide it into two parts. Each part has still solidity, extension, figure, and mobility. Divide it again, and it retains still the same qualities; and so divide it on, till the parts become insensible;¹³ they must retain still each of them all those qualities. For division (which is all that a mill, or pestle, or any other body, does upon another, in reducing it to insensible parts) can never take away either solidity, extension, figure, or mobility from any body, but only makes two or more distinct separate masses of matter, of that which was but one before; all which distinct masses, reckoned as so many distinct bodies, after division, make a certain number. These I call *original* or *primary qualities* of body, which I think we may observe to produce simple ideas in us, namely solidity, extension, figure, motion or rest, and number.

10. Secondly, such qualities which in truth are nothing in the objects themselves but powers to produce various sensations in us by their primary qualities, that is, by the bulk, figure, texture, and motion of their insensible parts, as colors, sounds, tastes, and so on. These I call *secondary qualities*. To these might

¹²*superficies*: surface. [D. C. ABEL]

¹³*insensible*: not able to be sensed. [D. C. ABEL]

be added a *third* sort, which are allowed to be barely powers; though they are as much real qualities in the subject as those which I, to comply with the common way of speaking, call qualities—but for distinction [call] *secondary* qualities. For the power in fire to produce a new color or consistency *in wax or clay* by its primary qualities, is as much a quality in fire as the power it has to produce *in me* a new idea or sensation of warmth or burning which I felt not before, by the same primary qualities (namely the bulk, texture, and motion of its insensible parts).

11. The next thing to be considered is how bodies produce ideas in us; and that is manifestly by impulse, the only way which we can conceive bodies to operate in.

12. If then external objects be not united to our minds when they produce ideas therein; and yet we perceive these original qualities in such of them as singly fall under our senses, it is evident that some motion must be thence continued by our nerves or animal spirits, by some parts of our bodies, to the brains or the seat of sensation, there to produce in our minds the particular ideas we have of them. And since the extension, figure, number, and motion of bodies of an observable bigness may be perceived at a distance by the sight, it is evident some singly imperceptible bodies must come from them to the eyes, and thereby convey to the brain some motion; which produces these ideas which we have of them in us.

13. After the same manner that the ideas of these original qualities are produced in us, we may conceive that the ideas of secondary qualities are also produced, namely by the operation of insensible particles on our senses. For, it being manifest that there are bodies and good store of bodies, each [of which] are so small that we cannot by any of our senses discover either their bulk, figure, or motion—as is evident in the particles of the air and water, and others extremely smaller than those; perhaps as much smaller than the particles of air and water, as the particles of air and water are smaller than peas or hailstones—let us suppose at present that the different motions and figures, bulk and number, of such particles, affecting the several organs of our senses, produce in us those different sensations which we have from the colors and smells of bodies; for example, that a violet, by the impulse of such insensible particles of matter, of peculiar figures and bulks, and in different degrees and modifications of their motions, causes the ideas of the blue color and sweet scent of that flower to be produced in our minds. It [is] no more impossible to conceive that God should annex such ideas to such motions, with which they have no similitude, than that he should annex the idea of pain to the motion of a piece of steel dividing our flesh, with which that idea has no resemblance.

14. What I have said concerning colors and smells may be understood also of tastes and sounds, and other the like sensible qualities; which, whatever reality we by mistake attribute to them, are in truth nothing in the objects themselves, but powers to produce various sensations in us; and depend on those primary qualities, namely bulk, figure, texture, and motion of parts, as I have said.

15. From whence I think it easy to draw this observation—that the ideas of primary qualities of bodies are resemblances of them, and their patterns do really exist in the bodies themselves, but the ideas produced in us by these secondary qualities have no resemblance of them at all. There is nothing like our ideas, existing in the bodies themselves. They are, in the bodies we denominate

from them, only a power to produce those sensations in us; and what is sweet, blue, or warm in idea, is but the certain bulk, figure, and motion of the insensible parts in the bodies themselves, which we call so.

16. Flame is denominated hot and light; snow, white and cold; and manna, white and sweet, from the ideas they produce in us—which qualities are commonly thought to be the same in those bodies [as] those ideas are in us, the one the perfect resemblance of the other, as they are in a mirror, and it would by most men be judged very extravagant if one should say otherwise. And yet he that will consider that the same fire that at one distance produces in us the sensation of warmth, does, at a nearer approach, produce in us the far different sensation of pain, ought to bethink himself what reason he has to say that this idea of warmth, which was produced in him by the fire, is *actually in the fire*; and his idea of pain, which the same fire produced in him the same way, is *not* in the fire. Why are whiteness and coldness in snow, and pain not, when it produces the one and the other idea in us; and can do neither, but by the bulk, figure, number, and motion of its solid parts?

17. The particular bulk, number, figure, and motion of the parts of fire or snow are really in them—whether anyone’s senses perceive them or no. And therefore they may be called *real* qualities, because they really exist in those bodies. But light, heat, whiteness, or coldness are no more really in them than sickness or pain is in manna. Take away the sensation of them; let not the eyes see light or colors, nor the ears hear sounds; let the palate not taste, nor the nose smell—and [then] all colors, tastes, odors, and sounds, as they are such particular ideas, vanish and cease and are reduced to their causes, that is, bulk, figure, and motion of parts. . . .

26. To conclude: Beside those before-mentioned primary qualities in bodies—namely bulk, figure, extension, number, and motion of their solid parts—all the rest, whereby we take notice of bodies and distinguish them one from another, are nothing else but several powers in them, depending on those primary qualities; whereby they are fitted, either by immediately operating on our bodies to produce several different ideas in us; or else, by operating on other bodies, so to change their primary qualities as to render them capable of producing ideas in us different from what before they did. The former of these, I think, may be called secondary qualities *immediately perceivable*; the latter, secondary qualities *mediately perceivable*.

An Enquiry Concerning Human Understanding

David Hume

A biography of David Hume appears on p. 46.

This reading is from Hume's *Enquiry Concerning Human Understanding*. Hume begins by distinguishing two kinds of perceptions of the mind: impressions and ideas. *Impressions* consist of direct sense experiences of things outside us (sensations) or inside us (passions and emotions); *ideas* are copies of such impressions. Impressions are distinguished from ideas by their greater "force and vivacity"; hearing a sound is an impression, whereas recalling the sound is an idea. Some ideas (for example, a gold mountain) are not direct copies of a particular impression, but modifications or combinations of impressions (gold and a mountain). To clarify an idea, we need simply go back to the impression(s) from which it derives.

Hume next inquires about our knowledge of "matters of fact" (things that could be otherwise than they are). He observes that we rely on the notion of cause and effect when we go beyond the matters of fact provided by impressions and memories of impressions. But how do we *know* that one thing is caused by another? Judgments of causality are based on experience; when we see that event A is followed regularly by event B, we infer that A causes B and that if A occurs in the future, it will be followed by B. But what justifies this inference? It is not based on impressions—for although we do have impressions of A and B as successive events, we have no impression of a third entity, a "cause," that links A and B. Consequently, we can *never know* that there is such a thing as causality. Hume argues that our belief in causality results not from a reasoning process, but from the unavoidable human tendency to believe that two events we experience as constantly conjoined are related as cause and effect.

SECTION II. OF THE ORIGIN OF IDEAS

Everyone will readily allow that there is a considerable difference between the perceptions of the mind when a man feels the pain of excessive heat or the pleasure of moderate warmth, and when he afterwards recalls to his memory this sensation or anticipates it by his imagination. These faculties may mimic or copy the perceptions of the senses, but they never can entirely reach the force and vivacity of the original sentiment.¹ The utmost we say of them, even when they operate with greatest vigor, is that they represent their object in so lively a manner that we could *almost* say we feel or see it. But, except the mind be disordered by disease or madness, they never can arrive at such a pitch of vivacity as to render these perceptions altogether undistinguishable. All the colors of poetry, however splendid, can never paint natural objects in such a manner as to make the description be taken for a real landscape. The most lively thought is still inferior to the dullest sensation.

¹*sentiment*: perception. [D. C. ABEL]

We may observe a like distinction to run through all the other perceptions of the mind. A man in a fit of anger is actuated in a very different manner from one who only thinks of that emotion. If you tell me that any person is in love, I easily understand your meaning and form a just² conception of his situation, but never can mistake that conception for the real disorders and agitations of the passion. When we reflect on our past sentiments and affections, our thought is a faithful mirror and copies its objects truly, but the colors which it employs are faint and dull in comparison of those in which our original perceptions were clothed. It requires no nice discernment or metaphysical³ head to mark the distinction between them.

Here therefore we may divide all the perceptions of the mind into two classes or species, which are distinguished by their different degrees of force and vivacity. The less forcible and lively are commonly denominated *thoughts* or *ideas*. The other species want⁴ a name in our language, and in most others—I suppose because it was not requisite for any but philosophical purposes to rank them under a general term or appellation. Let us, therefore, use a little freedom and call them *impressions*, employing that word in a sense somewhat different from the usual. By the term *impression*, then, I mean all our more lively perceptions, when we hear or see or feel or love or hate or desire or will. And impressions are distinguished from ideas, which are the less lively perceptions, of which we are conscious when we reflect on any of those sensations or movements above mentioned.

Nothing at first view may seem more unbounded than the thought of man, which not only escapes all human power and authority, but is not even restrained within the limits of nature and reality. To form monsters and join incongruous shapes and appearances costs the imagination no more trouble than to conceive the most natural and familiar objects. And while the body is confined to one planet, along which it creeps with pain and difficulty, the thought can in an instant transport us into the most distant regions of the universe—or even beyond the universe into the unbounded chaos, where nature is supposed to lie in total confusion. What never was seen or heard of may yet be conceived; nor is anything beyond the power of thought, except what implies an absolute contradiction.

But though our thought seems to possess this unbounded liberty, we shall find, upon a nearer examination, that it is really confined within very narrow limits and that all this creative power of the mind amounts to no more than the faculty of compounding, transposing, augmenting, or diminishing the materials afforded us by the senses and experience. When we think of a golden mountain, we only join two consistent ideas, *gold* and *mountain*, with which we were formerly acquainted. A virtuous horse we can conceive because, from our own feeling, we can conceive virtue; and this we may unite to the figure and shape of a horse, which is an animal familiar to us. In short, all the materials of thinking are derived either from our outward or inward sentiment: The mixture and

²*just*: correct. [D. C. ABEL]

³*metaphysical*: relating to *metaphysics*, the study of the nature and kinds of reality. [D. C. ABEL]

⁴*want*: lack. [D. C. ABEL]

composition of these belongs alone to the mind and will. Or, to express myself in philosophical language, all our ideas or more feeble perceptions are copies of our impressions or more lively ones.

