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HISTORY  
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RENÉ DESCARTES  
*Meditations on First Philosophy*

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## CAMBRIDGE TEXTS IN THE HISTORY OF PHILOSOPHY

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RENÉ DESCARTES

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*Meditations on First Philosophy*  
*with Selections from the Objections and Replies*

TRANSLATED AND EDITED BY  
JOHN COTTINGHAM  
*University of Reading*

Second Edition

with an introductory essay by  
BERNARD WILLIAMS  
and a general introduction by  
JOHN COTTINGHAM



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## Introductory essay

BERNARD WILLIAMS

'I would not urge anyone to read this book except those who are able and willing to meditate seriously with me', Descartes says to his readers in the Preface (p. 9, below), and he makes it clear that he means the *Meditations* not to be a treatise, a mere exposition of philosophical reasons and conclusions, but rather an exercise in thinking, presented as an encouragement and a guide to readers who will think philosophically themselves. Its thoughts, correspondingly, are presented as they might be conducted by its author – or rather, as though they were being conducted at the very moment at which you read them. Indeed, the 'I' who is having these thoughts may be yourself. Although we are conscious, in reading the *Meditations*, that they were written by a particular person, René Descartes, and at a particular time, about 1640, the 'I' that appears throughout them from the first sentence on does not specifically represent that person: it represents anyone who will step into the position it marks, the position of the thinker who is prepared to reconsider and recast his or her beliefs, as Descartes supposed we might, from the ground up.

This 'I' is different, then, from the 'I' that occurs in the *Replies* to the *Objections*. (Extracts from both of these also appear in this volume; how they came to be written is explained by the translator in his Note on the text, p. xl ix.) In the *Replies*, Descartes speaks straightforwardly for himself, and the 'I' represents the author of the *Meditations*. The 'I' in the *Meditations* themselves represents their narrator or protagonist, whom we may call 'the thinker'. Of course the author has to take

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responsibility for the thinker's reflections. He takes responsibility both for the conduct of them and for their outcome, where that includes the beliefs to which we shall have been led if we are persuaded by the arguments, and also the improved states of mind that the author expects us to reach by following his work. But the author is not answerable for every notion entertained by the thinker and for every turn that the reflection takes on the way. The series of thoughts has an upshot or culmination, reached in the Sixth Meditation, and some of the thinker's earlier thoughts have been overcome and left behind in the process of reaching that final point.

Some of those who submitted the *Objections* found it hard to follow the working out of this idea, and to see how far the thinker had got at various points in the process of reflection. It is still hard today, and commentators' discussions of the *Meditations* often take the form of asking how much at a given stage Descartes takes himself to have established. In such discussions, it is *Descartes* and his intentions that come into question; the modern objectors address themselves, if less directly than the objectors whose texts appear in this volume, to the author. It was, after all, Descartes who gave the thinker the directions he follows. There is a suggestion implicit in the beginning of the work that the thinker does not know how it will all turn out: but that is a fiction.

To say that it is a fiction is not necessarily to say that in terms of the work itself it is untrue. This might have been a work in which the thinker's fictional ignorance of how his reflections would turn out was convincingly sustained. To some extent it is so, and to that extent, one of the gifts offered to the reader by this extraordinary work is a freedom to write it differently, to set out with the thinker and end up in a different place. The rewriting of Descartes's story in that way has constituted a good deal of modern philosophy.

However, it would be wrong to suggest that the *Meditations* offers no more than an invitation to philosophical reflection, by asking some questions and showing one way in which they might be answered. We are expected, rather, to sense the author's guiding hand throughout. Modern readers may take this for granted too easily, because they underestimate Descartes's intention to engage the reader in the argument. They may think of the *Meditations* as just a device that Descartes chose to get across the opinions that we now find ascribed to him in histories of philosophy. It is, certainly, a device for convincing us,

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but it is more than that, because it aims to convince us by making us conduct the argument ourselves.

The first readers of the *Meditations* may have felt the author's guiding presence for a different reason, that they were conscious of a kind of writing that it resembled. It was, and remains, a very unusual work, and there had never been a work of philosophy presented in such a form before. But there did exist, familiarly, works of religious meditation, and Descartes's book self-consciously resembles them. Like many of them, it is ostensibly divided between days of contemplation and, again like them, it encourages and helps the reader to overcome and get rid of misleading and seductive states of the soul, so as to arrive at an understanding of his or her own nature and of a created being's relations with God.

