Chapter 1

Background

Life of Descartes[1]

René Descartes was born on 31 March 1596 in the small town of La Haye in the Touraine region of France (which, for this reason, was renamed *La*

René Descartes (1596-1650)

E2

Haye-Descartes in 1802, and subsequently, in 1967, simply *Descartes*). His mother having died when he was only one year old, he lived from that time on with his elder brother and sister in the house of his maternal grandmother. Between the ages of ten and eighteen he attended the Jesuit College of La Flèche at Anjou (he remained a devout Catholic throughout his life), and around 1614–15 he moved to a house just outside Paris, where he chose to live alone. It is while living here that he seems to have suffered a nervous breakdown. The next year he attended the University of Poitiers, where he studied not philosophy, but civil and canon law, and also possibly a little medicine.

At the age of twenty-two, keen to get some experience of the world, he began to travel. In 1618 he enlisted in the Dutch army as a gentleman soldier, where he first met Isaac Beeckman, a Dutch philosopher and scientist, who rekindled Descartes's interest in such matters.

On his return to France in 1619, Descartes seems to have undergone some sort of mystical experience which was to change his life. The revelation took the form of three consecutive dreams, and is understood to have left Descartes with the conviction that the universe was divinely designed and ordered on rational principles. This revelation, combining as it does aspects of both science and religion, is perhaps central to understanding Descartes and his outlook on life – and especially his purpose in writing the *Meditations*.

Over the next ten years, Descartes travelled to various parts of Europe, ranging between the Netherlands, Italy and France, but never settling in one place for too long. During this time, he had contact with various scholars, scientists and philosophers, and through conversation, debate, and correspondence, began to formalize his own views more clearly. In 1628, however, he moved to the Netherlands, where he lived – albeit in different places – for the next twenty years.

In 1635, a daughter, Francine, was born to Hélène, a serving maid at the house where he had been staying in Amsterdam. However, while Descartes seems to have taken a growing interest in the child, and to have contributed financially to the welfare of both mother and daughter, the relationship with Hélène seems to have been a short-lived thing. Tragically, however, his relationship with his daughter was not destined to last very long, and she died of a fever at the age of five.

During this time, Descartes's reputation had been steadily growing. His *Rules for the Direction of the Mind* had been completed in 1628, but was not to be published until after his death. Another work, his projected revision of current scientific knowledge, *De Mundo*, was almost ready for publication when, in 1633, Descartes heard of the fate of Galileo (with whom his work shared a Copernican – therefore heretical – view of the solar system), so he withheld publication. Slowly, however, over the next few years, he tentatively released those parts of this material which he considered would not offend the Church, until in 1637 he released *A Discourse on Method*, which collected much of the already published material in one volume, and contained his theories on light, meteors, and some discoveries in analytic geometry. The volume also contained the first account of his scientific and philosophical method, and it is this introductory part which is now most famous. In 1641, he reworked these philosophical ideas into the first text of the *Meditations on the First Philosophy*, which was originally published in Latin. It was this text which was to generate the most controversy amongst philosophers, theologians, and scholars (both for and against), and during most of the 1640s Descartes's time was taken up with defending and expanding upon the philosophical ideas presented there. The *Principles of Philosophy* followed in 1644, and restated the main ideas of the *Meditations*, together with certain of Descartes's theories concerning the structure of the universe and the nature of the soul. The final work to be published during his lifetime, *The Passions of the Soul*, was Descartes's attempt to put ethics on a scientific footing, and it appeared in 1649.

In the last year of his life he moved to Stockholm to tutor Queen Christina of Sweden. Apparently, the Queen – a habitual early riser – would arrange meetings with Descartes at 5 a.m. in a large, poorly heated, and draughty room. Little wonder, then, that he duly caught the cold which eventually led to his death, from pneumonia, on 11 February 1650, shortly before his fifty-fourth birthday.