To prove this, the two following arguments will, I hope, be sufficient. First, when we analyze our thoughts or ideas, however compounded or sublime, we always find that they resolve themselves into such simple ideas as were copied from a precedent⁵ feeling or sentiment. Even those ideas which at first view seem the most wide of this origin are found, upon a nearer scrutiny, to be derived from it. The idea of God, as meaning an infinitely intelligent, wise, and good Being, arises from reflecting on the operations of our own mind and augmenting, without limit, those qualities of goodness and wisdom. We may prosecute⁶ this inquiry to what length we please, where we shall always find that every idea which we examine is copied from a similar impression. Those who would assert that this position is not universally true nor without exception have only one, and that an easy method of refuting it—by producing that idea which, in their opinion, is not derived from this source. It will then be incumbent on us, if we would maintain our doctrine, to produce the impression, or lively perception, which corresponds to it.

Secondly, if it happen from a defect of the organ that a man is not susceptible of any species of sensation, we always find that he is as little susceptible of the correspondent ideas. A blind man can form no notion of colors; a deaf man of sounds. Restore either of them that sense in which he is deficient. By opening this new inlet for his sensations, you also open an inlet for the ideas, and he finds no difficulty in conceiving these objects. . . .

When we entertain, therefore, any suspicion that a philosophical term is employed without any meaning or idea (as is but too frequent), we need but inquire, *from what impression is that supposed idea derived?* And if it be impossible to assign any, this will serve to confirm our suspicion. By bringing ideas into so clear a light we may reasonably hope to remove all dispute which may arise concerning their nature and reality. . . .

SECTION IV. SKEPTICAL⁷ DOUBTS CONCERNING THE OPERATIONS OF THE UNDERSTANDING

Part I

All the objects of human reason or inquiry may naturally be divided into two kinds, to wit, *relations of ideas* and *matters of fact*. Of the first kind are the sciences of geometry, algebra, and arithmetic; and in short, every affirmation which is either intuitively or demonstratively certain. *That the square of the hypotenuse is equal to the square of the two sides* is a proposition which expresses a relation

⁵*precedent*: prior. [D. C. ABEL]

⁶*prosecute*: pursue. [D. C. ABEL]

⁷*skeptical*: relating to *skepticism*, the doctrine that we cannot attain certainty in knowledge. [D. C. ABEL]

between these figures. *That three times five is equal to the half of thirty* expresses a relation between these numbers. Propositions of this kind are discoverable by the mere operation of thought, without dependence on what is anywhere existent in the universe. Though there never were a circle or triangle in nature, the truths demonstrated by Euclid⁸ would forever retain their certainty and evidence.

Matters of fact, which are the second objects of human reason, are not ascertained in the same manner; nor is our evidence of their truth, however great, of a like nature with the foregoing. The contrary of every matter of fact is still possible because it can never imply a contradiction and is conceived by the mind with the same facility and distinctness, as if ever so conformable to reality. *That the sun will not rise tomorrow* is no less intelligible a proposition and implies no more contradiction than the affirmation *that it will rise*. We should in vain, therefore, attempt to demonstrate its falsehood. Were it demonstratively false, it would imply a contradiction and could never be distinctly conceived by the mind.

It may, therefore, be a subject worthy of curiosity to inquire what is the nature of that evidence which assures us of any real existence and matter of fact, beyond the present testimony of our senses or the records of our memory. This part of philosophy, it is observable, has been little cultivated either by the ancients or moderns, and therefore our doubts and errors in the prosecution of so important an inquiry may be the more excusable, while we march through such difficult paths without any guide or direction. They may even prove useful, by exciting curiosity and destroying that implicit faith and security which is the bane of all reasoning and free inquiry. The discovery of defects in the common philosophy, if any such there be, will not, I presume, be a discouragement but rather an incitement, as is usual, to attempt something more full and satisfactory than has yet been proposed to the public.

All reasonings concerning matter of fact seem to be founded on the relation of *cause and effect*. By means of that relation alone we can go beyond the evidence of our memory and senses. If you were to ask a man why he believes any matter of fact which is absent—for instance, that his friend is in the country, or in France—he would give you a reason; and this reason would be some other fact, as a letter received from him or the knowledge of his former resolutions and promises. A man finding a watch or any other machine in a desert⁹ island would conclude that there had once been men in that island. All our reasonings concerning fact are of the same nature. And here it is constantly supposed that there is a connection between the present fact and that which is inferred from it. Were there nothing to bind them together, the inference would be entirely precarious. The hearing of an articulate voice and rational discourse in the dark assures us of the presence of some person. Why? Because these are the effects of the human make and fabric, and closely connected with it. If we anatomize all the other reasonings of this nature, we shall find that they are founded on the relation of cause and effect, and that this relation is either near or remote, direct or collateral. Heat and light are collateral effects of fire, and the one effect may justly be inferred from the other.

⁸Euclid (flourished around 300 B.C.E.) was a Greek geometer. [D. C. ABEL]

⁹*desert*: desolate. [D. C. ABEL]

If we would satisfy ourselves, therefore, concerning the nature of that evidence which assures us of matters of fact, we must inquire how we arrive at the knowledge of cause and effect.

I shall venture to affirm, as a general proposition which admits of no exception, that the knowledge of this relation is not, in any instance, attained by reasonings *a priori*¹⁰ but arises entirely from experience, when we find that any particular objects are constantly conjoined with each other. Let an object be presented to a man of ever so strong natural reason and abilities; if that object be entirely new to him, he will not be able, by the most accurate examination of its sensible¹¹ qualities, to discover any of its causes or effects. Adam, though his rational faculties be supposed, at the very first, entirely perfect, could not have inferred from the fluidity and transparency of water that it would suffocate him, or from the light and warmth of fire that it would consume him. No object ever discovers, by the qualities which appear to the senses, either the causes which produced it or the effects which will arise from it; nor can our reason, unassisted by experience, ever draw any inference concerning real existence and matter of fact.

This proposition *that causes and effects are discoverable, not by reason but by experience* will readily be admitted with regard to such objects as we remember to have once been altogether unknown to us, since we must be conscious of the utter inability, which we then lay under, of foretelling what would arise from them. Present two smooth pieces of marble to a man who has no tincture of natural philosophy¹²—he will never discover that they will adhere together in such a manner as to require great force to separate them in a direct line, while they make so small a resistance to a lateral pressure. Such events as bear little analogy to the common course of nature are also readily confessed to be known only by experience; nor does any man imagine that the explosion of gunpowder or the attraction of a lodestone could ever be discovered by arguments *a priori*. In like manner, when an effect is supposed to depend upon an intricate machinery or secret¹³ structure of parts, we make no difficulty in attributing all our knowledge of it to experience. Who will assert that he can give the ultimate reason why milk or bread is proper nourishment for a man, not for a lion or a tiger?

But the same truth may not appear, at first sight, to have the same evidence with regard to events which have become familiar to us from our first appearance in the world, which bear a close analogy to the whole course of nature and which are supposed to depend on the simple qualities of objects, without any secret structure of parts. We are apt to imagine that we could discover these effects by the mere operation of our reason, without experience. We fancy that were we brought on a sudden into this world, we could at first have inferred that one billiard ball would communicate motion to another upon impulse, and that we needed not to have waited for the event in order to pronounce with certainty concerning it. Such is the influence of custom, that, where it is strongest, it not only

¹⁰*a priori*: based on abstract reasoning, independent of experience (literally, in Latin, “from what comes earlier”). [D. C. ABEL]

¹¹*sensible*: able to be sensed. [D. C. ABEL]

¹²*natural philosophy*: the philosophy of nature; natural science. [D. C. ABEL]

¹³*secret*: unseen. [D. C. ABEL]

covers our natural ignorance but even conceals itself and seems not to take place, merely because it is found in the highest degree.

But to convince us that all the laws of nature and all the operations of bodies, without exception, are known only by experience, the following reflections may perhaps suffice. Were any object presented to us and were we required to pronounce concerning the effect which will result from it, without consulting past observation; after what manner, I beseech you, must the mind proceed in this operation? It must invent or imagine some event which it ascribes to the object as its effect, and it is plain that this invention must be entirely arbitrary. The mind can never possibly find the effect in the supposed cause by the most accurate scrutiny and examination. For the effect is totally different from the cause and consequently can never be discovered in it. Motion in the second billiard ball is a quite distinct event from motion in the first; nor is there anything in the one to suggest the smallest hint of the other. A stone or piece of metal raised into the air and left without any support immediately falls. But to consider the matter *a priori*, is there anything we discover in this situation which can beget the idea of a downward, rather than an upward or any other motion in the stone or metal?

And as the first imagination or invention of a particular effect in all natural operations is arbitrary, where we consult not experience; so must we also esteem¹⁴ the supposed tie or connection between the cause and effect, which binds them together and renders it impossible that any other effect could result from the operation of that cause. When I see, for instance, a billiard ball moving in a straight line towards another; even suppose motion in the second ball should by accident be suggested to me, as the result of their contact or impulse; may I not conceive that a hundred different events might as well follow from that cause? May not both these balls remain at absolute rest? May not the first ball return in a straight line or leap off from the second in any line or direction? All these suppositions are consistent and conceivable. Why then should we give the preference to one, which is no more consistent or conceivable than the rest? All our reasonings *a priori* will never be able to show us any foundation for this preference.

In a word, then, every effect is a distinct event from its cause. It could not, therefore, be discovered in the cause, and the first invention or conception of it *a priori* must be entirely arbitrary. And even after it is suggested, the conjunction of it with the cause must appear equally arbitrary, since there are always many other effects which to reason must seem fully as consistent and natural. In vain, therefore, should we pretend¹⁵ to determine any single event, or infer any cause or effect, without the assistance of observation and experience. . . .

Part II

But we have not yet attained any tolerable satisfaction with regard to the question first proposed. Each solution still gives rise to a new question as difficult as the foregoing and leads us on to farther inquiries. When it is asked, "What is the

¹⁴*esteem*: regard. [D. C. ABEL]

¹⁵*pretend*: undertake. [D. C. ABEL]

nature of all our reasonings concerning matter of fact?," the proper answer seems to be that they are founded on the relation of cause and effect. When again it is asked, "What is the foundation of all our reasonings and conclusions concerning that relation?," it may be replied in one word, experience. But if we still carry on our sifting humor¹⁶ and ask, "What is the foundation of all conclusions from experience?," this implies a new question, which may be of more difficult solution and explication. Philosophers that give themselves airs of superior wisdom and sufficiency have a hard task when they encounter persons of inquisitive dispositions who push them from every corner to which they retreat, and who are sure at last to bring them to some dangerous dilemma. The best expedient to prevent this confusion is to be modest in our pretensions and even to discover the difficulty ourselves before it is objected to us. By this means, we may make a kind of merit of our very ignorance.

I shall content myself, in this section, with an easy task and shall pretend only to give a negative answer to the question here proposed. I say then, that even after we have experience of the operations of cause and effect, our conclusions from that experience are *not* founded on reasoning or any process of the understanding. This answer we must endeavor both to explain and to defend.