Those who wrote religious meditations were acting as guides to a spiritual discipline. Descartes's work gives his readers guidance in an intellectual discipline, and helps them to discover in themselves pure intellectual conceptions – of matter, of mind and of God – from which they will be able to form a true and unclouded understanding of the world. The inquiry in which he leads them does indeed yield a conviction of the existence of God. There is no reason at all to suppose that Descartes was insincere in these religious affirmations (though theories that ascribe to him complex strategies of deceit have a strange capacity to survive.) What is true is that the thoughts that lead to these conclusions are not in the least religious in spirit, and God's existence is established as a purely metaphysical conclusion. Anything to do with a religious life or, indeed, with any distinctively religious aspects of life, will have to come in after Descartes's reflections are over. The *Meditations*, though they have an analogy to traditional meditations that belong to the religious life, assuredly do not belong to it themselves.

A still greater difference lies in the authority with which the two kinds of works were offered. The authors of religious meditations claimed authority from their own experience, but also, most often, from a religious office. Descartes does not suppose that his right to claim a reader's attention lies in any sacramental, traditional or professional position. His authority to show us how to think lies only in this, that he has himself, as he supposes, uncovered methods of simple, clear-headed and rational inquiry which all reasonable people can conduct if they clear their minds of prejudice and address themselves in a straightforward way to the

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questions. No special training, no religious discipline, no knowledge of texts or of history is needed in order to do this. He was disposed to think, in fact, that such things could be an actual obstacle.

His justification for believing that his readers had these powers, if only they could use them, is to be found in the *Meditations* themselves. If we follow Descartes to the end of them and accept his considerations, we shall have come to a conception of ourselves as rational, immaterial selves born with pure intellectual ideas and a capacity for reasoning which enable us to grasp in basic respects the nature of the world. Each of us does indeed exist in some kind of union with a particular physical body. ‘My body’, one says, and Descartes took this phrase to register a profound truth, that what one truly is, is a mind ‘really distinct’ from the body. We need sensory information provided through the body not only to survive in the material world, but to find out particular scientific laws. But our own nature, the existence of God and indeed the most abstract structural features of the physical world itself can be discovered, Descartes supposed, by directed intelligence and rational insight.

Among these things we discover, when we direct our intelligence in the right way, is that we are beings who are capable of making just such discoveries, and we gain insight into the way in which we can make them. So we discover also how the *Meditations*, a work of pure reflection aiming to free us from error and to help us understand these basic matters, can succeed. Its end lies in its beginning, not just because its author knows how the thinker will come out, but in the philosophical sense that if we undertake to follow its method of inquiry, our doing so, Descartes supposed, is justified by our being the kind of creatures that it finally shows us to be.

The method deployed and invoked in the *Meditations* works, to an important degree, through argument, clear chains of reasoning. This tells us something of how to read the book. We are asked to argue, not merely through it, but with it. Because of this, it is specially appropriate that the book was associated, at its first publication, with *Objections* and *Replies*. Descartes had some political motives in having the *Objections* assembled, as he also did in dedicating the book to the Sorbonne. He wanted to have his work accepted by the religious authorities. For the same reason, he did not welcome all the *Objections* that were collected by his friend Mersenne, who organised the enterprise, being embarrassed in particular by those of the English sceptic and materialist Hobbes.

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But whatever the strategy of the publication, it was true to the spirit of the work, as Descartes clearly believed, that it should appear together with arguments attempting to refute it or defend it.

If we are to read the *Meditations* properly, we must remember that the thinker is not simply the author. We must not forget that the work is a carefully designed whole, of great literary cunning, and that it rarely lays out arguments in a complete or formal way. But this does not mean that it is not sustained by argument, or that arguing with it is inappropriate. It means only that we must read it carefully to find out what its arguments are, and what Descartes is taking for granted. If we reflect on what he is taking for granted or asking us by implication to accept, we are doing part of what he invited us to do, when he asked us to meditate with him.

A question of what he is taking for granted presents itself right at the beginning. ‘Reason now leads me to think’, he writes in the First Meditation (p. 15, below)

that I should hold back my assent from opinions which are not completely certain and indubitable just as carefully as I do from those which are patently false. So, for the purpose of rejecting all my opinions, it will be enough if I find in each of them at least some reason for doubt. And to do this I will not need to run through them all individually... Once the foundations of a building are undermined, anything built on them collapses of its own accord; so I will go straight for the basic principles on which all my former beliefs rested.

