

Rationalism on the Continent

Although philosophy rarely alters its direction with radical suddenness, there are times when its new concerns and emphases clearly separate it from its immediate past. Such was the case with seventeenth-century Continental rationalism, whose founder was René Descartes and which initiated what is called *modern philosophy*. In a sense, much of what the Continental rationalists set out to do had already been attempted by the medieval philosophers and by Bacon and Hobbes. But Descartes, Baruch Spinoza, and Gottfried Leibniz fashioned a new vision for philosophy. Influenced by the progress of science, they attempted to provide philosophy with the exactness of mathematics. They set out to formulate clear, rational principles that could be organized into a system of truths from which accurate information about the world could be deduced. They emphasized the rational capacity of the human mind, which they now considered the source of truth about both human nature and the world. Although they did not reject the claims of religion, they did consider philosophical reasoning something independent of supernatural revelation. They saw little value in subjective feeling and enthusiasm as means for discovering truth. Instead, they believed that, by following the appropriate method, they could discover the nature of the universe. This was an optimistic view of human reason, one that ran counter to the recent attempts at reviving ancient Skepticism, particularly those by Montaigne. The rationalists assumed that what they could think clearly with their minds did in fact exist in the world outside their minds. Descartes and Leibniz even argued that certain ideas are innate in the human mind, and, given the proper occasion, experience would cause these innate truths to become self-evident. The highly optimistic plan of rationalism was not altogether successful, as shown by the differences in the views of the leading proponents. To be sure, the rationalists ascribed determinism to all physical events, interpreting the natural world according to the mechanical model of physics. But Descartes described reality as a dualism consisting of two basic substances, namely, thought and things extended into three dimensions. Spinoza proposed a monism, saying that there is only a single substance, namely,

Nature. Leibniz was a pluralist, saying that there are different kinds of elemental substances which make up the world.

DESCARTES

Descartes's Life

René Descartes was born in Touraine in 1596. His father, Joachim Descartes, was a councillor of the Parliament of Brittany. From 1604 to 1612 young Descartes studied in the Jesuit college of La Flèche, where his curriculum included mathematics, logic, and philosophy. He was most impressed during these years with the certainty and precision of mathematics, as compared with traditional philosophy, which invariably produced doubts and disputes. For a time he was a soldier in the army of Maximilian of Bavaria. After traveling widely throughout Europe, he decided, in 1628, to settle in Holland, and it was here that Descartes wrote his principal philosophical works, including his *Discourse on Method* (1637), *Meditations on First Philosophy* (1641), *Principles of Philosophy* (1644), and *The Passions of the Soul* (1649). He went to Sweden in 1649 at the invitation of Queen Christina, who wanted Descartes to instruct her in his philosophy. As the queen could see him only at five o'clock in the morning, this unaccustomed encounter with the bitter cold at that hour made him easy prey to illness. Within a few months he suffered an attack of fever, and in February 1650, at the age of 54, he died.

The Quest for Certainty

Descartes was chiefly concerned with the problem of intellectual certainty. He had been educated, as he says, "at one of the most celebrated schools in Europe," and yet he found himself embarrassed with "many doubts and errors." Looking back on his studies, he saw that ancient literature provided him with charming fables that stimulated his mind. However, these could not guide his behavior since these fables portrayed types of human conduct that were simply beyond the power of human beings to perform. He spoke kindly of poetry, saying that the poet gives us knowledge with "imaginative force," even making truth "shine forth the more brightly" than could the philosophers. Still, poetry is a gift of the mind and not the fruit of study; therefore, it gives us no method for consciously discovering truth. Though he honored theology, he concluded that its "revealed truths" were quite above human intelligence, that to think successfully about them "it was necessary to have some extraordinary assistance from above, and to be more than a mere man." He did not want to deny these truths, for he apparently remained a pious Catholic to the end. Nevertheless, he did not find in theology a method by which these truths could be arrived at solely through the capacities of human reason. Nor was the philosophy he learned at college any more helpful in this regard, for "no single thing is to be found in it which is not subject of dispute, and in consequence which is not dubious."

His quest for certainty led Descartes to turn from his books to that "great book of the world" where through travel he met "men of diverse temperaments and conditions" and collected "varied experiences." He thought that by exposing himself to people of the world he would discover more exacting reasoning, since in practical life, as compared with scholarly activity, a mistake in reasoning has harmful consequences. But, he says, he found as much difference of opinion among practical people as among philosophers. From this experience with the book of the world, Descartes decided "to believe nothing too certainly of which I had only been convinced by example and custom." He resolved to continue his search for certainty, and on a memorable night, November 10, 1619, he had three dreams that convinced him to construct the system of true knowledge upon the capacities of human reason alone.