The Cultural Context

No ideas exist in isolation from their historical context, and the further away the ideas are from the present day, the more need there is to understand the times which gave birth to them. In Descartes's case, the time is the seventeenth century, and the place is western Europe. However, while it is true that Descartes was a French philosopher, many philosophers and scholars of the time chose to write in Latin, thus providing a common academic language for thinkers from most European countries.[2]

As I have already mentioned in the Introduction, this period marked a turning point in the history of ideas. It was a time when the power of the Catholic Church was still great, but when old ideas were being challenged through the growth of scientific inquiry. When Galileo pledged his support for the Polish astronomer Copernicus's idea that the Sun was the centre of the universe in a work published in 1632,[3] he was soon after imprisoned by the

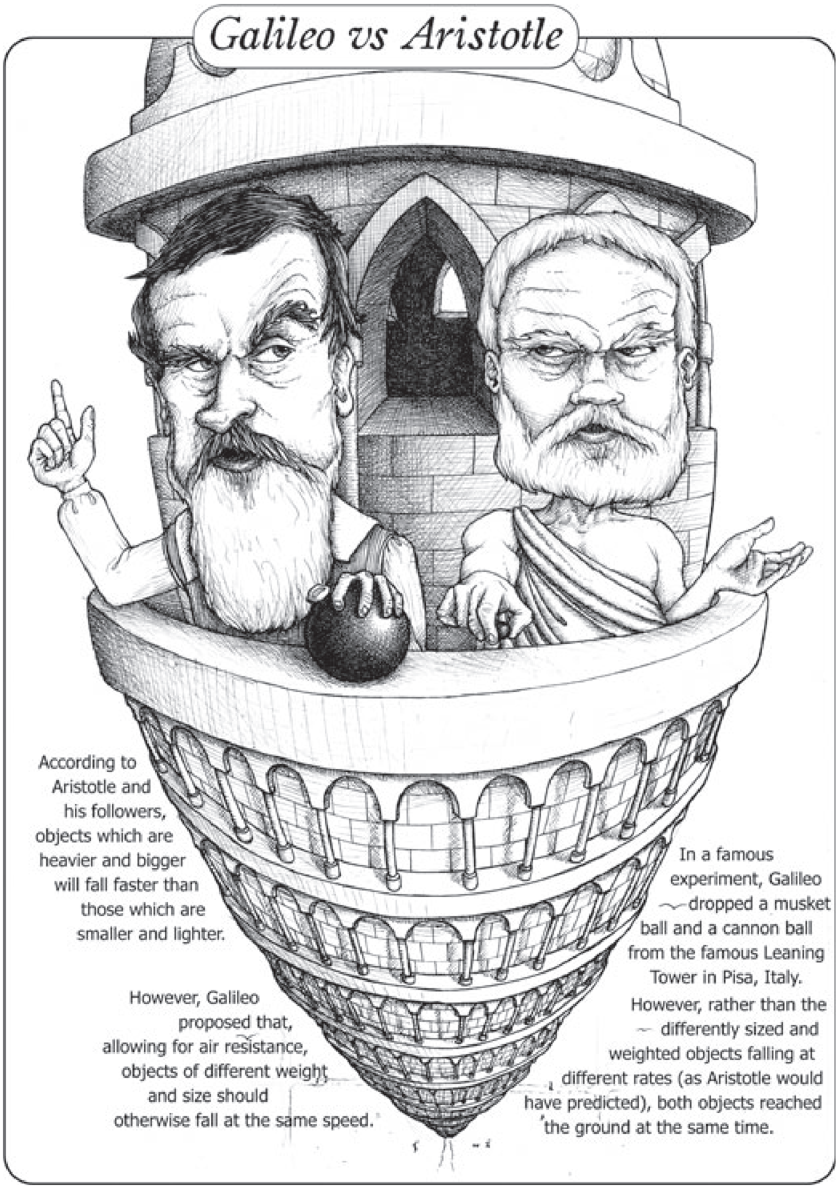
E2

Inquisition.[4] This event had a great effect on Descartes, and (as noted above) he put off publishing his philosophical work while he thought out the best way to introduce his ideas without incurring the wrath of the Church (when he finally did publish his *Discourse and Essays* some years later, it was anonymously).[5]

Philosophically, Descartes's approach can be contrasted with the traditional approach of the time, which we now refer to as Scholasticism. Descartes sometimes refers in his writing to the 'philosophy of the schools' or 'schoolmen'. By this, he means the philosophical tradition which had become established in such *schools* or early universities as existed by the middle of the thirteenth century in cities all over Europe (the leading two existed in Paris and Oxford).[6]