Why does reason now lead him to think this? Everyone is engaged in trying to get information about matters of concern to him; some, such as Descartes, are involved in the sciences and want to arrive at systematic and reasoned beliefs about nature. But no one ordinarily supposes that the rational way to start on these things is to throw away or lay aside all the information one thinks one already has. Descartes thinks not only that this is the right course for him, but that it is self-evidently the right course for him. Why should he think this? Why should doubt seem the path to knowledge, if there is a path to knowledge at all?

We must notice first that the approach is not supposed to be applied to the ordinary affairs of life. Descartes makes that point over and over again, saying for instance that we must distinguish between ‘the actions of life’ and ‘the search for truth’; and in the *Synopsis* to the *Meditations*

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(p. 13, below) he is prepared to use such a distinction even to define what counts as serious: ‘no sane person has ever seriously doubted these things’. He does not mean that the results of his reflections will not affect ordinary practice or the conduct of the sciences. On the contrary, this is what he hopes they will do, setting the sciences, for instance, on the right path. Nor does he think that these reflections are a trivial way of passing the time. They cannot be that, if eventually they could have these practical and scientific effects. He may think that it is particularly his own, the author’s, use of the Doubt that will have those effects, but he also believes that it is a worthwhile exercise for any of us, once in a lifetime, to take temporarily the position of the thinker of such reflections, and this will not be a trivial undertaking, either. Indeed, he himself said that the meditation to which he invited us in the Preface was itself, in its own way, ‘serious’.

When Descartes says that the thoughts deploying the Doubt are to be separated from practical life, and in that sense (but only in that sense) are not ‘serious’, he is defining a special kind of intellectual project which by its nature can be conducted only if it is separated from all other activities. In ordinary life, when we want the truth on a subject, we pursue it, necessarily, in a context of other things that we are aiming to do, including other inquiries we need to make. The pattern of our inquiries is formed by many constraints on how we can spend our time and energies, and by considerations of what we risk by failing to look into one thing or spending too long looking into another. These constant and often implicit calculations of the economics of inquiry help to shape the body of our beliefs; and they have the consequence that our beliefs, while they aim at truth, will, inevitably, only partly achieve it. Descartes conceived of a project that would be *purely* the search for truth, and would be unconstrained by any other objectives at all. Because it temporarily lays aside the demands of practical rationality, it has to be detached from practice; and because it is concerned with truth and nothing else, it has to raise its requirements to the highest conceivable level, and demand nothing less than absolute certainty.

The search has to take place out of this world, so to speak, and its nature, its internal purpose, explains why this should be. But there is still a question about its external purpose. Why should Descartes or anyone else, once in a lifetime, take time out of the world to pursue this project? Descartes can commend it to us in more than one way, but his own

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principal reason is that he is looking for what he calls, at the start of the First Meditation and in many other places, ‘foundations’ of knowledge. To serve this purpose, the Doubt has to be methodical. A refusal to take things for granted that might be doubtful is part of Descartes’s general intellectual method, which he had introduced in his earlier work *The Discourse on the Method*; the Doubt is an extreme application of that idea, conditioned by the circumstances of the special project, the radical search for certainty. The Doubt is deployed for defined purposes, and from the start it is under control.

It was not a new idea that scepticism might be used for its beneficial effects. Sceptics in the ancient world, Pyrrhonians and others, had advocated such techniques for their own purposes; their teachings had been revived since the Reformation, and sceptical views were in the air at the time that Descartes wrote. Some of his critics complained that material he deployed, for instance about the errors of the senses, was old stuff. But Descartes could rightly reply that while scepticism was no new thing, his use of it was indeed new. When the Pyrrhonians deployed sceptical considerations, it was in order to calm and eradicate an unsatisfiable urge for knowledge; and it was rather in this spirit, sixty years before the *Meditations*, that Montaigne had written. But Descartes’s aim was precisely the opposite, to use scepticism to help in acquiring knowledge, and to bring out from a sceptical inquiry the result that knowledge was, after all, possible. The Doubt served that purpose by eliminating false conceptions; and the fact that it was possible to use it in this way and then overcome it gave the fundamental reassurance that a proper science would have nothing to fear from the doubts of the sceptics. Descartes’s Doubt was to be both revelatory and pre-emptive.