Descartes broke with the past and gave philosophy a fresh start. In particular, since his system of truth would have to be derived from his own rational capacities, he would no longer rely on previous philosophers for his ideas, nor would he accept any idea as true simply because it was expressed by someone with authority. Neither the authority of Aristotle's great reputation nor the authority of the church could suffice to produce the kind of certainty he sought. Descartes was determined to discover the basis of intellectual certainty in his own reason. He therefore gave philosophy a fresh start by using only those truths he could know through his own powers as the foundation for all other knowledge. He was well aware of his unique place in the history of philosophy; he writes, "Although all the truths which I class among my principles have been known from all time and by all men, there has been no one up to the present, who, so far as I know, has adopted them as the principles of philosophy . . . as the sources from which may be derived a knowledge of all things else which are in the world. This is why it here remains to me to prove that they are such."

His goal was to arrive at a system of thought whose various principles were not only true but connected in such a clear way that we could move easily from one true principle to another. But in order to achieve such an organically connected set of truths, Descartes felt that he must make these truths "conform to a rational scheme." With such a scheme he could not only organize present knowledge but "direct our reason in order to discover those truths of which we are ignorant." His first task, therefore, was to work out his "rational scheme"—that is, his *method*.

Descartes's Method

Descartes's method consists of harnessing the abilities of the mind with a special set of rules. He insisted on the *necessity* of method and on systematic and orderly thinking. He was appalled at scholars who sought aimlessly for truth, comparing them to people who, "burning with an unintelligent desire to find treasure, continuously roam the streets, seeking to find something that a passerby might have chanced to drop." He continues, "It is very certain that unregulated inquiries and confused reflections of this kind only confound the natural light and blind our mental powers." But by themselves our mental

capacities can lead us astray unless they are carefully regulated. Method consists, therefore, in those rules by which our capacities of intuition and deduction are guided in an orderly way.

The Example of Mathematics Descartes looked to mathematics for the best example of clear and precise thinking. “My method,” he writes, “contains everything which gives certainty to the rule of arithmetic.” Indeed, he wanted to make all knowledge a sort of “universal mathematics.” He was convinced that mathematical certainty is the result of a special way of thinking. If he could discover this way, he would have a method for discovering true knowledge “of whatever lay within the compass of my powers.” Mathematics is not itself the method, but merely exhibits the method Descartes was searching for. Geometry and arithmetic, he says, are only “examples” or “the outer covering” and not “the constituents” of his new method. What, then, is there about mathematics that led Descartes to find in it the basis of his own method?

In mathematics Descartes discovered something fundamental about mental operations. Specifically, he fastened on the mind’s ability to apprehend directly and clearly certain basic truths. He was not so much concerned with explaining the mechanics of how we form ideas from experience. Instead, he wanted to affirm the fact that our minds are capable of knowing some ideas with absolute clarity and distinctness. Moreover, mathematical reasoning showed how we progress in an orderly way from what we do know to what we don’t know. For example, in geometry we begin with concepts of lines and angles and discover from these more complex concepts, such as the degrees of an angle. Why can we not use this same method of reasoning in other fields as well? Descartes was convinced that we could, and he claimed that his method contained “the primary rudiments of human reason” and that with it he could elicit the “truths in every field whatsoever.” From his perspective all the various sciences are merely different ways in which the same abilities of reasoning and the same method are used. In each case it is the orderly use of intuition and deduction.

Intuition and Deduction Descartes placed the whole edifice of knowledge on the foundation of intuition and deduction, saying that “these two methods are the most certain routes to knowledge,” adding that any other approach should be “rejected as suspect of error and dangerous.” In a nutshell, intuition gives us foundational concepts, and deduction draws more information from our intuitions. Descartes describes intuition as an intellectual activity or vision of such clarity that it leaves no doubt in the mind. The fluctuating testimony of our senses and the imperfect creations of our imaginations leave us confused. Intuition, though, provides “the conception which an unclouded and attentive mind gives us so readily and distinctly that we are wholly freed from doubt about that which we understand.” Intuition gives us clear notions but also some truths about reality, as, for example, that *I think*, that *I exist*, and that *a sphere has a single surface*—truths that are basic, simple, and irreducible. Moreover, it is by intuition that we grasp the connection between one truth and another—such as the formula “if $A = B$ and $C = B$, then $A = C$.”