It must certainly be allowed that nature has kept us at a great distance from all her secrets and has afforded us only the knowledge of a few superficial qualities of objects, while she conceals from us those powers and principles on which the influence of those objects entirely depends. . . . If a body of like color and consistence with that bread which we have formerly eaten be presented to us, we make no scruple of repeating the experiment¹⁷ and foresee, with certainty, like nourishment and support. Now this is a process of the mind or thought, of which I would willingly know the foundation. It is allowed on all hands that there is no known connection between the sensible qualities and the secret powers, and consequently that the mind is not led to form such a conclusion concerning their constant and regular conjunction, by anything which it knows of their nature. As to past *experience*, it can be allowed to give *direct* and *certain* information of those precise objects only, and that precise period of time, which fell under its cognizance. But why this experience should be extended to future times and to other objects which, for aught we know, may be only in appearance similar—this is the main question on which I would insist. The bread which I formerly ate nourished me; that is, a body of such sensible qualities was, at that time, endued with such secret powers. But does it follow that other bread must also nourish me at another time, and that like sensible qualities must always be attended with like secret powers? The consequence seems nowise necessary. At least it must be acknowledged that there is here a consequence drawn by the mind; that there is a certain step taken—a process of thought and an inference which wants to be explained. These two propositions are far from being the same: "I have found that such an object has always been attended with such an effect" and "I foresee that other objects which are in appearance similar

¹⁶*sifting humor*: questioning frame of mind. [D. C. ABEL]

¹⁷*experiment*: experience. [D. C. ABEL]

will be attended with similar effects." I shall allow, if you please, that the one proposition may justly be inferred from the other; I know, in fact, that it always is inferred. But if you insist that the inference is made by a chain of reasoning, I desire you to produce that reasoning. The connection between these propositions is not intuitive. There is required a medium¹⁸ which may enable the mind to draw such an inference, if indeed it be drawn by reasoning and argument. What that medium is, I must confess, passes my comprehension—and it is incumbent on those to produce it, who assert that it really exists and is the origin of all our conclusions concerning matter of fact. . . .

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. When a man says, "I have found, in all past instances, such sensible qualities conjoined with such secret powers," and when he says, "Similar sensible qualities will always be conjoined with similar secret powers," he is not guilty of a tautology, nor are these propositions in any respect the same. You say that the one proposition is an inference from the other. But you must confess that the inference is not intuitive; neither is it demonstrative. Of what nature is it, then? To say it is experimental¹⁹ is begging the question. For all inferences from experience suppose, as their foundation, that the future will resemble the past and that similar powers will be conjoined with similar sensible qualities. If there be any suspicion that the course of nature may change and that the past may be no rule for the future, all experience becomes useless and can give rise to no inference or conclusion. It is impossible, therefore, that any arguments from experience can prove this resemblance of the past to the future, since all these arguments are founded on the supposition of that resemblance. Let the course of things be allowed hitherto ever so regular—that alone, without some new argument or inference, proves not that, for the future, it will continue so. In vain do you pretend to have learned the nature of bodies from your past experience. Their secret nature, and consequently all their effects and influence, may change without any change in their sensible qualities. This happens sometimes and with regard to some objects—why may it not happen always and with regard to all objects? What logic, what process of argument secures you against this supposition? My practice, you say, refutes my doubts. But you mistake the purport of my question. As an agent, I am quite satisfied in the point; but as a philosopher who has some share of curiosity (I will not say skepticism), I want to learn the foundation of this inference. No reading, no inquiry has yet been able to remove my difficulty or give me satisfaction in a matter of such importance. Can I do better than propose the difficulty to the public, even though, perhaps, I have small hopes of obtaining a solution? We shall at least, by this means, be sensible²⁰ of our ignorance, if we do not augment our knowledge. . . .

¹⁸*medium*: basis for an inference. [D. C. ABEL]

¹⁹*experimental*: based on experience. [D. C. ABEL]

²⁰*sensible*: aware. [D. C. ABEL]

SECTION V. SKEPTICAL SOLUTION OF THESE DOUBTS

Part I

. . . Suppose a person, though endowed with the strongest faculties of reason and reflection, to be brought on a sudden into this world. He would, indeed, immediately observe a continual succession of objects, and one event following another; but he would not be able to discover anything farther. He would not at first, by any reasoning, be able to reach the idea of cause and effect, since the particular powers by which all natural operations are performed never appear to the senses. Nor is it reasonable to conclude, merely because one event, in one instance, precedes another, that therefore the one is the cause, the other the effect. Their conjunction may be arbitrary and casual. There may be no reason to infer the existence of one from the appearance of the other. And in a word, such a person, without more experience, could never employ his conjecture or reasoning concerning any matter of fact, or be assured of anything beyond what was immediately present to his memory and senses.

Suppose, again, that he has acquired more experience and has lived so long in the world as to have observed familiar objects or events to be constantly conjoined together. What is the consequence of this experience? He immediately infers the existence of one object from the appearance of the other. Yet he has not, by all his experience, acquired any idea or knowledge of the secret power by which the one object produces the other; nor is it by any process of reasoning [that] he is engaged to draw this inference. But still he finds himself determined to draw it. And though he should be convinced that his understanding has no part in the operation, he would nevertheless continue in the same course of thinking. There is some other principle which determines him to form such a conclusion.

This principle is custom or habit. For wherever the repetition of any particular act or operation produces a propensity to renew the same act or operation, without being impelled by any reasoning or process of the understanding, we always say that this propensity is the effect of *custom*. By employing that word, we pretend not to have given the ultimate reason of such a propensity. We only point out a principle of human nature which is universally acknowledged and which is well known by its effects. Perhaps we can push our inquiries no farther or pretend to give the cause of this cause, but must rest contented with it as the ultimate principle which we can assign of all our conclusions from experience. It is sufficient satisfaction that we can go so far, without repining at the narrowness of our faculties because they will carry us no farther. And it is certain we here advance a very intelligible proposition at least, if not a true one, when we assert that after the constant conjunction of two objects—heat and flame, for instance, weight and solidity—we are determined by custom alone to expect the one from the appearance of the other. This hypothesis seems even the only one which explains the difficulty why we draw from a thousand instances an inference which we are not able to draw from one instance that is in no respect different from them. Reason is incapable of any such variation. The conclusions which it draws from considering one circle are the same which it would form upon surveying all the circles in the universe. But no man, having seen only one body move after being impelled

by another, could infer that every other body will move after a like impulse. All inferences from experience, therefore, are effects of custom, not of reasoning.

Custom, then, is the great guide of human life. It is that principle alone which renders our experience useful to us and makes us expect for the future a similar train of events with those which have appeared in the past. Without the influence of custom, we should be entirely ignorant of every matter of fact beyond what is immediately present to the memory and senses. We should never know how to adjust means to ends, or to employ our natural powers in the production of any effect. There would be an end at once of all action as well as of the chief part of speculation.

But here it may be proper to remark that though our conclusions from experience carry us beyond our memory and senses and assure us of matters of fact which happened in the most distant places and most remote ages, yet some fact must always be present to the senses or memory, from which we may first proceed in drawing these conclusions. A man who should find in a desert country the remains of pompous²¹ buildings would conclude that the country had, in ancient times, been cultivated by civilized inhabitants. But did nothing of this nature occur to him, he could never form such an inference. We learn the events of former ages from history; but then we must peruse the volumes in which this instruction is contained, and thence carry up our inferences from one testimony to another till we arrive at the eyewitnesses and spectators of these distant events. In a word, if we proceed not upon some fact present to the memory or senses, our reasonings would be merely hypothetical; and however the particular links might be connected with each other, the whole chain of inferences would have nothing to support it, nor could we ever by its means arrive at the knowledge of any real existence. If I ask why you believe any particular matter of fact which you relate, you must tell me some reason; and this reason will be some other fact connected with it. But as you cannot proceed after this manner *in infinitum*,²² you must at last terminate in some fact which is present to your memory or senses, or must allow that your belief is entirely without foundation.

What, then, is the conclusion of the whole matter? A simple one—though, it must be confessed, pretty remote from the common theories of philosophy. All belief of matter of fact or real existence is derived merely from some object present to the memory or senses and a customary conjunction between that and some other object. Or in other words, having found in many instances that any two kinds of objects—flame and heat, snow and cold—have always been conjoined together; if flame or snow be presented anew to the senses, the mind is carried by custom to expect heat or cold and to *believe* that such a quality does exist and will discover itself upon a nearer approach. This belief is the necessary result of placing the mind in such circumstances. It is an operation of the soul when we are so situated, as unavoidable as to feel the passion of love when we receive benefits, or hatred when we meet with injuries. All these operations are a species of natural instincts, which no reasoning or process of the thought and understanding is able either to produce or to prevent.

²¹*pompous*: magnificent. [D. C. ABEL]

²²*in infinitum*: (Latin) "to infinity." [D. C. ABEL]

Critique of Pure Reason

Immanuel Kant

Immanuel Kant was born in 1724 in Königsberg, Prussia, where he spent his entire life. As a boy he attended the Collegium Fridericanum, a school run by the Pietists (the Lutheran sect to which his family belonged). In 1740 he enrolled in the University of Königsberg, where he studied a wide variety of subjects, including theology, philosophy, mathematics, physics, and medicine. He withdrew from the university in 1747 to support himself by working as a private tutor for various families in eastern Prussia. He resumed his studies in 1754 and completed his degree the following year. He then became a lecturer at the University of Königsberg, teaching such diverse subjects as mathematics, geography, mineralogy, and philosophy. Fifteen years later he was appointed professor of logic and metaphysics. His writings—especially his monumental *Critique of Pure Reason* (1781)—brought him increasing fame, and students came from afar to hear him lecture. In 1797 he stopped lecturing, but he continued to write. He died in Königsberg in 1804 at the age of 79.

Kant's principal works, in addition to *Critique of Pure Reason*, are *Prolegomena to Any Future Metaphysics* (1783), *Groundwork of the Metaphysics of Morals* (1785), *Critique of Practical Reason* (1788), and *Critique of Judgment* (1790).

Our reading is taken from Kant's second edition of *Critique of Pure Reason*, published in 1787. Kant's project in this book is to investigate how much we can know by "pure reason" (reason itself, apart from any experience). In his preface, Kant observes that we typically assume that our knowledge (cognition) must conform to objects—that when we know something, our mind must match the way the objects are. If this assumption is correct, it would be impossible to have any knowledge of objects a priori (prior to our experience of them). Kant rejects this assumption; he holds the converse, that *objects* must conform to our *knowledge*—that when we know something, objects must match the way our minds are. Objects conform to our way of receiving sense experience (intuition) and to our way of intellectually synthesizing this sense experience (thought). That is to say, our minds are constructed in such a way that we necessarily *sense* objects through the forms of "sensibility" (namely, space and time) and we necessarily *think* objects through certain "categories" (also called "concepts") of the understanding, such as causality and unity. This means that we can know certain things about objects a priori. For example, we know that we will experience them as existing in space and as being caused. But according to Kant, even though we know that objects will invariably *appear to us* in certain ways, we can never know how things are *in themselves*.

In his introduction, Kant explains that a priori knowledge is characterized by necessity and universality. He then explains that some of our judgments (those in mathematics and metaphysics, for example) are not only a priori but synthetic. (A *synthetic* statement adds something to a concept; an *analytic* one does not.) Kant's doctrine about the structure of the mind is designed to explain how such synthetic a priori judgments are possible.