‘Foundations of knowledge’ can mean more than one thing. Descartes has often been thought to be searching for foundations in the sense of axioms from which the whole of knowledge or, more particularly, the whole of science, might be deduced, as in a geometrical system. In fact, this is rarely his concern, and it does not represent his understanding of what a completed science would be like. Historians classify Descartes as a ‘rationalist’, but this should not be taken to mean that he supposed mere rational reflection to be enough to establish scientific conclusions. He was a rationalist, rather, in his views about the origins of scientific concepts. He thought that the terms in which physics should describe the world were given to rational reflection, and he supposed them to be, in

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fact, purely mathematical. It was only by empirical investigation and experiment, however, that we could discover which descriptions, expressed in those terms, were true of the actual world.

Basically, the Doubt provides foundations for knowledge because it helps to eliminate error. Descartes's aim was not so much to find truths from which all scientific knowledge could be deduced, but rather to identify false or doubtful propositions which were implied by our everyday beliefs and so made those beliefs themselves unreliable. One belief of this kind was that objects in the external world had just the qualities that they seem to have, such as colour. The Doubt helped in eliminating this very general error, which could then be replaced by the sound conviction that objects, in themselves, had only the properties ascribed to them by mathematical physics. Once this corrected view had been laid bare and found indubitable in the process of orderly reflection, it could from then on serve as a sound foundation of our understanding of the world.

Proceeding in this way, Descartes could indeed 'go straight for the basic principles on which all my former beliefs rested'. The workings of the Doubt are adjusted to these aims. In its most extreme, 'hyperbolical', form, the Doubt is embodied in the fiction (p. 19) that a malicious demon, 'of the utmost power and cunning has employed all his energies in order to deceive me'. This device provides Descartes with a thought-experiment that can be generally applied: if there were an indefinitely powerful agency who was misleading me to the greatest conceivable extent, would *this* kind of belief or experience be correct? Thinking in these terms, Descartes is led to identify whole tracts of his ordinary experience he may lay aside, so that he suspends belief in the whole of the material world, including his own body.

It is significant, however, and characteristic of the way in which the *Meditations* unfolds, that Descartes does not start his sceptical inquiry with this extreme device. We are invited to get used to sceptical thinking gradually, by considering first more familiar and realistic occasions of error. He starts with illusions of the senses, in which we mistake the shape of a distant tower, for instance, or suppose a straight stick, partly in water, to be bent. Such examples remind us that we can be mistaken, and that even by everyday canons the world need not really be as it presents itself to our perception. There is little in these cases, however, to encourage the more generally sceptical idea that on any given occasion

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when we take ourselves to be perceiving something, we may be mistaken. He thinks that we are led to that further and more radical idea by reflection on the ‘errors of our dreams’. The phenomenon of dreaming creates a more general and more puzzling scepticism because, first, it is true (or at least the sceptic pretends that it is true) that anything we can perceive we can dream we perceive; and, second, there is no way of telling at the time of dreaming whether we are dreaming or not. So it seems that at any moment I can ask ‘how do I know that I am not dreaming now?’, and find it hard to give an answer. But what I can do, at any rate, if the question has occurred to me, is to ‘bracket’ these experiences, and not commit myself on the question of whether they are waking experiences which are reliable, or dreams which are delusive.

Once I am prepared to do this, I am well started on the sceptical journey. So far I have reached only the distributive doubt, *on any occasion I may be mistaken*, but reflecting on the possibility that I can have a set of experiences that do not correspond to anything real, I am nearly ready to take the step, with the help of the malicious demon, to the final and collective doubt, *I may be mistaken all the time*. In his description of what dreams are Descartes already lays the ground for what is to come. In the Sixth Meditation (p. 61) he says that he did not believe that what he seemed to perceive when he was dreaming came ‘from things located outside me’. In an everyday sense, certainly, that description of a dream must be correct. But the description has acquired some large implications by the time I reach the last Meditation, and, having accepted the ‘real distinction’ between mind and body, understand that my body is itself something ‘outside me’.