Descartes describes deduction as “all necessary inference from facts that are known with certainty.” What makes intuition and deduction similar is that both involve truth. By intuition we grasp a simple truth completely and immediately, whereas by deduction we arrive at a truth by a process, a “continuous and uninterrupted action of the mind.” By linking deduction so closely with intuition, Descartes gave a new interpretation of deduction, which up to his time had been identified with a type of reasoning called the *syllogism*. Deduction, as he described it, is different from a syllogism. Whereas a syllogism involves the relationship of *concepts* to each other, deduction for Descartes involves the relation of *truths* to each other. It is one thing to go from a premise to a conclusion as one does in a syllogism. But it is another thing to move from an indubitable fact to a conclusion about that fact, as he says we must do by deduction. Descartes emphasized this difference between reasoning from a *fact* and from a *premise*, for the central point of his method was at stake here. His quarrel with earlier philosophy and theology was that conclusions were drawn syllogistically from premises that were either untrue or based only on authority. If we start with facts, though, we are guaranteed the truth of our conclusion through proper deduction. He wanted to rest knowledge on a starting point that had absolute certainty in the individual’s own mind. Knowledge requires the use, therefore, of intuition and deduction, where “first principles are given by intuition alone while the remote conclusions . . . are furnished only by deduction.” This, then, is, key component of Descartes’s method. Another component of his method consists of rules to guide intuition and deduction.

Rules of Method The chief point of Descartes’s rules is to provide a clear and orderly procedure for the operation of the mind. It was his conviction that “method consists entirely in the order and disposition of the objects toward which our mental vision must be directed if we would find out any truth.” We must begin with a simple and absolutely clear truth and must move step by step without losing clarity and certainty along the way. Descartes spent many years at the task of formulating concrete rules. Of the twenty-one rules found in his *Rules for the Direction of the Mind*, the following are among the most important:

Rule III: When we propose to investigate a subject, “our inquiries should be directed, not to what others have thought, nor to what we ourselves conjecture, but to what we can clearly and perspicuously behold and with certainty deduce.”

Rule IV: This is a rule requiring that other rules be adhered to strictly, for “if a person observes them accurately, he shall never assume what is false as true, and will never spend his mental efforts to no purpose.”

Rule V: We shall comply with the method exactly if we “reduce involved and obscure propositions step by step to those that are simpler, and then starting with the intuitive apprehension of all those that are absolutely simple, attempt to ascend to the knowledge of all others by precisely similar steps.”

Rule VIII: "If in the matters to be examined we come to a step in the series of which our understanding is not sufficiently well able to have an intuitive cognition, we must stop short there."

In a similar way Descartes formulated four precepts in his *Discourse on Method*, which he believed were perfectly sufficient, "provided I took the firm and unwavering resolution never in a single instance to fail in observing them." His own words, these are the rules:

The *first* was never to accept anything for true which I did not clearly know to be such; . . . to comprise nothing more in my judgment than what was presented to my mind so clearly and distinctly as to exclude all ground of doubt. The *second*, to divide each of the difficulties under examination into as many parts as possible, and as might be necessary for its adequate solution. The *third*, to conduct my thoughts in such order that by commencing with objects the simplest and easiest to know, I might ascend by little and little, and, as it were, step by step, to the knowledge of the more complex. . . . And the *last*, in every case to make enumerations so complete, and reviews so general, that I might be assured that nothing was omitted.

Compared with Bacon and Hobbes, Descartes's method puts very little emphasis on sense experience and experiment in achieving knowledge. How is it that we know the essential qualities, for example, of a piece of wax, Descartes asks? At one time a piece of wax is hard and has a certain shape, color, size, and fragrance. But when we bring it close to the fire, its hardness melts, its fragrance vanishes, its shape and color are lost, and its size increases. What remains in the wax that permits us still to know it is wax? "It cannot," he says, "be anything that I observed by means of the senses, since everything in the field of taste, smell, sight, touch, and hearing is changed, and still the same wax nevertheless remains." It is "nothing but my understanding alone which does conceive it . . . solely an inspection by the mind," which enables me to know the true qualities of the wax. And, he says, "what I have said here about the wax can be applied to all other things external to me." He relies for the most part on the truths contained in the mind, "deriving them from [no] other source than certain germs of truth which exist naturally in our souls." Descartes assumed that we possess certain innate ideas, in the sense that we are "born with a certain disposition or propensity for contracting them." Because we can know these truths, we can be assured of a reliable foundation for our deductions. He was confident that he could start from the beginning and rethink and rebuild all of philosophy by having recourse solely to his own rational abilities and by directing them in accordance with his rules. He therefore set out to show that we can have certainty of knowledge not only about mathematical concepts but also about the nature of reality.

Methodic Doubt

Descartes used the method of doubt in order to find an absolutely certain starting point for building up our knowledge. Having set out in his *Rules* that we

should never accept anything about which we can entertain any doubt, he now tries to doubt everything. He says, "Because I wished to give myself entirely to the search after truth, I thought it was necessary for me . . . to reject as absolutely false everything concerning which I could imagine the least ground of doubt." His intention is clear, for he wants to sweep away all his former opinions, "so that they might later on be replaced, either by others which were better, or by the same, when I had made them conform to the uniformity of a rational scheme."