In the final two sections of our reading, Kant gives arguments to show that space and time (the forms of sensibility) are a priori, and explains that there are 12 categories of the understanding, corresponding to the 12 kinds of judgment.

PREFACE TO THE SECOND EDITION

Whether or not the treatment of the cognitions belonging to the concern of reason travels the secure course of a science is something which can soon be judged by its success. If after many preliminaries and preparations are made, a science gets stuck as soon as it approaches its end, or if in order to reach this end it must often go back and set out on a new path; or likewise if it proves impossible for the different coworkers to achieve unanimity as to the way in which they should pursue their common aim; then we may be sure that such a study is merely groping about, that it is still far from having entered upon the secure course of a science. And it is already a service to reason if we can possibly find that path for it, even if we have to give up as futile much of what was included in the end previously formed without deliberation. . . .

Up to now it has been assumed that all our cognition must conform to the objects; but all attempts to find out something about them a priori¹ through concepts that would extend our cognition have, on this presupposition, come to nothing. Hence let us once try whether we do not get farther with the problems of metaphysics² by assuming that the objects must conform to our cognition, which would agree better with the requested possibility of an a priori cognition of them, which is to establish something about objects before they are given to us. This would be just like the first thoughts of Copernicus,³ who, when he did not make good progress in the explanation of the celestial motions if he assumed that the entire celestial host revolves around the observer, tried to see if he might not have greater success if he made the observer revolve and left the stars at rest. Now in metaphysics we can try in a similar way regarding the *intuition*⁴ of objects. If intuition has to conform to the constitution of the objects, then I do not see how we can know anything of them a priori; but if the object (as an object of the senses) conforms to the constitution of our faculty of intuition, then I can very well represent this possibility to myself. Yet because I cannot stop with these intuitions, if they are to become cognitions, but must refer them as representations to something as their object and determine this object through them, I can assume *either* that the concepts through which I bring about this determination also conform to the objects, and then I am once again in the same difficulty about how I could know anything about them a priori, *or else* I assume that the objects, or what is the same thing, the *experience* in which alone they can be cognized (as given objects), conforms to those concepts—in which case I immediately see an easier way out of the difficulty, since experience itself is a kind of cognition requiring the understanding, whose rule I have to presuppose in myself before any object is given to me, hence a priori, which rule is expressed in

¹*a priori*: independent of experience (literally, in Latin, “from what comes earlier”); contrasted with *a posteriori*, dependent on experience (“from what comes later”). [D. C. ABEL]

²*metaphysics*: the study of the nature and kinds of reality. [D. C. ABEL]

³Nicolaus Copernicus (1473–1543) was a Polish astronomer. [D. C. ABEL]

⁴*intuition*: sense experience. [D. C. ABEL]

concepts a priori, to which all objects of experience must therefore necessarily conform, and with which they must agree. . . .

INTRODUCTION TO THE SECOND EDITION

I. On the Difference Between Pure and Empirical Cognition

There is no doubt whatever that all our cognition begins with experience; for how else should the cognitive faculty be awakened into exercise if not through objects that stimulate our senses and in part themselves produce representations, in part bring the activity of our understanding into motion to compare these, to connect or separate them, and thus to work up the raw material of sensible impressions into a cognition of objects that is called experience? *As far as time is concerned*, then, no cognition in us precedes experience, and with experience every cognition begins.

But although all our cognition commences *with* experience, yet it does not on that account all arise *from* experience. For it could well be that even our experiential cognition is a composite of that which we receive through impressions and that which our own cognitive faculty (merely prompted by sensible impressions) provides out of itself, which addition we cannot distinguish from that fundamental material until long practice has made us attentive to it and skilled in separating it out.

It is therefore at least a question requiring closer investigation, and one not to be dismissed at first glance, whether there is any such cognition independent of all experience and even of all impressions of the senses. One calls such cognitions a priori, and distinguishes them from *empirical* ones, which have their sources a posteriori, namely in experience.

The former expression is nevertheless not yet sufficiently determinate to designate the whole sense of the question before us. For it is customary to say of many a cognition derived from experiential sources that we are capable of it or partake in it a priori, because we do not derive it immediately from experience, but rather from a general rule that we have nevertheless itself borrowed from experience. So one says of someone who undermined the foundation of his house that he could have known a priori that it would collapse—he need not have waited for the experience of it actually collapsing. Yet he could not have known this entirely a priori. For that bodies are heavy and hence fall if their support is taken away must first have become known to him through experience.

In the sequel therefore we will understand by a priori cognitions not those that occur independently of this or that experience, but rather those that occur *absolutely* independently of all experience. Opposed to them are empirical cognitions, or those that are possible only a posteriori, that is, through experience. Among a priori cognitions, however, those are called *pure* with which nothing empirical is intermixed. Thus, for example, the proposition “Every alteration has its cause” is an a priori proposition, only not pure, since alteration is a concept that can be drawn only from experience.

II. We Are in Possession of Certain A Priori Cognitions, and Even the Common Understanding Is Never Without Them

At issue here is a mark by means of which we can securely distinguish a pure cognition from an empirical one. Experience teaches us, to be sure, that something is constituted thus and so, but not that it could not be otherwise. *First*, then, if a proposition is thought along with its *necessity*, it is an a priori judgment. If it is, moreover, also not derived from any proposition except one that in turn is valid as a necessary proposition, then it is absolutely a priori. *Second*, experience never gives its judgments true or strict but only assumed and comparative *universality* (through induction), so properly it must be said: As far as we have yet perceived, there is no exception to this or that rule. Thus if a judgment is thought in strict universality—that is, in such a way that no exception at all is allowed to be possible—then it is not derived from experience, but is rather valid absolutely a priori. Empirical universality is therefore only an arbitrary increase in validity from that which holds in *most* cases to that which holds in *all* (as in, for example, the proposition “All bodies are heavy”), whereas strict universality belongs to a judgment essentially; this points to a special source of cognition for it, namely a faculty of a priori cognition. Necessity and strict universality are therefore secure indications of an a priori cognition, and also belong together inseparably. But since in their use it is sometimes easier to show the empirical limitation in judgments than the contingency⁵ in them, or is often more plausible to show the unrestricted universality that we ascribe to a judgment than its necessity, it is advisable to employ separately these two criteria, each of which is in itself infallible.

Now it is easy to show that in human cognition there actually are such necessary and in the strictest sense universal, thus pure a priori judgments. If one wants an example from the sciences, one need only look at all the propositions of mathematics; if one would have one from the commonest use of the understanding, the proposition that every alteration must have a cause will do;⁶ indeed in the latter the very concept of a cause so obviously contains the concept of a necessity of connection with an effect and a strict universality of rule that it would be entirely lost if one sought, as Hume⁷ did, to derive it from a frequent association of that which happens with that which precedes and a habit (thus a merely subjective necessity) of connecting representations arising from

⁵*contingency*: the state of being able to be or not to be; contrasted with *necessity*. [D. C. ABEL]

⁶At the end of the previous section, Kant stated that the proposition “Every alteration has a cause” is absolutely a priori *but not pure*; but here he states that this proposition is absolutely a priori *and also pure*. Kant evidently means to distinguish a strict and a loose sense in which an absolutely a priori proposition can be pure. In the *strict* sense, an absolutely a priori proposition is pure if it contains no empirical element at all; and since alteration is a concept drawn from experience, “Every alteration has a cause” is *not* purely a priori in the strict sense. In the *loose* sense, an absolutely a priori proposition is pure if the concept of the predicate is contained in the concept of the subject, even if the concepts themselves are derived from experience; and therefore “Every alteration has a cause” is purely a priori in this loose sense. [D. C. ABEL]

⁷David Hume (1711–1776) was a Scottish philosopher and historian; for a biography, see p. 46. [D. C. ABEL]

that association. Even without requiring such examples for the proof of the reality of pure a priori principles in our cognition, one could establish their indispensability for the possibility of experience itself, thus establish it a priori. For where would experience itself get its certainty if all rules in accordance with which it proceeds were themselves in turn always empirical, thus contingent? Hence one could hardly allow these to count as first principles. Yet here we can content ourselves with having displayed the pure use of our cognitive faculty as a fact together with its indication. Not merely in judgments, however, but even in concepts is an origin of some of them revealed a priori. Gradually remove from your experiential concept of a *body* everything that is empirical in it—the color, the hardness or softness, the weight, even the impenetrability—there still remains the *space* that was occupied by the body (which has now entirely disappeared), and you cannot leave that out. Likewise, if you remove from your empirical concept of every object, whether corporeal or incorporeal, all those properties of which experience teaches you, you could still not take from it that by means of which you think of it as a *substance* or as *dependent* on a substance (even though this concept contains more determination than that of an object in general). Thus, convinced by the necessity with which this concept presses itself on you, you must concede that it has its seat in your faculty of cognition a priori. . . .

IV. On the Difference Between Analytic and Synthetic Judgments

In all judgments in which the relation of a subject to the predicate is thought (if I consider only affirmative judgments, since the application to negative ones is easy), this relation is possible in two different ways. Either the predicate *B* belongs to the subject *A* as something that is (covertly) contained in this concept *A*; or *B* lies entirely outside the concept *A*, though to be sure it stands in connection with it. In the first case I call the judgment *analytic*, in the second *synthetic*. Analytic judgments (affirmative ones) are thus those in which the connection of the predicate is thought through identity, but those in which this connection is thought without identity are to be called synthetic judgments. One could also call the former *judgments of clarification*, and the latter *judgments of amplification*, since through the predicate the former do not add anything to the concept of the subject, but only break it up by means of analysis into its component concepts, which were already thought in it (though confusedly); while the latter, on the contrary, add to the concept of the subject a predicate that was not thought in it at all, and could not have been extracted from it through any analysis. For example, if I say “All bodies are extended,” then this is an analytic judgment. For I do not need to go beyond the concept that I combine with the body in order to find that extension is connected with it, but rather I need only to analyze that concept—that is, become conscious of the manifold that I always think in it—in order to encounter this predicate therein. It is therefore an analytic judgment. On the contrary, if I say “All bodies are heavy,” then the predicate is something entirely different from that which I think in the mere concept of a body in general. The addition of such a predicate thus yields a synthetic judgment.

Judgments of experience, as such, are all synthetic. For it would be absurd to ground an analytic judgment on experience, since I do not need to go beyond my concept at all in order to formulate the judgment, and therefore need no testimony from experience for that. That a body is extended is a proposition that is established a priori, and is not a judgment of experience. For before I go to experience, I already have all the conditions for my judgment in the concept, from which I merely draw out the predicate in accordance with the principle of contradiction, and can thereby at the same time become conscious of the necessity of the judgment, which experience could never teach me. On the contrary, although I do not at all include the predicate of weight in the concept of a body in general, the concept nevertheless designates an object of experience through a part of it, to which I can therefore add still other parts of the same experience as belonging with the former. I can first cognize the concept of body analytically through the marks of extension, of impenetrability, of shape, and so on, which are all thought in this concept. But now I amplify my cognition and, looking back to the experience from which I had extracted this concept of body, I find that weight is also always connected with the previous marks, and I therefore add this synthetically as predicate to that concept. It is thus experience on which the possibility of the synthesis of the predicate of weight with the concept of body is grounded, since both concepts, though the one is not contained in the other, nevertheless belong together, though only contingently, as parts of a whole, namely experience, which is itself a synthetic combination of intuitions.