Every step in the sceptical progress should be questioned. It is at the beginning that all the seeds are sown of the philosophical system that has come to life by the end of the *Meditations*. To take just one example of questions that the thinker’s reflections invite, do these facts about dreaming, even if we accept them, really lead to the conclusion that I can never know whether I am awake? Why, in particular, does the thinker take dreaming so seriously for his purposes, and not madness? He simply dismisses the deranged people who think that their heads are made of earthenware, or that they are pumpkins, or made of glass (p. 16). Perhaps Bourdin, the author of the Seventh Objections, makes a good point in suggesting that the two conditions should be treated together (p. 80). There is of course this difference, that the mad are assumed

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unable to conduct the meditation at all: the thinker turns away from them, treats them in the third person, because they cannot join him and the reader in thinking through these things, whereas we who are the readers have dreams, as the thinker has. But is this enough of a difference? Descartes and his thinker cannot speak to us *when we are dreaming*. Descartes seemingly thinks that if we are sane, we can be sure that we are, even though mad people cannot tell that they are mad. So why should the fact that when we are dreaming, we cannot tell that we are, imply that we cannot be sure we are awake when we are awake? There may be an answer to that question; but we should not let the argument from dreams go by until we have considered what it might be.

The *Meditations* use the Doubt to lead out of the Doubt into knowledge and a correct conception of things. In doing that, they do not merely provide a sounder conception: they show that we can reach such a conception, and demonstrate that knowledge is to be had. The foundations that Descartes believes himself at the end to have discovered are also foundations of the *possibility* of knowledge. That is why the scepticism of the *Meditations* is pre-emptive. Descartes claimed that he had taken the doubts of the sceptics farther than the sceptics had taken them, and had been able to come out the other side.

The rebuttal of scepticism depends on the existence of a God who has created us and who is ‘no deceiver’. If we do our own part in clarifying our thoughts (as thinker does in the *Meditations*) and we seek the truth as seriously as we can, God will not allow us to be systematically mistaken. However hard we think about these matters, however much we clarify our understanding of what an ‘external’ world might be, we are left with a conviction that there is such a world – a conviction so powerful that it needed the extreme device of the malicious demon temporarily to displace it. It would be contrary to the benevolence and the trustworthiness of God that this conviction should be untrue.

It is essential that we should have done our own part. God cannot be expected to underwrite confused conceptions which have not been carefully examined. If we do not accept a sound intellectual discipline, we deceive ourselves and are responsible for our errors. (This is one way in which Descartes thinks that the will is involved in belief.) Equally, God’s benevolence does not guarantee us against every error, but only against general and systematic error. We remain liable to occasional mistakes, such as those of defective perception and also those of dreams,

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which before these reassurances seemed to offer a sceptical threat. Particular errors are caused by our bodily constitution, and it is not surprising that we should be subject to them. The sceptics' threat was that our entire picture of things might be wrong: now we have an assurance, because God is no deceiver, that this cannot be so.

But have we? Those who offered *Objections* were only the first among many to doubt whether Descartes's argument succeeds, even in its own terms. In the course of the *Meditations*, the sceptic has been allowed to cast doubt, it seems, even on the convictions that ground the belief in God. This doubt must be resisted, but how, in resisting it, can we appeal to the existence and nature of God, without arguing in a circle? Descartes's answer to this objection emphasises that a doubt about the proofs of God, and their implications for the validation of our thoughts, can be entertained only when one is not actually considering them. At the time they are clearly considered, these proofs are supposed to be as compelling as any other basic certainty – that I cannot think without existing, for instance, or that twice two is four. So when the sceptic professes to doubt the proofs of God, or any other such certainty, it can be only because he is not actually considering them at that time. All one can do is to refer him back to them; if he does properly consider them, he will, then, be convinced.

All this Descartes clearly says, but it is a little less clear what he expects us, and the sceptic, to make of it. His idea may be this, that if the sceptic reverts to his doubts when he has stopped thinking clearly about the proofs, we have earned the right by then simply to forget about him. He is merely insisting that we go on giving the answer – an answer we indeed have – to one question, his question, instead of getting on with our scientific inquiries or other practical activities, rather as though we were required to spend all our time out of the world with the thinker. We have offered all the justifications we could in principle offer, and now have the right to see the dispute as one about how to spend our time. If the sceptic were still to offer some basis for his doubts, it seems that it could now lie only in the idea that intellectual concentration was itself the enemy of truth: that you are more likely to be right about these matters if you do not think carefully about them than if you do. This idea is denied by the procedures of the sceptic, as well as by those of Descartes's thinker; in starting on the *Meditations* themselves, or any other inquiry, we implicitly reject it.

