

Philosophy 168
Lectures on *Discourse on the Method*
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The *Discourse on the Method of rightly conducting one's reason and seeking truth in the sciences* accompanies the *Optics, Meteorology, and Geometry*. It is a rambling document whose content can be broken down into three categories: autobiography, methodology, and substantive philosophical claims.

Autobiography

The essay begins with an account of what Descartes found to be good and bad about his education. Descartes catalogues all the things he had learned in his “literary studies,” i.e., in his reading of books while in school. While there are some advantages to the studies, they are “full of superstition and falsehood,” and their greatest value is to allow Descartes to avoid being deceived by them.

Several fields of study are worthy of comment. In mathematics, much is secure, but it is of little value. Theology is based on divine guidance, and it is unaffected by the “weak reasonings” of the human mind. This is an odd position for Descartes to take, since he will be claiming to have achieved absolute certainty in various matters. Apparently the human mind is only relatively weak, as is the finite in the face of infinity.

Philosophy is the scene of endless dispute and disagreement. Descartes seems to have genuinely believed that he could bring an end to them.

After abandoning literary studies, Descartes began his travels, reading “the book of the world.” One result of this was his appreciation of the variation in opinion that is based on “example and custom.” Avoiding relativity induced him to seek a method for discovering truth that is secure in a way that opinion is not.

In a period of solitude, apparently at Ulm, in the service of Prince Maximilian of Bavaria, Descartes came to a realization of what he had to do, which was to purge his mind of all opinion and replace it with truth. But before he could do this, he would have to do two things: to accumulate more experience, and to practice carrying out his new method. He had a lot of time, as he was only twenty-three years old. After nine years, people thought he had completed his project (i.e., his treatise containing *The World* and other works). Not wanting to be taken to boast of his accomplishment, he moved to Amsterdam, where he lived anonymously.

Descartes takes some pains to explain why he did not publish his treatise. His basic reason is that he did not want his discoveries to be the object of disputation, and he wanted to be free to

say what he wanted, without having to take a position relative to the current controversies. Regarding the Galileo situation, Descartes said that he had seen nothing wrong with his position (that the earth moves), but its condemnation led him to fear error in what he has written.

While professing great confidence about his discoveries, Descartes recognizes that their confirmation will require a great many observations. He asks people to send him their own observations. He also requests that readers of the works he is publishing send him their criticisms. (In the “Preface to the Reader” in the *Meditations* he describes two of them, but in fact there were many.) Generally, Descartes describes his efforts as being of great potential use to society, especially to future generations.

Methodology

One unifying theme of the *Discourse* is the insistence on certainty in mathematical, scientific, and philosophical investigations. Descartes held that most of what was available at the time was the product of merely probable reasoning, based on opinions formed in childhood. The only way to free himself of this influence is to clear away all his previous opinions and start from scratch. To this end, he develops what we now call the “method of doubt.” We will return to this later. Descartes notes that the best design of a city is by a single architect, but cities are not leveled in order to improve them. So he will not seek to reform society. But he can resolve to reform himself from within and build a structure of knowledge according to a single plan.

Descartes lays down several sets of rules to help accomplish this plan. One set is to govern his behavior while he engages in his project of tearing down and rebuilding. These rules are to some extent modeled on those of the ancient skeptics and Stoics. A skeptical prescription is to follow the laws and customs in the place you find yourself. But Descartes made a major exception for religion: the teachings of one’s youth should be retained. A Stoic maxim is to be the master of one’s self.

Aside from these practical rules, Descartes presents two sets of rules that are to govern his theoretical work. The first set is given in Part Two, and it looks a lot like those in the *Rules for the Direction of the Native Intelligence*. The first rule is to accept only what is presented to the mind with such clarity and distinctness that he could have no occasion to doubt it. This is a central rule for all his philosophizing. When he did have doubt, he resorted to “suppositions.” The next two rules call for the division of every difficulty to the greatest possible extent, and then movement from what is simplest in thought (the result of the division) to what is more complex in thought. One should not try to follow the order of complexity in nature. The final rule enjoins him to be complete. These rules are quite generic, giving no specific guidance.

The final set of rules is laid out in Part Six. This set is closer to a “scientific method” of discovery. It is in the “rationalist” style, which Descartes himself pioneered. The first step is to begin with “seeds of truth which are naturally in our soul” and discover general principles which

govern everything that exists or can exist (AT VI 64). These are to be found from an examination of God alone, since God is the creator of all actual and possible existing things. The principles of his physics are “so evident that they need only to be understood to be believed” (AT VI 68). We have seen how in *The World* Descartes tried to base his laws of motion and direction of motion on the immutability of God. The second step is to deduce effects from the general principles. This was the main task of *The World*, which attempted to move from the chaotic condition of an imaginary world to an order which is just like that which we find in the actual world. The first task is to prove the existence of the earth and celestial bodies, and then the components of the earth (water, etc.) which are “the most common of all and the simplest,” and which “are consequently the easiest to know” (AT VI 64). We should not look first to the phenomena of the actual world and try to discover principles governing them, as Aristotle had done. This would be to begin with the senses, which provide data which are uncertain and subject to dispute.

Descartes appeals to the public for help in his investigation. He asks for results of experiments to be sent to him, but he discounts the value of objections, saying that that he generally has already taken them into account already, unless it “was quite wide of the mark. Thus I have almost never encountered a critic of my views who did not seem to be either less rigorous or less impartial than myself” (AT VI 69). Disputes tend to produce plausibility arguments and not the discovery of truth.

The third of these rules finally brings in observation, which is central to “empiricist” scientific method. The general principles allow the derivation of phenomena in different ways. “My greatest difficulty is usually to discover in which of these ways it depends on them.” Observation can sort this out, but the kinds of observations that would be needed are numerous, time-consuming, and expensive.