But in synthetic a priori judgments this means of help is entirely lacking. If I am to go beyond the concept *A* in order to cognize another *B* as combined with it, what is it on which I depend and by means of which the synthesis becomes possible, since I here do not have the advantage of looking around for it in the field of experience? Take the proposition "Everything that happens has its cause." In the concept of something that happens, I think, to be sure, of an existence that was preceded by a time, and so on, and from that analytic judgments can be drawn. But the concept of a cause lies entirely outside that concept, and indicates something different from the concept of what happens in general, and is therefore not contained in the latter representation at all. How then do I come to say something quite different about that which happens in general, and to cognize the concept of cause as belonging to it, indeed necessarily, even though not contained in it? What is the unknown = *X* here on which the understanding depends when it believes itself to discover beyond the concept of *A* a predicate that is foreign to it yet that it nevertheless believes to be connected with it? It cannot be experience, for the principle that has been adduced adds the latter representations to the former not only with greater generality than experience can provide, but also with the expression of necessity, hence entirely a priori and from mere concepts. Now the entire final aim of our speculative a priori cognition rests on such synthetic, that is, ampliative principles; for the analytic ones are, to be sure, most important and necessary, but only for attaining that distinctness of concepts that is requisite for a secure and extended synthesis as a really new acquisition.

V. Synthetic A Priori Judgments Are Contained as Principles in All Theoretical Sciences of Reason

1. *Mathematical judgments are all synthetic.* This proposition seems to have escaped the notice of the analysts of human reason until now, indeed to be diametrically opposed to all of their conjectures, although it is incontrovertibly certain and is very important in the sequel. For since one found that the inferences of the mathematicians all proceed in accordance with the principle of contradiction (which is required by the nature of any apodictic⁸ certainty), one was persuaded that the principles could also be cognized from the principle of contradiction, in which, however, they erred; for a synthetic proposition can of course be comprehended in accordance with the principle of contradiction, but only insofar as another synthetic proposition is presupposed from which it can be deduced, never in itself.

It must first be remarked that properly mathematical propositions are always a priori judgments and are never empirical, because they carry necessity with them, which cannot be derived from experience. But if one does not want to concede this, well then, I will restrict my proposition to *pure mathematics*, the concept of which already implies that it does not contain empirical but merely pure a priori cognition.

To be sure, one might initially think that the proposition " $7 + 5 = 12$ " is a merely analytic proposition that follows from the concept of a sum of 7 and 5 in accordance with the principle of contradiction. Yet if one considers it more closely, one finds that the concept of the sum of 7 and 5 contains nothing more than the unification of both numbers in a single one, through which it is not at all thought what this single number is that comprehends the two of them. The concept of 12 is by no means already thought merely by my thinking of that unification of 7 and 5, and no matter how long I analyze my concept of such a possible sum I will still not find 12 in it. One must go beyond these concepts, seeking assistance in the intuition that corresponds to one of the two—one's 5 fingers, say, or (as in Segner's arithmetic)⁹ 5 points—and one after another add the units of the 5 given in the intuition to the concept of 7. For I take first the number 7, and, as I take the fingers of my hand as an intuition for assistance with the concept of 5, to that image of mine I now add the units that I have previously taken together in order to constitute the number 5 one after another to the number 7, and thus see the number 12 arise. That 7 *should* be added to 5 I have, to be sure, thought in the concept of a sum $= 7 + 5$, but not that this sum is equal to the number 12. The arithmetical proposition is therefore always synthetic; one becomes all the more distinctly aware of that if one takes somewhat larger numbers, for it is then clear that, twist and turn our concepts as we will, without getting help from intuition we could never find the sum by means of the mere analysis of our concepts.

⁸*apodictic*: absolute. [D. C. ABEL]

⁹Johann Andreas von Segner, *Anfangsgründe der Arithmetik, Geometrie and der Geometrischen Berechnungen* ("Elements of Arithmetic, Geometry, and Geometric Calculations"), published in 1756. Segner (1704–1777) was a German mathematician and naturalist. [D. C. ABEL]

Just as little is any principle of pure geometry analytic. That the straight line between two points is the shortest is a synthetic proposition. For my concept of *the straight* contains nothing of quantity, but only a quality. The concept of the shortest is therefore entirely additional to it, and cannot be extracted out of the concept of the straight line by any analysis. Help must here be gotten from intuition, by means of which alone the synthesis is possible. . . .

2. *Natural science (physica)*¹⁰ contains within itself synthetic a priori judgments as principles. I will adduce only a couple of propositions as examples, such as the proposition that in all alterations of the corporeal world the quantity of matter remains unaltered; or that in all communication of motion, effect and counter-effect must always be equal. In both of these not only the necessity, thus their a priori origin, but also that they are synthetic propositions is clear. For in the concept of matter I do not think persistence, but only its presence in space through the filling of space. Thus I actually go beyond the concept of matter in order to add something to it a priori that I did not think *in it*. The proposition is thus not analytic, but synthetic, and nevertheless thought a priori, and likewise with the other propositions of the pure part of natural science.

3. *In metaphysics*, even if one regards it as a science that has thus far merely been sought but is nevertheless indispensable because of the nature of human reason, synthetic a priori cognitions are supposed to be contained, and it is not concerned merely with analyzing concepts that we make of things a priori and thereby clarifying them analytically, but we want to amplify our cognition a priori. To this end we must make use of such principles that add something to the given concepts that was not contained in them, and through synthetic a priori judgments go so far beyond that experience itself cannot follow us that far—for example, in the proposition “The world must have a first beginning” and others besides—and thus metaphysics, at least as far as its end is concerned, consists of purely synthetic a priori propositions.

VI. THE GENERAL PROBLEM OF PURE REASON

One has already gained a great deal if one can bring a multitude of investigations under the formula of a single problem. For one thereby not only lightens one’s own task, by determining it precisely, but also the judgment of anyone else who wants to examine whether we have satisfied our plan or not. The real problem of pure reason is now contained in the question: *How are synthetic judgments a priori possible?*

That metaphysics has until now remained in such a vacillating state of uncertainty and contradictions is to be ascribed solely to the cause that no one has previously thought of this problem and perhaps even of the distinction between analytic and synthetic judgments. On the solution of this problem, or on a satisfactory proof that the possibility that it demands to have explained

¹⁰*physica*: the Greek term for (the study of) “natural things,” rendered in English as “physics.” [D. C. ABEL]

does not in fact exist at all, metaphysics now stands or falls. David Hume, who among all philosophers came closest to this problem, still did not conceive of it anywhere near determinately enough and in its universality, but rather stopped with the synthetic proposition of the connection of the effect with its cause (*principium causalitatis*),¹¹ believing himself to have brought out that such an a priori proposition is entirely impossible. And according to his inferences everything that we call metaphysics would come down to a mere delusion of an alleged insight of reason into that which has in fact merely been borrowed from experience and from habit has taken on the appearance of necessity—an assertion, destructive of all pure philosophy, on which he would never have fallen if he had had our problem in its generality before his eyes, since then he would have comprehended that according to his argument there could also be no pure mathematics, since this certainly contains synthetic a priori propositions, an assertion from which his sound understanding would surely have protected him.

In the solution of the above problem there is at the same time contained the possibility of the pure use of reason in the grounding and execution of all sciences that contain a theoretical a priori cognition of objects—that is, the answer to the questions:

How is pure mathematics possible?

How is pure natural science possible?

About these sciences, since they are actually given, it can appropriately be asked *how* they are possible; for that they must be possible is proved through their actuality. As far as *metaphysics* is concerned, however, its poor progress up to now, and the fact that of no metaphysics thus far expounded can it even be said that, as far as its essential end is concerned, it even really exists, leaves everyone with ground to doubt its possibility.

But now this kind of cognition is in a certain sense also to be regarded as given, and metaphysics is actual, if not as a science yet as a natural predisposition (*metaphysica naturalis*).¹² For human reason, without being moved by the mere vanity of knowing it all, inexorably pushes on, driven by its own need, to such questions that cannot be answered by any experiential use of reason and of principles borrowed from such a use; and thus a certain sort of metaphysics has actually been present in all human beings as soon as reason has extended itself to speculation in them, and it will also always remain there. And now about this too the question is *How is metaphysics as a natural predisposition possible?*—that is, how do the questions that pure reason raises, and which it is driven by its own need to answer as well as it can, arise from the nature of universal human reason?

But since unavoidable contradictions have always been found in all previous attempts to answer these natural questions—for example, whether the world has a beginning or exists from eternity, and so on—one cannot leave it up to the mere natural predisposition to metaphysics, that is, to the pure faculty of

¹¹*principium causalitatis*: (Latin) “the principle of causality.” [D. C. ABEL]

¹²*metaphysica naturalis*: (Latin) “natural metaphysics.” [D. C. ABEL]

reason itself, from which, to be sure, some sort of metaphysics (whatever it might be) always grows, but it must be possible to bring it to certainty regarding either the knowledge or ignorance of objects, that is, to come to a decision either about the objects of its questions or about the capacity and incapacity of reason for judging something about them, thus either reliably to extend our pure reason or else to set determinate and secure limits for it. This last question, which flows from the general problem above, would rightly be this: *How is metaphysics possible as science?*

The critique of reason thus finally leads necessarily to science; the dogmatic use of it without critique, on the contrary, leads to groundless assertions, to which one can oppose equally plausible ones, and thus leads to skepticism.

Further, this science cannot be terribly extensive, for it does not deal with objects of reason, whose multiplicity is infinite, but merely with itself, with problems that spring entirely from its own womb, and that are not set before it by the nature of things that are distinct from it but through its own nature; so that, once it has become completely familiar with its own capacity in regard to the objects that may come before it in experience, then it must become easy to determine, completely and securely, the domain and the bounds of its attempted use beyond all bounds of experience. . . .

THE TRANSCENDENTAL DOCTRINE OF ELEMENTS.¹³

FIRST PART: THE TRANSCENDENTAL AESTHETIC¹⁴

In whatever way and through whatever means a cognition may relate to objects, that through which it relates immediately to them, and at which all thought as a means is directed as an end, is *intuition*. This, however, takes place only insofar as the object is given to us; but this in turn, <at least for us humans,>¹⁵ is possible only if it affects the mind in a certain way. The capacity (receptivity) to acquire representations through the way in which we are affected by objects is called *sensibility*. Objects are therefore *given* to us by means of sensibility, and it alone affords us *intuitions*; but they are *thought* through the understanding, and from it arise *concepts*. But all thought, whether straightaway (*directe*) or through a detour (*indirecte*),¹⁶ must, <by means of certain marks,> ultimately be related to intuitions, thus, in our case, to sensibility, since there is no other way in which objects can be given to us. . . .

