*René Descartes, the celebrated mathematician and physicist, is also often considered a founder of modern philosophy, as he sought new ways to move beyond Medieval Aristoteleanism and justify the science of his day. In his* Discourse on Method *he expresses his disappointment with traditional philosophy and with the limitations of theology; only logic, geometry and algebra hold his respect, because of the utter certainty which they can offer us. Unfortunately, because they depend on hypotheses, they cannot tell us what is real (i.e., what the world is really like). Therefore Descartes proposes a method of thought incorporating the rigor of mathematics but based on intuitive truths about what is real, basic knowledge which could not be wrong (like the axioms of geometry). He calls into question everything that he thinks he has learned through his senses but rests his whole system on the one truth that he cannot doubt, namely, the reality of his own mind and the radical difference between the mental and the physical aspects of the world.*

**Part 1:**

Good sense is the most evenly distributed thing in the world, for all people suppose themselves so well provided with it that even those who are the most difficult to satisfy in every other respect never seem to desire more than they have. It is not likely that everyone is mistaken; rather this attitude reveals that the ability to judge and distinguish the true from the false, which is properly what one calls good sense or reason, is in fact naturally equally distributed among all people. Thus the diversity of our opinions does not result from some of us being more reasonable than others, but solely from the fact that we conduct our thoughts along different paths, and consider different things. . . .

As far as reason--or good sense--is concerned, since it is the only thing that makes us human and differentiates us from the animals, I should like to believe that it is entirely present in each of us. . . .

I was nourished by study from my earliest childhood; and since I was convinced that this was the means to acquire a clear and certain knowledge of all that is useful in life, I had an extreme desire to learn. But as soon as I had finished a course of studies which usually culminates in one being accepted as one of the learned, I changed my opinion completely; for I found myself troubled by so many doubts and errors that the only profit I had gained in seeking to educate myself was to discover more and more clearly the extent of my ignorance. Nevertheless I had been at one of the most famous schools in Europe, where I thought there must be wise men if such existed anywhere on earth. There I had learned all that the others learned; and besides, not satisfied with the knowledge that we were taught, I had pored over all the unusual and strange books that I could lay my hands on. In addition, I knew how others evaluated me; and I did not want to be considered inferior to my fellow-students, even though some among them were already destined to take the places of my teachers. Finally, our century seemed to me to abound in as many wise spirits as any preceding one, which led me to suppose that I could judge the experience of others by my own, and to think that there was no such knowledge in the world such as I had been led to hope for. . . .

I was especially pleased with mathematics because of the certainty and clarity of its proofs; but I did not as yet realize its true usefulness; and, thinking that it was only useful in the mechanical arts, I was astonished that, since its foundations were so firm and solid, no one had built something higher upon it. To the contrary, I felt that the writings of the ancient pagans (1) who had discussed morality were like superb, magnificent palaces which were built on mere sand and mud: they greatly praised the virtues and made them appear more exalted than anything else in the world; but they did they did not sufficiently teach how to know them. Often that which they called by the fine name of "virtue" was nothing but apathy, or pride, or despair, or parricide.

I revered our theology, and hoped as much as anyone else to get to heaven; but having learned, as if it were certain, that the road to heaven is as open to the most ignorant as to the most learned, and that the revealed truths which lead one there are beyond our comprehension, I did not dare to submit them to my feeble reasonings, and I thought that to undertake successfully to examine them one would need some extraordinary heavenly aid and beyond human ability.

Of philosophy I will say nothing except that, seeing that it had been developed by the finest minds that had lived over many centuries and that nevertheless there was no point in it which was not still under dispute, and consequently doubtful, I lacked the presumption to hope that I would succeed any better than the others. When I considered how many different opinions there had been about the same subject put forward by learned men, whereas only one of them could have been correct, I considered that anything which was only probable was as good as false. . . .

It is true that while I considered only the customs of other ordinary men, I found nothing in them to reassure me, and I noticed as much diversity among them as I had earlier done among the opinions of philosophers. The greatest benefit I received from this study was that, having observed many things which, while they seemed quite extravagant and ridiculous, were nevertheless commonly accepted as true and approved by great peoples, I learned not to believe too firmly in anything of which I had been persuaded only by example and custom. Thus I freed myself little by little from many errors which can dim our natural light and even make us less able to listen to reason. But after I had spent several years thus studying the book of the world and trying to get some experience, I one day resolved to study my own self, and to use all the powers of my mind to choose the path I should follow, which was much more successful, it seems to me, than if I had never left my country or my books.