Finally, Descartes toward the end of Part Six of the essay discusses the use of “suppositions,” whose truth he does not care to prove, in his investigations. He acknowledges that his use of suppositions might shock his readers.

The discussion is uncharacteristically confusing, so what follows is a reconstruction. Suppositions lie between the “primary truths” based on the seeds planted in the mind by God and the observed phenomena. The primary truths hold for all bodies. The suppositions say something about the characteristics of the bodies themselves. In *The World*, we saw that Descartes makes suppositions about the original composition of his fable-world: that there are diverse extended bodies moving in diverse ways.

Here are two examples of suppositions from the essays accompanying the *Discourse*. In the *Optics*, Descartes supposes that light is “a certain movement, or very rapid and lively action, which passes to our eyes through the medium of the air and other transparent bodies, just as the movement or resistance of the bodies of a blind man passes to his hands by means of a stick”

(First Discourse). In the *Meteorology*, the supposition is that there are three kinds of very small particles which make up all material things and the fill the spaces between them. For example, “I assume that the small particles of which water is composed are long, smooth, and slippery, like little eels, which are such that however they join and interlace, they are never thereby so knotted or hooked together that they cannot easily be separated” (First Discourse).

The issue Descartes is trying to address in the *Discourse* is why he does not see a need to prove that the suppositions hold. Strictly speaking, he would have to derive what he supposes from the primary truths themselves. Descartes rather coyly tells us that although he can do this, he will withhold the demonstration because of others might put it to bad use. But he has already noted an obstacle to this: that there are many ways of deriving phenomena from primary truths. Based on what was said in the third rule of Part Six (concerning the need for observations), it is not clear that any of his suppositions could actually be derived as the exclusive consequences of the primary truths.

So why should any one supposition be held to be superior to any other? The answer is that it is “proved” through the consequences of its being true. Experience can confirm or “prove” the truth of the supposition. If, for example, Descartes could show that his supposed world ends up being just like “our” world, the suppositions he makes about that world are “proved.” Or if the observed behavior of light agrees with the supposition that it is some kind of motion or action, the supposition is vindicated.

So when Descartes, in an apparently casual way, invokes suppositions without proofs from primary truths (proofs “from above,” so to speak), he is still entitled to use them because of their agreement with experience. The relation of the suppositions to the effects that follow from them is not proof, but “explanation.” The ultimate idea here is that we can explain actually observed phenomena by making suppositions from which they follow.

Descartes protests that he is not engaged in fallacious circular reasoning when he holds that the cause proves the effect and that the effect proves the cause. Circularity can be avoided by taking “cause” and “effect” to be ambiguous. The cause “proves” the effect only when the cause is a first truth from which the effect (a supposition) follows. As has been noted, Descartes never gives proofs of this kind, though he claims to be in possession of them.

The effect “proves” the cause only when the cause is a supposition and the effect is an experienced phenomenon. Descartes tries to provide proofs of this kind, which, he contends, is enough to justify his use of suppositions. We shall shortly examine what such a “proof” might look like.

Here is a representative passages from the *Meteorology* which gives another reason for accepting the suppositions.

It is true that since the knowledge of these matters depends on general principles of nature which have not yet, to my knowledge, been accurately explained, I shall have to use certain hypotheses [suppositions] at the outset, as I did in the *Optics*. But I shall try to render them so simple and easy that perhaps you will have no difficulty in accepting them, even though I have not yet demonstrated them. (First Discourse)

What makes the suppositions “so simple and easy” is that they are analogies to what we observe in experience. Just as we would expect slippery eels not to get tied up in knots like string would be, we would expect small particles shaped like them to flow smoothly. Just as we would expect contact with a body to be transmitted (nearly) instantaneously by a stick to our hands, so we can expect light to be transmitted (nearly) instantaneously.

An example of the use of suppositions in Descartes’s actual scientific practice is found in the *Optics*, which will be discussed in a later class.

Philosophical Claims

In the *Discourse*, Descartes makes a number of substantive philosophical claims, both at the level of metaphysics and at the level of natural philosophy.

Metaphysics

In Part Four, Descartes describes what he (as the author of the *Discourse*) will discuss: “The arguments by which he proves the existence of God and the human soul, which are the foundations of metaphysics.” This is a new turn in Cartesian philosophy. It may have been motivated by a desire to place science (at least officially) on a theological basis, in which case its results could not be challenged. At any rate, what we get is a broad outline of the project that was to be completed in detail in the *Meditations*. One key point to note is the claim that knowledge of God is a requirement for knowledge of the standard of truth. This invites the charge of circularity, which is raised by Mersenne and Arnauld in their objections to the *Meditations*.

Natural Philosophy

We have already discussed most of what Descartes revealed about his unpublished work. One new topic in the *Discourse* is quite famous, or infamous. For Aristotle, there is a progression of souls, from lesser to greater function. The vegetative soul of plants allows them to live and grow, but not much else. The sentient soul of animals allows them to move around on their own as well as to facilitate that motion by perceiving the environment around them. The rational soul of humans adds the power of abstract thought.

Descartes rejected the doctrine of vegetative and animal souls, contending that only the only soul is the rational soul, and that the vegetative and sentient functions that Aristotle had attributed to

the human soul are seated in the body and are purely mechanical. But how could he determine whether an animal has a soul? He devises a test, similar to what we now call a "[Turing test](#)," which the computer scientist Alan Turing proposed to determine whether a computer is thinking. Animals fail the test. One problem is that they do not have articulate language. The other is that they lack general problem-solving skills, which is characteristic of machines, which are devised for special purposes.