*Introductory essay*

Modern readers will want to consider how exactly Descartes answers the problem of the ‘Cartesian Circle’, and whether his answer, in his own terms, is a good one. Few of them, however, will accept those terms, or agree that the theological foundation he offers for science and everyday belief is convincing. Descartes was very insistent that science itself should be thoroughly mechanistic and should not offer explanations in terms of God’s purposes or any kind of teleology. In this, he was one of the major prophets of the seventeenth-century scientific revolution. Yet his justification of the possibility of such a science itself lay in God, and in a kind of teleology, a conviction that the world cannot be such that our desire to know must be ultimately misguided or frustrated. Perhaps we still have some version of that conviction, but if so, it is not for those reasons, and it could not be used to provide foundations for science.

To Descartes’s contemporaries, it seemed much more obvious that God existed and was no deceiver than that natural science was possible. Neither the successes nor the institutions of modern science yet existed. For us, science is manifestly possible, and because it is so, the demand is less pressing than it seemed to Descartes that it should be justified from the ground up. We may feel happier than he did to live without foundations of knowledge. But that must leave us open to questions of how that can be so. We need to know what the science that is so manifestly possible, is. Does it describe a world that is there anyway, independently of us? What does this question itself mean? How do we, with our thoughts and our bodies, fit into our picture of the natural world? We cannot do with Descartes’s *Meditations* everything that he hoped to achieve with them himself, but there remain many good reasons to accept his invitation to them.

BERNARD WILLIAMS

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*The Meditations and Cartesian Philosophy*

JOHN COTTINGHAM

Descartes's *Meditations on First Philosophy* is, indisputably, one of the greatest philosophical classics of all time. The challenge it offers is in many ways definitive of the philosophical enterprise: to leave behind the comfortable world of inherited prejudice and preconceived opinion; to take nothing for granted in the determination to achieve secure and reliable knowledge. Descartes talks of 'demolishing] everything completely and starting] again right from the foundations', and for this purpose he famously uses doubt, stretched to its limits, as an instrument which self-destructs, impelling him forwards on the journey towards certainty and truth.<sup>1</sup> These central themes are today part of every introductory course in the philosophy of knowledge: Descartes's masterpiece has achieved canonical status in that part of the philosophy syllabus we now call 'epistemology'. Yet for Descartes himself these epistemic concerns were but one part of a much wider project: the construction of a grand, all-embracing system of philosophy which would encompass metaphysics, natural science, psychology and morals, connecting all the objects within the scope of human understanding. In the words of the famous metaphor which he deployed some six years after the publication of the *Meditations*, 'the whole of philosophy is like a

<sup>1</sup> See the opening paragraph of the *Meditations*. Descartes's use of doubt, and other key philosophical issues in the *Meditations*, are discussed in the Introductory essay to the present volume, by Bernard Williams, pp. viiff., above.

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tree. The roots are metaphysics, the trunk is physics, and the branches . . . all the other sciences.<sup>2</sup>

Descartes spent much of his career occupied with what we would nowadays call theoretical physics: he devised a radical new theory of the nature of matter, defined simply as extension in three dimensions, and formulated a number of mathematical laws describing the results of collisions of moving particles of matter. He then proposed to apply these principles to a wide variety of subjects, from cosmology and astronomy to physiology and medicine; and towards the end of his life he planned to include a science of man, which would develop prescriptions for how to understand and control the workings of our bodies, and how to live fulfilled and worthwhile lives. Examining the course of Descartes's life, and the context in which the *Meditations* was written, helps us deepen our understanding of the metaphysical and epistemological themes of his most famous book by seeing how they fit into the broader philosophical system which he devoted his life to creating.

### The shaping of a philosopher

René Descartes was born in France on 31 March 1596 in the small town of La Haye (now renamed 'Descartes'), some fifty kilometres south of Tours. Not a very great deal is known of his early life, but it seems likely that his childhood was not a particularly happy one. His health was poor, and he appears not to have got on very well with his father, Joachim, who was often away discharging his duties as Counsellor at the Parliament of Brittany. Relations between the two in later life were certainly strained, and when René sent his father a copy of his first published book the father's only reported reaction was that he was displeased to have a son 'idiotic enough to have himself bound in vellum'.<sup>3</sup> Descartes's mother

<sup>2</sup> *Principles of Philosophy*, Preface to the French Edition of 1647 (AT IXB 14; CSM I 186). Throughout the present volume, 'AT' refers to the standard Franco-Latin edition of Descartes by C. Adam and P. Tannery, *Oeuvres de Descartes*, rev. edn. (12 vols., Paris, Vrin/CNRS, 1964–76); 'CSM' refers to the English translation by J. Cottingham, R. Stoothoff and D. Murdoch, *The Philosophical Writings of Descartes*, vols. I and II (Cambridge, Cambridge University Press, 1985) and 'CSMK' to vol. III, *The Correspondence*, by the same translators and A. Kenny (Cambridge, Cambridge University Press, 1991). For the text of the *Meditations*, see 'Note on the text and the translation', p. 1, below.