By this method of doubt, Descartes shows how uncertain our knowledge is, even of what seems most obvious to us. What can be clearer than "that I am here, seated by the fire . . . holding this paper in my hands"? But when I am asleep, I dream that I am sitting by the fire, and this makes me realize that "there are no conclusive indications by which waking life can be distinguished from sleep." Nor can I be sure that *things* exist, for I cannot tell when I am imagining or really knowing: "I have learned that [my] senses sometimes mislead me." But surely arithmetic, geometry, or sciences that deal with things must contain some certainty, for "whether I am awake or asleep, two and three together will always make the number five." Here Descartes refers to his long-held belief that there is a God who can do anything. But, he asks, how can he be sure that God "has brought it about that there is no earth, no sky, no extended bodies"? In spite of how evident his impressions are of the world around him, there is a possibility—remote as it may be—that it is all a divinely implanted hallucination. Perhaps God is deceiving him with *everything* he is experiencing!

At this point Descartes says that "if I am fortunate enough to find a single truth which is certain and indubitable," that will suffice to reverse doubt and establish a philosophy. Like Archimedes, who demanded only an immovable fulcrum to move the earth from its orbit, Descartes searched for his one truth and found it in the very act of doubting. I may doubt that my body exists, or that I am awake, or, in short, that all is illusion or false. Nevertheless, one thing remains about which I can have no doubt at all, that *I am*. Descartes makes his point here, in one of the most famous passages in the history of philosophy:

But I was persuaded that there was nothing in all the world, that there was no heaven, no earth, that there were no minds, nor any bodies: was I not then likewise persuaded that I did not exist? Not at all; of a surety I myself did exist since I persuaded myself of something. But there is some deceiver or other, very powerful and very cunning, who ever employs his ingenuity in deceiving me. Then without doubt I exist also if he deceives me, and let him deceive me as much as he will, he can never cause me to be nothing so long as I think that I am something.

According to Descartes, even if God is deceiving me in every possible way, I know that I exist since; in the very mental act of doubting, I am affirming my own existence. Descartes expresses this in the phrase "I think, therefore I am" (*cogito ergo sum*, in Latin).

At first, nothing more is proved by this truth—"I think, therefore I am"—than the existence of my thinking self. My doubts still remain about the existence of my own body and about anything else that is other than my thinking.

To say "I think, therefore I am" is to affirm *my* existence: "But what then am I? A thing which thinks. What is a thing which thinks? It is a thing which doubts, understands, affirms, denies, wills, refuses and which also imagines and feels." Throughout, Descartes assumes that because thinking is a fact there must also be a thinker, "a thing which thinks." This "thing" is not the body, for "I knew that I was a substance the whole nature of which is to think, and that for its existence there is no need of any place, nor does it depend on any material thing." This much, then, seems absolutely certain, namely, that I, an ego, exist, "for it is certain that no thought can exist apart from a thing which thinks." But so far, the thinker is alone, a Robinson Crusoe, enclosed in his ideas.

The Existence of God and External Things

To go beyond the certainty of his own existence as a thinking being, Descartes asks again how we know something to be true. "What," he asks, "is required in a proposition for it to be true and certain?" What is there about the proposition "I think, therefore I am" that makes it certain? "I came to the conclusion that I might assume as a general rule that the things which we conceive very *clearly* and *distinctly* are all true." In this context *clear* means "that which is present and apparent to an attentive mind," in the same way that objects are clear to our eyes. *Distinctness* refers to "that which is so precise and different from all other objects that it contains within itself nothing but what is clear." The reason, then, that the proposition "I think, therefore I am" is true is simply that it is clear and distinct to my mind. This is the reason, too, that mathematical propositions are true, for they are so clear and distinct that we cannot help accepting them. But to guarantee the truth of our clear and distinct ideas, Descartes had to prove that God exists and that he is not a deceiver who makes us think that false things are true.

Descartes cannot use Aquinas's proofs for the existence of God because those proofs are based on the very facts that are still subject to Descartes's doubt, namely, facts about the external world such as *motion* and *cause* among physical things. Instead, Descartes must prove God's existence solely in terms of his rational awareness of his own existence and internal thoughts. He therefore begins his proof by examining the various ideas that pass through his mind.

Two things strike him about these ideas: (1) that they are caused and (2) that according to their content they differ markedly from each other. Ideas are effects, and their causes must be discovered. Some of our ideas seem to be "born with me," some "invented" by me, whereas others "come from without." Our reason tells us that "something cannot be derived from nothing" and also that "the more perfect . . . cannot be a consequence of . . . the less perfect." Our ideas possess different degrees of reality, but "it is manifest by natural light that there must be at least as much reality in the efficient and total cause as in the effect." Some of our ideas, judging by the degree of their reality, could have their origin in ourselves. But the idea of God contains so much "objective reality" that I wonder whether I could have produced that idea by myself. For "by the name God I understand a substance which is infinite, independent, all-knowing, all-powerful