The activities of these schools were based largely on the study of the works of the Greek philosopher Aristotle (384–322 BC) and the writings of his commentators. This led to a very formal, strict, and narrow focus almost solely on Aristotle's works and method, resulting in a tight union between Aristotelian philosophy and Christian doctrine (or rather, the Catholic Church's interpretation of the teachings of the Bible). As you may imagine, this environment was not really very conducive to the development of scientific method or free thinking, and the power of the Church ensured that any philosopher with unconventional views could be branded a religious heretic and face imprisonment, torture, or even death (which is one of the reasons why Descartes dedicates the *Meditations* to the Doctors of Theology in Paris!).[7]

To give you an idea of the sort of problems the early scientists faced in this period, consider the problem of gravity. Now, Aristotle's system predicts that any two objects falling to the ground will differ in their speed according to their weight. So, a heavier object will fall faster than a lighter one. This is because, according to Aristotle, every object will seek its 'natural place' in the universe, and heavy objects – because of their weight – will do so faster than light ones. However, in a famous experiment, the Italian philosopher and scientist Galileo Galilei (1564–1642) tried to show how this was wrong. He is said to have taken a cannon ball and a small musket ball[8] and, in front of a crowd of witnesses, to have dropped them both off the famous Leaning Tower in Pisa, Italy. However, rather than arriving at the ground at different times – as Aristotle would have predicted – the balls seemed to land at more or less the same time. The only factor which alters the rate at which objects fall, Galileo concluded, is air resistance. Therefore, the more surface area a thing has, the more the air will slow it down – hence, things with a smaller surface area, or aerodynamic things (which are designed to have little air resistance – such as arrows and aeroplanes) fly faster through the air.[9]


Galileo vs Aristotle
According to Aristotle and his followers, objects which are heavier and bigger will fall faster than those which are smaller and lighter.
However, Galileo proposed that, allowing for air resistance, objects of different weight and size should otherwise fall at the same speed.
In a famous experiment, Galileo dropped a musket ball and a cannon ball from the famous Leaning Tower in Pisa, Italy.
However, rather than the differently sized and weighted objects falling at different rates (as Aristotle would have predicted), both objects reached the ground at the same time.

E2

The Purpose of the Meditations

The *Meditations*, or to give it its fuller title, *Meditations on First Philosophy*, was published in Latin in 1641. In many ways, it is a restatement and refinement of many of the ideas which Descartes developed in his earlier work, the *Discourse on Method*, but expressed at greater length and in a narrative format. The book contains six meditations, each of which is supposed to take place on a different day. The reader is thus led, step by step, with Descartes on his journey towards – hopefully – the same conclusions as the author.

The main theme which propels the narrative of the *Meditations* is the search for certainty. Cleverly, Descartes presents the text as if it is an answer to the *theological* sceptics and unbelievers who have questioned such things as whether there is a God, and whether the soul exists (and is immortal). However, in doing this, he also sets out his method for finding truth *in the sciences*. In this way, Descartes is also hoping to release the hold that Church dogma and the followers of Aristotle, and scholastic philosophy in general, have had over the development of philosophy and science, and at the same time to establish a way in which science, philosophy, and religion can coexist in harmony.

The problem, then, for both scientists and philosophers, was that the dogma of the Church and the doctrines of Aristotle were thought together to represent the last word on the nature of reality. Scientific experiment, therefore, was not so much unthought-of, but rather not thought *necessary*, since all that we may wish to know can be worked out from consideration of the so-called *first principles* that govern reality (an example of which would be the assumptions about falling bodies proposed by Aristotle). However, many of these first principles were themselves based on speculation, and under certain circumstances (such as Galileo's experiment from the tower in Pisa) could in fact be seen to be wrong. Thus Descartes saw his first task as being to utilize certain sceptical arguments in order to expose these false assumptions, and ultimately arrive at the *true* first principles.

The method Descartes employs in the *Meditations* to achieve this has become known as his 'method of doubt'. Thus he begins not by stating things which he thinks are true and building upon them, but by asking the simple question, 'Is there any one thing of which we can be absolutely certain?' In tackling the problem in this way, Descartes attempts to find the one thing beyond all doubt upon which we can build our knowledge – the *very first* principle, so to speak.

E2