<sup>3</sup> Cf. AT xii 7, 8, and 433–4.

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died, in childbirth, a year after his own birth,<sup>4</sup> and he was looked after by his maternal grandmother until, at the age of ten, he was sent away as a boarding pupil to the recently founded Jesuit college of La Flèche in Anjou, where he remained for eight or nine years. During Descartes's time there the school was steadily building up a reputation for excellence (he later described it as 'one of the most famous schools in Europe'<sup>5</sup>); pupils followed a comprehensive curriculum which included classical literature and traditional classics-based subjects such as history and rhetoric, as well as, in the senior years, higher mathematics and philosophy. The approach to philosophy taken by Descartes's teachers belonged to what we now know as the 'scholastic' tradition; that is to say, it was based on broadly Aristotelian principles, adapted in an attempt to make them consistent with the demands of Christian orthodoxy, and elaborated over many centuries by a host of learned commentators. Descartes's teachers at La Flèche would have been well versed in such commentaries, and would also have made use of compendious textbooks like the *Summa Philosophiae Quadripartita*, a four-part treatise by a noted contemporary Scholastic, Eustachius a Sancto Paulo, which provided a complete philosophical system, including logic, metaphysics, moral philosophy and 'natural philosophy' or physics.<sup>6</sup> Descartes was not impressed with the philosophy he learned at school, and later wrote that the subject, despite being 'cultivated for many centuries by the most excellent minds', contained no point which was not 'disputed and hence doubtful'. The 'shaky foundations' of the traditional system meant, in his view, that all the specific sciences built on them were equally suspect.<sup>7</sup>

In 1610, about halfway through Descartes's time at La Flèche, the College marked the death of its founder, Henry IV, with a series of grand observances, including the reciting of poems, one of which hailed the recent discovery by Galileo of the moons of Jupiter (which 'brightened

<sup>4</sup> Despite what the philosopher himself told a correspondent (letter to Elizabeth of May or June 1645, AT IV 220–1; CSMK 250–1), it was not René's own birth that cost his mother her life, but that of a younger brother (who lived only three days); see G. Rodis-Lewis, 'Descartes' Life and the Development of his Philosophy', in J. Cottingham (ed.), *The Cambridge Companion to Descartes* (Cambridge, Cambridge University Press, 1992), p. 23.

<sup>5</sup> *Discourse on the Method*, Part One (AT VI 5; CSM I 113).

<sup>6</sup> The *Summa Philosophiae Quadripartita* was published in 1609. For more on Eustachius, and on some of the commentaries on Aristotle which Descartes may have read at La Flèche, see R. Ariew, 'Descartes and Scholasticism', in Cottingham, *Cambridge Companion to Descartes*, pp. 74ff.

<sup>7</sup> See *Discourse*, Part One (AT VI 8; CSM I 115).

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the gloom of the King's death').<sup>8</sup> We do not know what part if any Descartes played in these ceremonies (though some have suggested that he was the author of the poem honouring Galileo); what is certain is that Galileo's discovery came in due course to be widely acknowledged as strong experimental support for the new Copernican cosmology, dethroning the earth from its privileged place at the centre of the universe – a shift which, more than any other, has subsequently come to be seen as central to the philosophical and scientific revolution of the early modern period. Descartes himself was to become a convinced if cautious adherent of the new heliocentric model, and his own scientific career was to intertwine, at a crucial point, with that of Galileo. By his late thirties Descartes had produced a comprehensive treatise on cosmology and physics, *Le Monde* (*The World* or *The Universe*), which applied reductive mechanical principles to the explanation of a wide variety of celestial and terrestrial phenomena; in the course of the work (though carefully insisting that it was an account of how things *might* have evolved in an imaginary universe) he places the sun at the centre of the planetary system.<sup>9</sup> But on hearing of the condemnation of Galileo by the Inquisition for advocating the heliocentric hypothesis, Descartes decided to withdraw his own treatise from publication. 'I desire to live in peace', he wrote to his friend and chief correspondent, Marin Mersenne.<sup>10</sup>

The cautious and reclusive attitude which became typical of Descartes's middle years was in some respects at odds with the rather more active and outgoing life he pursued in his twenties. After taking a law degree at Poitiers, at the age of twenty-two Descartes went to Holland and enrolled in the army of Prince Maurice of Nassau; this was the prelude for a series of travels in Europe, inspired by the resolve, as Descartes later put it, 'to seek no knowledge other than that which could be found in myself or else in the great book of the world'.<sup>11</sup> The comment suggests that his motive for choosing the soldier's life was the prospect for travel it offered, though in later life he commented acidly that the chief attraction of a military career for the young was the opportunity it provided for 'idleness and debauchery'.<sup>12</sup> At all events,

<sup>8</sup> See Rodis-Lewis, 'Descartes' Life', p. 26, and AT XII 29.

