

Descartes

René Descartes (31 March 1596 – 11 February 1650) was a French philosopher and writer who spent most of his adult life in the Dutch Republic. He has been dubbed the 'Father of Modern Philosophy', and much subsequent Western philosophy is a response to his writings, which are studied closely to this day. In particular, his *Meditations on First Philosophy* continues to be a standard text at most university philosophy departments. Descartes' influence in mathematics is equally apparent; the Cartesian coordinate system—allowing algebraic equations to be expressed as geometric shapes (2D coordinate system)—was named after him. He is credited as the father of analytical geometry. Descartes was also one of the key figures in the Scientific Revolution.

Descartes frequently sets his views apart from those of his predecessors. In the opening section of the *Passions of the Soul*, a treatise on the Early Modern version of what are now commonly called emotions, Descartes goes so far as to assert that he will write on this topic "as if no one had written on these matters before". Many elements of his philosophy have precedents in late Aristotelianism, the revived Stoicism of the 16th century, or in earlier philosophers like St. Augustine. In his natural philosophy, he differs from the schools on two major points: First, he rejects the analysis of corporeal substance into matter and form; second, he rejects any appeal to ends—divine or natural—in explaining natural phenomena. In his theology, he insists on the absolute freedom of God's act of creation.

Descartes was a major figure in 17th-century continental rationalism, later advocated by Baruch Spinoza and Gottfried Leibniz, and opposed by the empiricist school of thought consisting of Hobbes, Locke, Berkeley, Jean-Jacques Rousseau, and Hume.

Leibniz, Spinoza and Descartes were all well versed in mathematics as well as philosophy, and Descartes and Leibniz contributed greatly to science as well. As the inventor of the Cartesian coordinate system, Descartes founded analytic geometry, the bridge between algebra and geometry, crucial to the discovery of infinitesimal calculus and analysis.

He is perhaps best known for the philosophical statement "*Cogito ergo sum*" (French: *Je pense, donc je suis*; English: *I think, therefore I am*; or *I am thinking, therefore I exist* or *I do think, therefore I do exist*), found in part IV of *Discourse on the Method* (1637 – written in French but with inclusion of "*Cogito ergo sum*") and §7 of part I of *Principles of Philosophy* (1644 – written in Latin).

Descartes is often regarded as the first thinker to provide a philosophical framework for the natural sciences as these began to develop.

In his *Discourse on the Method*, he attempts to arrive at a fundamental set of principles that one can know as true without any doubt. To achieve this, he employs a method called hyperbolic/metaphysical doubt, also sometimes referred to as methodological skepticism: he rejects any ideas that can be doubted, and then reestablishes them in order to acquire a firm foundation for genuine knowledge.

Initially, Descartes arrives at only a single principle: thought exists. Thought cannot be separated from me, therefore, I exist (*Discourse on the Method* and *Principles of*

Philosophy). Most famously, this is known as *cogito ergo sum* (English: "I think, therefore I am"). Therefore, Descartes concluded, if he doubted, then something or someone must be doing the doubting, therefore the very fact that he doubted proved his existence. "The simple meaning of the phrase is that if one is skeptical of existence, that is in and of itself proof that he does exist."

Descartes concludes that he can be certain that he exists because he thinks. But in what form? He perceives his body through the use of the senses; however, these have previously been unreliable. So Descartes determines that the only indubitable knowledge is that he is a *thinking thing*. Thinking is what he does, and his power must come from his essence. Descartes defines "thought" (*cogitatio*) as "what happens in me such that I am immediately conscious of it, insofar as I am conscious of it". Thinking is thus every activity of a person of which he is immediately conscious.

To further demonstrate the limitations of the senses, Descartes proceeds with what is known as the *Wax Argument*. He considers a piece of wax; his senses inform him that it has certain characteristics, such as shape, texture, size, colour, smell, and so forth. When he brings the wax towards a flame, these characteristics change completely. However, it seems that it is still the same thing: it is still the same piece of wax, even though the data of the senses inform him that all of its characteristics are different. Therefore, in order to properly grasp the nature of the wax, he should put aside the senses. He must use his mind. Descartes concludes:

And so something which I thought I was seeing with my eyes is in fact grasped solely by the faculty of judgment which is in my mind.

In this manner, Descartes proceeds to construct a system of knowledge, discarding perception as unreliable and instead admitting only deduction as a method. In the third and fifth *Meditation*, he offers an ontological proof of a benevolent God (through both the ontological argument and trademark argument). Because God is benevolent, he can have some faith in the account of reality his senses provide him, for God has provided him with a working mind and sensory system and does not desire to deceive him. From this supposition, however, he finally establishes the possibility of acquiring knowledge about the world based on deduction *and* perception. In terms of epistemology therefore, he can be said to have contributed such ideas as a rigorous conception of foundationalism and the possibility that reason is the only reliable method of attaining knowledge.

In Descartes's system, knowledge takes the form of ideas, and philosophical investigation is the contemplation of these ideas. This concept would influence subsequent internalist movements as Descartes's epistemology requires that a connection made by conscious awareness will distinguish knowledge from falsity. As a result of his Cartesian doubt, he viewed rational knowledge as being "incapable of being destroyed" and sought to construct an unshakable ground upon which all other knowledge can be based. The first item of unshakable knowledge that Descartes argues for is the aforementioned *cogito*, or thinking thing.

Descartes also wrote a response to skepticism about the existence of the external world. He argues that sensory perceptions come to him involuntarily, and are not willed by him. They are external to his senses, and according to Descartes, this is evidence of the

existence of something outside of his mind, and thus, an external world. Descartes goes on to show that the things in the external world are material by arguing that God would not deceive him as to the ideas that are being transmitted, and that God has given him the "propensity" to believe that such ideas are caused by material things.

Descartes was also known for his work in producing the Cartesian Theory of Fallacies. This can be most easily explored using the statement: "This statement is a lie." While it is most commonly referred to as a paradox, the Cartesian Theory of Fallacies states that at any given time a statement can be both true and false simultaneously because of its contradictory nature. The statement is true in its fallacy. Thus, Descartes developed the Cartesian Theory of Fallacies, which greatly influenced the thinking of the time. Many would-be philosophers were trying to develop inexplicable statements of seeming fact, however, this laid rumours of such a proposition impossible. Many philosophers believe that when Descartes formulated his Theory of Fallacies, he intended to be lying, which in and of itself embodies the theory.

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