I call a science of all principles of a priori sensibility the *transcendental aesthetic*. There must therefore be such a science, which constitutes the first part

¹³*transcendental doctrine of elements*: *Elements* are the forms that our minds impose on objects; the doctrine Kant proposes is *transcendental* because the forms that our minds impose are a priori and thus transcend the objects themselves. [D. C. ABEL]

¹⁴*aesthetic*: something pertaining to sensation (*aisthēsis* in Greek). [D. C. ABEL]

¹⁵Words placed in angle brackets were added by Kant to the second edition of his book. [D. C. ABEL]

¹⁶*Directe* and *indirecte* are Latin terms meaning, respectively, “directly” and “indirectly.” [D. C. ABEL]

of the transcendental doctrine of elements, in opposition to that which contains the principles of pure thinking, and which is named *transcendental logic*.

First Section. On Space

By means of outer sense (a property of our mind) we represent to ourselves objects as outside us, and all as in space. In space their shape, magnitude, and relation to one another is determined, or determinable. Inner sense, by means of which the mind intuits itself, or its inner state, gives, to be sure, no intuition of the soul itself, as an object; yet it is still a determinate form, under which the intuition of its inner state is alone possible, so that everything that belongs to the inner determinations is represented in relations of time. Time can no more be intuited externally than space can be intuited as something in us. Now what are space and time? Are they actual entities? Are they only determinations or relations of things, yet ones that would pertain to them even if they were not intuited, or are they relations that only attach to the form of intuition alone, and thus to the subjective constitution of our mind, without which these predicates could not be ascribed to any thing at all? In order to instruct ourselves about this, we will <expound the concept of space> first. . . .

1. Space is not an empirical concept that has been drawn from outer experiences. For in order for certain sensations to be related to something outside me (that is, to something in another place in space from that in which I find myself), thus in order for me to represent them as outside <and next to> one another, thus not merely as different but as in different places, the representation of space must already be their ground. Thus the representation of space cannot be obtained from the relations of outer appearance through experience, but this outer experience is itself first possible only through this representation.

2. Space is a necessary representation, a priori, that is the ground of all outer intuitions. One can never represent that there is no space, though one can very well think that there are no objects to be encountered in it. It is therefore to be regarded as the condition of the possibility of appearances, not as a determination dependent on them, and is an a priori representation that necessarily grounds outer appearances. . . .

Second Section: On Time

1. Time is not an empirical concept that is somehow drawn from an experience. For simultaneity or succession would not themselves come into perception if the representation of time did not ground them a priori. Only under its presupposition can one represent that several things exist at one and the same time (simultaneously) or in different times (successively).

2. Time is a necessary representation that grounds all intuitions. In regard to appearances in general one cannot remove time, though one can very well take the appearances away from time. Time is therefore given a priori. In it

alone is all actuality of appearances possible. The latter could all disappear, but time itself (as the universal condition of their possibility) cannot be removed. . . .

**THE ANALYTIC OF CONCEPTS.¹⁷ FIRST CHAPTER:
ON THE CLUE TO THE DISCOVERY OF ALL PURE
CONCEPTS OF UNDERSTANDING**

**Second Section. On the Logical Function of Understanding
in Judgments**

If we abstract from all content of a judgment in general, and attend only to the mere form of the understanding in it, we find that the function of thinking in that can be brought under four titles, each of which contains under itself three moments. They can suitably be represented in the following table.

	1. <i>Quantity of Judgments</i> Universal Particular Singular	
2. <i>Quality</i> Affirmative Negative Infinite		3. <i>Relation</i> Categorical Hypothetical Disjunctive
	4. <i>Modality</i> Problematic Assertoric Apodictic . . .	

**Third Section. On the Pure Concepts of the Understanding,
or Categories**

. . . There arise exactly as many pure concepts of the understanding, which apply to objects of intuition in general a priori, as there were logical functions of all possible judgments in the table; for the understanding is completely exhausted and its capacity entirely measured by these functions. Following Aristotle we will call these concepts *categories*,¹⁸ for our aim is basically identical with his although very distant from it in execution.

¹⁷*analytic of concepts*: the study of the a priori forms of understanding (categories of the understanding), which synthesize what we perceive through sensation. The analytic of concepts is a part of *transcendental logic*, the study of the principles of pure thinking. [D. C. ABEL]

¹⁸Aristotle wrote a treatise called *Categories* (*Katēgoriai*, “predicates”), which postulates 10 ways in which we think about things and in which things exist. For a biography of Aristotle, see p. 331. [D. C. ABEL]

TABLE OF CATEGORIES

	1.	
	<i>Of Quantity</i>	
	Unity	
	Plurality	
	Totality	
2.		3.
<i>Of Quality</i>		<i>Of Relation</i>
Reality		Of Inherence and Subsistence (<i>substantia et accidentia</i>) ¹⁹
Negation		Of Causality and Dependence (cause and effect)
Limitation		Of Community (reciprocity between agent and patient) ²⁰
	4.	
	<i>Of Modality</i>	
	Possibility—Impossibility	
	Existence—Nonexistence	
	Necessity—Contingency	

Now this is the listing of all original pure concepts of synthesis that the understanding contains in itself a priori, and on account of which it is only a pure understanding; for by these concepts alone can it understand something in the manifold of intuition—that is, think an object for it. This division is systematically generated from a common principle, namely the faculty for judging (which is the same as the faculty for thinking), and has not arisen rhapsodically from a haphazard search for pure concepts, of the completeness of which one could never be certain, since one would only infer it through induction, without reflecting that in this way one would never see why just these and not other concepts should inhabit the pure understanding.

¹⁹*substantia et accidentia*: (Latin) substance [what subsists in itself] and accident [what inheres in a substance]. [D. C. ABEL]

²⁰*agent and patient*: that which acts and that which is acted upon. [D. C. ABEL]

Love and Knowledge: Emotion in Feminist Epistemology

Alison M. Jaggar

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Jaggar's books include *Feminist Frameworks: Alternative Theoretical Accounts of the Relations Between Women and Men* (coeditor with Paula S. Rothenberg, 1978; 3d ed., 1993), *Feminist Politics and Human Nature* (1983), *Gender/Body/Knowledge: Feminist Reconstructions of Being and Knowing* (coeditor with Susan R. Bordo, 1989), *A Companion to Feminist Philosophy* (coeditor with Iris M. Young, 1998), and *Just Methodologies: An Interdisciplinary Feminist Reader* (editor, 2006).

Our selection is taken from Jaggar's 1989 article "Love and Knowledge: Emotion in Feminist Epistemology." Jaggar rejects the traditional Western philosophical doctrines that reason and emotion are completely separate faculties, that reason is the sole path to knowledge, and that emotion subverts knowledge. She argues that reason and emotion must be seen as interrelated and interdependent and that feelings play an essential role in attaining knowledge. Modern science has created the "myth of dispassionate investigation"—the notion that scientific inquiry is completely severed from values and feelings. Jaggar contends that this notion is false and that it is in fact an ideology that helps preserve the political power of the dominant group in a society. It does this by exalting reason and associating it with the dominant group, while devaluing emotion and associating it with subordinate groups. This ideology gives more credibility to the observations of members of the dominant group (in our society, mainly white males) than to the observations of members of subordinate groups (mainly people of color and women), thereby justifying the dominant group's claim to political authority.

The ideologies of a society greatly influence the emotional responses of all the members of the society; certain kinds of responses to certain kinds of situations become conventional and expected. But significant numbers of people in subordinate groups may not experience these expected emotions. For example, people on welfare may feel resentment rather than gratitude for what they receive. Jaggar calls these unconventional feelings of subordinate groups "outlaw emotions" and contends that by exploring them we

can often come to see things differently and more accurately than we presently do. The reason is that outlaw emotions of people in subordinate groups (especially of women) are usually more appropriate to the situation than conventional emotions. Jaggar concludes that because outlaw emotions are more appropriate responses, they are more reliable guides to the way things are, and therefore important elements in an adequate theory of knowledge.

INTRODUCTION

Within the Western philosophical tradition, emotions have usually been considered potentially or actually subversive of knowledge. From Plato until the present, with a few notable exceptions, reason rather than emotion has been regarded as the indispensable faculty for acquiring knowledge.

Typically, although again not invariably, the rational has been contrasted with the emotional, and this contrasted pair then often linked with other dichotomies. Not only has reason been contrasted with emotion, but it has also been associated with the mental, the cultural, the universal, the public, and the male, whereas emotion has been associated with the irrational, the physical, the natural, the particular, the private, and, of course, the female.

Although Western epistemology¹ has tended to give pride of place to reason rather than emotion, it has not always excluded emotion completely from the realm of reason. In the *Phaedrus*, Plato portrayed emotions, such as anger or curiosity, as irrational urges (horses) that must always be controlled by reason (the charioteer). On this model, the emotions were not seen as needing to be totally suppressed, but rather as needing direction by reason. For example, in a genuinely threatening situation, it was thought not only irrational but foolhardy not to be afraid. The split between reason and emotion was not absolute, therefore, for the Greeks. Instead, the emotions were thought of as providing indispensable motive power that needed to be channeled appropriately. Without horses, after all, the skill of the charioteer would be worthless.

The contrast between reason and emotion was sharpened in the seventeenth century by redefining reason as a purely instrumental faculty. For both the Greeks and the medieval philosophers, reason had been linked with value insofar as reason provided access to the objective structure or order of reality, seen as simultaneously natural and morally justified. With the rise of modern science, however, the realms of nature and value were separated: Nature was stripped of value and reconceptualized as an inanimate mechanism of no intrinsic worth. Values were relocated in human beings, rooted in their preferences and emotional responses. The separation of supposedly natural fact from human value meant that reason, if it were to provide trustworthy insight into reality, had to be uncontaminated by or abstracted from value. Increasingly, therefore, though never universally, reason was reconceptualized as the ability to make valid inferences from premises established elsewhere, the ability to

¹*epistemology*: the study of the nature and grounds of knowledge. [D. C. ABEL]

calculate means but not to determine ends. The validity of logical inferences was thought independent of human attitudes and preferences; this was now the sense in which reason was taken to be objective and universal.

The modern redefinition of rationality required a corresponding reconceptualization of emotion. This was achieved by portraying emotions as nonrational and often irrational urges that regularly swept the body, rather as a storm sweeps over the land. The common way of referring to the emotions as the “passions” emphasized that emotions happened to or were imposed upon an individual, something she suffered rather than something she did.²

The epistemology associated with this new ontology³ rehabilitated sensory perception, which like emotion, typically had been suspected or even discounted by the Western tradition as a reliable source of knowledge. British empiricism,⁴ succeeded in the nineteenth century by positivism,⁵ took its epistemological task to be the formulation of rules of inference that would guarantee the derivation of certain knowledge from the “raw data” supposedly given directly to the senses. Empirical testability became accepted as the hallmark of natural science; this, in turn, was viewed as the paradigm of genuine knowledge. Often epistemology was equated with the philosophy of science, and the dominant methodology of positivism prescribed that truly scientific knowledge must be capable of intersubjective verification. Because values and emotions had been defined as variable and idiosyncratic, positivism stipulated that trustworthy knowledge could be established only by methods that neutralized the values and emotions of individual scientists.