**Part 2:**

When I was younger I had studied a little among other branches of philosophy, logic, and among types of mathematics, geometrical analysis and algebra: three arts or sciences which seemed as if they ought to contribute something to my goal. But when I examined them, I realized that as far as logic was concerned, its syllogisms and most of its other methods serve only to explain to someone else that which one already knows, or even, like Lully's art, to speak foolishly of things one does not know, rather than to actually learn anything. Even though logic contains, in fact, many very true and good precepts, they are nevertheless mingled with so many others which are harmful or superfluous that it is almost as hard to separate them out as to carve a Diana or a Minerva from an as yet untouched block of marble. Besides, as far as the analysis of the ancients or modern algebra is concerned, and besides the fact that they can deal only with very abstract matters which seem utterly useless, the former is always so restricted to the study of geometrical figures that it cannot exercise the understanding without greatly tiring the imagination; and the latter is so restricted to certain rules and figures that it has become a confused, obscure art which perplexes the mind instead of being a science which cultivates it. So I thought that I had to look for some other method which, having the advantages of these three, would be free of their defects. Just as a multitude of laws often creates excuses for vices, so that the best regulated state is that which, having very few laws, makes those few strictly observed, instead of the great number or precepts which make up logic, I thought that the four following precepts would suffice, provided that I could make a firm, steadfast resolution not to violate them even once.

The first was to never accept anything as true which I could not accept as obviously true; that is to say, to carefully avoid impulsiveness and prejudice, and to include nothing in my conclusions but whatever was so clearly presented to my mind that I could have no reason to doubt it.

The second was to divide each of the problems I was examining in as many parts as I could, as many as should be necessary to solve them.

The third, to develop my thoughts in order, beginning with the simplest and easiest to understand matters, in order to reach by degrees, little by little, to the most complex knowledge, assuming an orderliness among them which did not at all naturally seem to follow one from the other.

And the last resolution was to make my enumerations so complete and my reviews so general that I could be assured that I had not omitted anything.

These long chains of reasoning, so simple and easy, which geometers customarily use to make their most difficult demonstrations, caused me to imagine that everything which could be known by human beings could be deduced one from the other in the same way, and that, provided only that one refrained from accepting anything as true which was not, and always preserving the order by which one deduced one from another, there could not be any truth so abstruse that one could not finally attain it, nor so hidden that it could not be discovered. And I had little trouble finding which propositions I needed to begin with, for I already knew that they would be the simplest and the easiest to know. . . .

I took the best features of geometrical analysis and of algebra, and corrected all the defects of one by the other. (2)

**Part 4:**

I had noticed for a long time that it was necessary sometimes to agree with opinions about ethics which I knew to be quite uncertain, even though they were indubitable, as I said earlier; but since I wanted to devote myself solely to the search for truth, I thought that I should act in the opposite manner, and reject as absolutely false anything about which I could imagine the slightest doubt, so that I could see if there would not remain after all that something in my belief which could be called absolutely certain. So, because our senses sometimes trick us, I tried to imagine that there was nothing which is the way that we imagine it; and since there are people who are mistaken about the simplest matters of geometry, making mistakes in logic, and supposing that I was as likely to make mistakes as anyone else, I rejected as false all the reasonings that I had considered as valid demonstrations. Finally, considering that all our thoughts which we have when we are awake can also come to us when we are sleeping without a single one of them being true, I resolved to pretend that everything I had ever thought was no more true that the illusions in my dreams. But I immediately realized that, though I wanted to think that everything was false, it was necessary that the "me" who was doing the thinking was something; and noticing that this truth--I think, therefore I am--was so certain and sure that all the wildest suppositions of skeptics could not shake it, I judged that I could unhesitatingly accept it as the first principle of the philosophy for which I was seeking.

Then, examining closely what I was, and seeing that I could imagine that I had no body and that there was no world or place where I was, I could not imagine that I did not exist at all. On the contrary, precisely because I doubted the existence of other things it followed quite obviously and certainly that I did exist. If, on the other hand, I had only ceased to think while everything else that I had imagined remained true, I would have had no reason to believe that I existed; therefore I realized that I was a substance whose essence, or nature, is nothing but thought, and which, in order to exist, needs no place to exist nor any other material thing. So this self, that is to say the soul, through which I am what I am, is entirely separate from the body, and is even more easily known than the latter, so that even if I did not have a body, my soul would continue to be all that it is.

*Translated by Paul Brians*

(1) Descartes means to include here the Greek philosophers; "pagan" covers anyone who was not a part of Christendom.

(2) It was Descartes who figured out how to combine algebra and geometry such that, on a pair of intersecting axes, we can geometrically map any algebraic function. Those axes are still called "Cartesian co-ordinates."