Recent approaches to epistemology have challenged some fundamental assumptions of the positivist epistemological model. . . . However, few challenges have been raised thus far to the purported gap between emotion and knowledge. In this paper, I wish to begin bridging this gap through the suggestion that emotions may be helpful and even necessary rather than inimical to the construction of knowledge. . . .

THE MYTH OF DISPASSIONATE INVESTIGATION

. . . [The] derogatory Western attitude toward emotion, like the earlier Western contempt for sensory observation, fails to recognize that emotion, like sensory perception, is necessary to human survival. Emotions prompt us to act appropriately, to approach some people and situations and to avoid others, to caress or cuddle, fight or flee. Without emotion, human life would be unthinkable. Moreover, emotions have an intrinsic as well as an instrumental value.⁶

²The noun “passion” derives from the Latin verb *pati*, “to undergo, to be acted upon.” The adjective “passive” also derives from *pati*. [D. C. ABEL]

³*ontology*: the study of the nature and kinds of reality. [D. C. ABEL]

⁴*empiricism*: the doctrine that knowledge is attained primarily through sense experience. [D. C. ABEL]

⁵*positivism*: the doctrine that the only source of genuine knowledge is empirical science. [D. C. ABEL]

⁶Something *intrinsically valuable* is valuable for its own sake; something *instrumentally valuable* is valuable as a means (an instrument a tool) to something else. [D. C. ABEL]

Although not all emotions are enjoyable or even justifiable, as we shall see, life without any emotion would be life without any meaning.

Within the context of Western culture, however, people have often been encouraged to control or even suppress their emotions. Consequently, it is not unusual for people to be unaware of their emotional state or to deny it to themselves and others. This lack of awareness, especially combined with a neopositivist⁷ understanding of emotion that construes it as just a feeling of which one is aware, lends plausibility to the myth of dispassionate investigation. But lack of awareness of emotions certainly does not mean that emotions are not present subconsciously or unconsciously, or that subterranean emotions do not exert a continuing influence on people's articulated values and observations, thoughts, and actions.

Within the positivist tradition, the influence of emotion is usually seen only as distorting or impeding observation or knowledge. Certainly it is true that contempt, disgust, shame, revulsion, or fear may inhibit investigation of certain situations or phenomena. Furiously angry or extremely sad people often seem quite unaware of their surroundings or even of their own conditions; they may fail to hear or may systematically misinterpret what other people say. People in love are notoriously oblivious to many aspects of the situation around them.

In spite of these examples, however, positivist epistemology recognizes that the role of emotion in the construction of knowledge is not invariably deleterious and that emotions may make a valuable contribution to knowledge. But the positivist tradition will allow emotion to play only the role of suggesting hypotheses for investigation. Emotions are allowed this because the so-called logic of discovery sets no limits on the idiosyncratic methods that investigators may use for generating hypotheses.

When hypotheses are to be tested, however, positivist epistemology imposes the much stricter logic of justification. The core of this logic is replicability, a criterion believed capable of eliminating or canceling out what are conceptualized as emotional as well as evaluative biases on the part of individual investigators. The conclusions of Western science thus are presumed "objective," precisely in the sense that they are uncontaminated by the supposedly "subjective" values and emotions that might bias individual investigators.

But if . . . the positivist distinction between discovery and justification is not viable, then such a distinction is incapable of filtering out values in science. For example, although such a split, when built into the Western scientific method, is generally successful in neutralizing the idiosyncratic or unconventional values of individual investigators, it has been argued that it does not, indeed, cannot, eliminate generally accepted social values. These values are implicit in the identification of the problems that are considered worthy of investigation, in the selection of the hypotheses that are considered worthy of testing, and in the solutions to the problems that are considered worthy of acceptance. The science of past centuries provides ample evidence of the influence of prevailing social

⁷*neopositivist*: relating to a revised, twentieth-century version of positivism (see footnote 5). [D. C. ABEL]

values, whether seventeenth-century atomistic physics or nineteenth-century competitive interpretations of natural selection. . . .

Positivism views values and emotions as alien invaders that must be repelled by a stricter application of the scientific method. If the foregoing claims are correct, however, the scientific method and even its positivist construals themselves incorporate values and emotions. Moreover, such an incorporation seems a necessary feature of all knowledge and conceptions of knowledge. Therefore, rather than repressing emotion in epistemology it is necessary to rethink the relation between knowledge and emotion and construct conceptual models that demonstrate the mutually constitutive rather than oppositional relation between reason and emotion. Far from precluding the possibility of reliable knowledge, emotion as well as value must be shown as necessary to such knowledge. Despite its classical antecedents and as in the ideal of disinterested inquiry, the ideal of dispassionate inquiry is an impossible dream, but a dream nonetheless or perhaps a myth that has exerted enormous influence on Western epistemology. Like all myths, it is a form of ideology that fulfills certain social and political functions.

THE IDEOLOGICAL FUNCTION OF THE MYTH

So far, I have spoken very generally of people and their emotions, as though everyone experienced similar emotions and dealt with them in similar ways. It is an axiom of feminist theory, however, that all generalizations about "people" are suspect. The divisions in our society are so deep, particularly the divisions of race, class, and gender, that many feminist theorists would claim that talk about people in general is ideologically dangerous because such talk obscures the fact that no one is simply a person but instead is constituted fundamentally by race, class, and gender. Race, class, and gender shape every aspect of our lives, and our emotional constitution is not excluded. Recognizing this helps us to see more clearly the political functions of the myth of the dispassionate investigator.

Feminist theorists have pointed out that the Western tradition has not seen everyone as equally emotional. Instead, reason has been associated with members of dominant political, social, and cultural groups and emotion with members of subordinate groups. Prominent among those subordinate groups in our society are people of color, except for supposedly "inscrutable Orientals," and women.

Although the emotionality of women is a familiar cultural stereotype, its grounding is quite shaky. Women appear to be more emotional than men because they, along with some groups of people of color, are permitted and even required to express emotion more openly. In contemporary Western culture, emotionally inexpressive women are suspect as not being real women, whereas men who express their emotions freely are suspected of being homosexual or in some other way deviant from the masculine ideal. Modern Western men, in contrast with Shakespeare's heroes, for instance, are required to present a facade of coolness, lack of excitement, even boredom, to express emotion only rarely and then for relatively trivial events, such as sporting occasions, where the emotions expressed are acknowledged to be dramatized and so are not taken entirely

seriously. Thus, women in our society form the main group allowed or even expected to express emotion. A woman may cry in the face of disaster, and a man of color may gesticulate, but a white man merely sets his jaw.

White men's control of their emotional expression may go to the extremes of repressing their emotions, failing to develop emotionally, or even losing the capacity to experience many emotions. Not uncommonly, these men are unable to identify what they are feeling, and even they may be surprised, on occasion, by their own apparent lack of emotional response to a situation, such as a death, where emotional reaction is perceived to be appropriate. . . . Paradoxically, men's lacking awareness of their own emotional responses frequently results in their being more influenced by emotion rather than less.

Although there is no reason to suppose that the thoughts and actions of women are any more influenced by emotion than the thoughts and actions of men, the stereotypes of cool men and emotional women continue to flourish because they are confirmed by an uncritical daily experience. In these circumstances, where there is a differential assignment of reason and emotion, it is easy to see the ideological function of the myth of the dispassionate investigator. It functions, obviously, to bolster the epistemic⁸ authority of the currently dominant groups, composed largely of white men, and to discredit the observations and claims of the currently subordinate groups including, of course, the observations and claims of many people of color and women. The more forcefully and vehemently the latter groups express their observations and claims, the more emotional they appear and so the more easily they are discredited. The alleged epistemic authority of the dominant groups then justifies their political authority.

The previous section of this paper argued that dispassionate inquiry was a myth. This section has shown that the myth promotes a conception of epistemological justification vindicating the silencing of those, especially women, who are defined culturally as the bearers of emotion and so are perceived as more "subjective," biased, and irrational. In our present social context, therefore, the ideal of the dispassionate investigator is a classist, racist, and especially masculinist myth.

EMOTIONAL HEGEMONY AND EMOTIONAL SUBVERSION

. . . Within a hierarchical society, the norms and values that predominate tend to serve the interests of the dominant groups. Within a capitalist, white supremacist, and male-dominant society, the predominant values will tend to be those that serve the interests of rich white men. Consequently, we are all likely to develop an emotional constitution that is quite inappropriate for feminism. Whatever our color, we are likely to feel what Irving Thalberg⁹ has called "visceral racism"; whatever our sexual orientation, we are likely to be homophobic; whatever our class, we are likely to be at least somewhat ambitious and competitive; whatever our sex, we are likely to feel contempt for women. Such emotional responses may be rooted in us so deeply that they are relatively

⁸*epistemic*: relating to knowledge. [D. C. ABEL]

⁹Irving Thalberg, Jr. (1930–1987), was an American philosopher. [D. C. ABEL]

impervious to intellectual argument and may recur even when we pay lip service to changed intellectual convictions.

By forming our emotional constitution in particular ways, our society helps to ensure its own perpetuation. The dominant values are implicit in responses taken to be precultural or acultural, our so-called gut responses. Not only do these conservative responses hamper and disrupt our attempts to live in or prefigure alternative social forms but also, and insofar as we take them to be natural responses, they blinker us theoretically. For instance, they limit our capacity for outrage; they either prevent us from despising or encourage us to despise; they lend plausibility to the belief that greed and domination are inevitable human motivations; in sum, they blind us to the possibility of alternative ways of living.

This picture may seem at first to support the positivist claim that the intrusion of emotion only disrupts the process of seeking knowledge and distorts the results of that process. The picture, however, is not complete; it ignores the fact that people do not always experience the conventionally acceptable emotions. They may feel satisfaction rather than embarrassment when their leaders make fools of themselves. They may feel resentment rather than gratitude for welfare payments and hand-me-downs. They may be attracted to forbidden modes of sexual expression. They may feel revulsion for socially sanctioned ways of treating children or animals. In other words, the hegemony that our society exercises over people's emotional constitution is not total.

People who experience conventionally unacceptable, or what I call "outlaw" emotions often are subordinated individuals who pay a disproportionately high price for maintaining the status quo. The social situation of such people makes them unable to experience the conventionally prescribed emotions. For instance, people of color are more likely to experience anger than amusement when a racist joke is recounted, and women subjected to male sexual banter are less likely to be flattered than uncomfortable or even afraid.

When unconventional emotional responses are experienced by isolated individuals, those concerned may be confused, unable to name their experience; they may even doubt their own sanity. Women may come to believe that they are "emotionally disturbed" and that the embarrassment or fear aroused in them by male sexual innuendo is prudery or paranoia. When certain emotions are shared or validated by others, however, the basis exists for forming a subculture defined by perceptions, norms, and values that systematically oppose the prevailing perceptions, norms, and values. By constituting the basis for such a subculture, outlaw emotions may be politically (because epistemologically) subversive.

Outlaw emotions are distinguished by their incompatibility with the dominant perceptions and values; and some, though certainly not all, of these outlaw emotions are potentially or actually feminist emotions. Emotions become feminist when they incorporate feminist perceptions and values, just as emotions are sexist or racist when they incorporate sexist or racist perceptions and values. For example, anger becomes feminist anger when it involves the perception that the persistent importuning endured by one woman is a single instance of a widespread pattern of sexual harassment, and pride becomes feminist pride when it is evoked by realizing that a certain person's achievement was possible only because that individual overcame specifically gendered obstacles to success. . . .

OUTLAW EMOTIONS AND FEMINIST THEORY

. . . Outlaw emotions may . . . enable us to perceive the world differently from its portrayal in conventional descriptions. They may provide the first indications that something is wrong with the way alleged facts have been constructed, with accepted understandings of how things are. Conventionally unexpected or inappropriate emotions may precede our conscious recognition that accepted descriptions and justifications often conceal as much as reveal the prevailing state of affairs. Only when we reflect on our initially puzzling irritability, revulsion, anger, or fear may we bring to consciousness our “gut-level” awareness that we are in a situation of coercion, cruelty, injustice, or danger. Thus, conventionally inexplicable emotions, particularly though not exclusively those experienced by women, may lead us to make subversive observations that challenge dominant conceptions of the status quo. They may help us to realize that what are taken generally to be facts have been constructed in a way that obscures the reality of subordinated people, especially women’s reality.

But why should we trust the emotional responses of women and other subordinated groups? How can we determine which outlaw emotions are to be endorsed or encouraged and which rejected? In what sense can we say that some emotional responses are more appropriate than others? What reason is there for supposing that certain alternative perceptions of the world, perceptions informed by outlaw emotions, are to be preferred to perceptions informed by conventional emotions? Here I can indicate only the general direction of an answer, whose full elaboration must await another occasion.

I suggest that emotions are appropriate if they are characteristic of a society in which all humans (and perhaps some nonhuman life too) thrive, or if they are conducive to establishing such a society. For instance, it is appropriate to feel joy when we are developing or exercising our creative powers, and it is appropriate to feel anger and perhaps disgust in those situations where humans are denied their full creativity or freedom. Similarly, it is appropriate to feel fear if those capacities are threatened in us.

This suggestion, obviously, is extremely vague and may even verge on the tautologous. How can we apply it in situations where there is disagreement over what is or is not disgusting or exhilarating or unjust? Here I appeal to a claim for which I have argued elsewhere: The perspective on reality that is available from the standpoint of the subordinated, which in part at least is the standpoint of women, is a perspective that offers a less partial and distorted and therefore more reliable view.¹⁰ Subordinated people have a kind of epistemological privilege insofar as they have easier access to this standpoint and therefore a better chance of ascertaining the possible beginnings of a society in which all could thrive. For this reason, I would claim that the emotional responses of subordinated people in general, and often of women in particular, are more likely to be appropriate than the emotional responses of the dominant class. That is, they are more likely to incorporate reliable appraisals of situations.

¹⁰Alison M. Jaggar, *Feminist Politics and Human Nature* (Totowa, NJ: Rowman & Allanheld, 1983), Chapter 11. [A. M. JAGGAR]

Even in contemporary science, where the ideology of dispassionate inquiry is almost overwhelming, it is possible to discover a few examples that seem to support the claim that certain emotions are more appropriate than others in both a moral and epistemological sense. For instance, Hilary Rose claims that women's practice of caring, even though warped by its containment in the alienated context of a coercive sexual division of labor, has nevertheless generated more accurate and less oppressive understandings of women's bodily functions, such as menstruation.¹¹ Certain emotions may be both morally appropriate and epistemologically advantageous in approaching the nonhuman and even the inanimate world. Jane Goodall's scientific contribution to our understanding of chimpanzee behavior seems to have been made possible only by her amazing empathy with or even love for these animals.¹² In her study of Barbara McClintock, Evelyn Fox Keller describes McClintock's relation to the objects of her research—grains of maize and their genetic properties—as a relation of affection, empathy, and “the highest form of love: love that allows for intimacy without the annihilation of difference.” She notes that McClintock's “vocabulary is consistently a vocabulary of affection, of kinship, of empathy.”¹³ Examples like these prompt Hilary Rose to assert that a feminist science of nature needs to draw on heart as well as hand and brain.

SOME IMPLICATIONS OF RECOGNIZING THE EPISTEMIC POTENTIAL OF EMOTION

Accepting that appropriate emotions are indispensable to reliable knowledge does not mean, of course, that uncritical feeling may be substituted for supposedly dispassionate investigation. Nor does it mean that the emotional responses of women and other members of the underclass are to be trusted without question. Although our emotions are epistemologically indispensable, they are not epistemologically indisputable. Like all our faculties, they may be misleading, and their data, like all data, are always subject to reinterpretation and revision. Because emotions are not presocial, physiological responses to unequivocal situations, they are open to challenge on various grounds. They may be dishonest or self-deceptive, they may incorporate inaccurate or partial perceptions, or they may be constituted by oppressive values. Accepting the indispensability of appropriate emotions to knowledge means no more (and no less) than that discordant emotions should be attended to seriously and respectfully rather than condemned, ignored, discounted, or suppressed.

Just as appropriate emotions may contribute to the development of knowledge, so the growth of knowledge may contribute to the development of appropriate emotions. For instance, the powerful insights of feminist theory often

¹¹Hilary Rose, “Hand, Brain, and Heart: A Feminist Epistemology for the Natural Sciences,” *Signs: Journal of Women in Culture and Society* 9 (Autumn 1983): 73–90. [A. M. JAGGAR]

¹²Jane Goodall, *The Chimpanzees of Gombe: Patterns of Behavior* (Cambridge, MA: Harvard University Press, 1986). [A. M. JAGGAR]

¹³Evelyn Fox Keller, *Gender and Science* (New Haven, CT: Yale University Press, 1984), p. 184. [A. M. JAGGAR]

stimulate new emotional responses to past and present situations. Inevitably, our emotions are affected by the knowledge that the women on our faculty are paid systematically less than the men, that one girl in four is subjected to sexual abuse from heterosexual men in her own family, and that few women reach orgasm in heterosexual intercourse. We are likely to feel different emotions toward older women or people of color as we reevaluate our standards of sexual attractiveness or acknowledge that black is beautiful. The new emotions evoked by feminist insights are likely in turn to stimulate further feminist observations and insights, and these may generate new directions in both theory and political practice. There is a continuous feedback loop between our emotional constitution and our theorizing such that each continually modifies the other and is in principle inseparable from it.

The ease and speed with which we can reeducate our emotions is unfortunately not great. Emotions are only partially within our control as individuals. Although affected by new information, they are habitual responses not quickly unlearned. Even when we come to believe consciously that our fear or shame or revulsion is unwarranted, we may still continue to experience emotions inconsistent with our conscious politics. We may still continue to be anxious for male approval, competitive with our comrades and sisters, and possessive with our lovers. These unwelcome, because apparently inappropriate emotions, should not be suppressed or denied; instead, they should be acknowledged and subjected to critical scrutiny. The persistence of such recalcitrant emotions probably demonstrates how fundamentally we have been constituted by the dominant worldview, but it may also indicate superficiality or other inadequacy in our emerging theory and politics. We can only start from where we are—beings who have been created in a cruelly racist, capitalist, and male-dominated society that has shaped our bodies and our minds, our perceptions, our values and our emotions, our language, and our systems of knowledge.

The alternative epistemological models that I suggest would display the continuous interaction between how we understand the world and who we are as people. They would show how our emotional responses to the world change as we conceptualize it differently and how our changing emotional responses then stimulate us to new insights. They would demonstrate the need for theory to be self-reflexive, to focus not only on the outer world but also on ourselves and our relation to that world, to examine critically our social location, our actions, our values, our perceptions, and our emotions. The models would also show how feminist and other critical social theories are indispensable psychotherapeutic tools because they provide some insights necessary to a full understanding of our emotional constitution. Thus, the models would explain how the reconstruction of knowledge is inseparable from the reconstruction of ourselves. . . .

We can now see that women's subversive insights owe much to women's outlaw emotions, themselves appropriate responses to the situations of women's subordination. In addition to their propensity to experience outlaw emotions, at least on some level, women are relatively adept at identifying such emotions, in themselves and others, in part because of their social responsibility for caretaking, including emotional nurturance. It is true that women, like all subordinated peoples, especially those who must live in close proximity with their masters, often

engage in emotional deception and even self-deception as the price of their survival. Even so, women may be less likely than other subordinated groups to engage in denial or suppression of outlaw emotions. Women's work of emotional nurturance has required them to develop a special acuity in recognizing hidden emotions and in understanding the genesis of those emotions. This emotional acumen can now be recognized as a skill in political analysis and validated as giving women a special advantage both in understanding the mechanisms of domination and in envisioning freer ways to live.

CONCLUSION

The claim that emotion is vital to systematic knowledge is only the most obvious contrast between the conception of theoretical investigation that I have sketched here and the conception provided by positivism. For instance, the alternative approach emphasizes that what we identify as emotion is a conceptual abstraction from a complex process of human activity that also involves acting, sensing, and evaluating. This proposed account of theoretical construction demonstrates the simultaneous necessity for and interdependence of faculties that our culture has abstracted and separated from each other: emotion and reason, evaluation and perception, observation and action. The model of knowing suggested here is nonhierarchical and antifoundationalist;¹⁴ instead, it is appropriately symbolized by the radical feminist metaphor of the upward spiral.¹⁵ Emotions are neither more basic than observation, reason, or action in building theory, nor secondary to them. Each of these human faculties reflects an aspect of human knowing inseparable from the other aspects. Thus, to borrow a famous phrase from a Marxian context,¹⁶ the development of each of these faculties is a necessary condition for the development of all.

In conclusion, it is interesting to note that acknowledging the importance of emotion for knowledge is not an entirely novel suggestion within the Western epistemological tradition. That archrationalist, Plato himself, came to accept in the end that knowledge required a (very purified form of) love. It may be no accident that in the *Symposium* Socrates learns this lesson from Diotima, the wise woman!

¹⁴*antifoundationalist*: opposed to "foundationalist" theories of knowledge, which claim that all knowledge is founded ultimately on one basic class of things known. [D. C. ABEL]

¹⁵The metaphor of knowledge as an upward spiral emphasizes the interaction among the various human faculties involved in the knowing process; it is intended as an alternative to the linear conception of knowledge implied by foundationalism. [D. C. ABEL]

¹⁶The reference is to the statement by Karl Marx and Friedrich Engels that, in a communist society, "the free development of each is the condition for the free development of all" (*Manifesto of the Communist Party*, end of Section II). The passage appears on p. 475 of this book; biographies of Marx and Engels are on p. 466. [D. C. ABEL]