<sup>9</sup> See *Le Monde*, ch. 10 (AT XI 69–70). <sup>10</sup> Letter of April 1634 (AT I 285–6; CSMK 43).

<sup>11</sup> *Discourse*, Part One (AT VI 9; CSM I 115).

<sup>12</sup> Letter to Pollot of 1648 (AT V 557; CSMK 359).

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the most significant result of his initial journey to Holland was the friendship Descartes formed with the Dutch mathematician Isaac Beeckman, whom he met accidentally in 1618. Beeckman made Descartes party to a number of projects on which he was working in pure and applied mathematics, and was described by Descartes in terms reminiscent of those later used by Immanuel Kant when he acknowledged Hume as the one who had roused him from his ‘dogmatic slumbers’. ‘You alone’, Descartes wrote to Beeckman in 1619, ‘roused me from my state of indolence’; in another letter, he spoke of the ‘gigantic task’ which, inspired by Beeckman’s ideas, he had set himself: that of devising a method which would provide ‘a general solution of all possible equations involving any sort of quantity’.<sup>13</sup> Descartes continued to work on arithmetic, algebra and geometry (and the relationship between them) for much of the following decade, and it was to become a central theme of his later philosophy that mathematics possessed the kind of precision and certainty which the traditional philosophy he had learnt at school conspicuously lacked. Mathematics was a paradigm of what Descartes came to call *scientia* – genuine and systematic knowledge based on reliable principles.

Descartes’s earliest work, the *Compendium Musicae*, written in 1618 and dedicated to Beeckman, applied quantitative principles to the study of musical harmony and dissonance. But the wider significance which mathematical reasoning later came to have for Descartes consisted in its being a model for all human understanding: ‘Those long chains composed of very simple and easy reasonings, which geometers customarily use to arrive at their most difficult demonstrations, had given me occasion to suppose that all the things which fall within the scope of human knowledge are interconnected in the same way.’<sup>14</sup> This ambitious vision of a new model for the sciences was probably shaped and nurtured over a number of years, but according to Descartes himself it took root in his mind after an extraordinary experience which occurred during his European travels.

On 10 November 1619 Descartes found himself closeted in a ‘stove-heated room’ (*poêle*) in a town in southern Germany, where after a day of intense meditation, he fell asleep and had a series of three strikingly vivid

<sup>13</sup> Letters of 23 April and 26 March 1619 (AT X 163, 157–8; CSMK IV, 2–3).

<sup>14</sup> *Discourse*, Part Two (AT VI 19; CSM I 120).

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dreams. In the first, he was assailed by phantoms and a violent whirlwind, took refuge in a college, where he tried to reach the chapel, and was greeted by a friend who gave him a present which he took to be a ‘melon brought from a foreign country’. As he woke up he felt a sharp pain in his side which made him fear that an ‘evil demon was trying to deceive him’; such was the sense of dread produced by the dream that he lay awake for several hours. In the second dream he heard a terrible noise like a thunderclap, and saw a shower of bright sparks, whereupon he awoke at once, still in a state of terror. The last and most complex dream involved the appearance and disappearance of various books on a table: first an encyclopaedia, which he thought might be ‘very useful to him’; then an anthology of poetry containing the Pythagorean motto for truth and falsity, ‘*Est et non*’, and an ode of Ausonius beginning *Quod vitae sectabor iter?* (“What road in life shall I follow?”); and finally (after a long dialogue with a stranger about the contents of the books) the encyclopaedia again, this time incomplete. As he began to wake up, he immediately started interpreting the dream, the most significant feature being the encyclopaedia, which he took for a symbol of ‘how the sciences are linked together’. The upshot of this night of troubled visions was that Descartes became convinced that his own life’s journey should be devoted to completing the ‘encyclopaedia’: his mission was to found a new and comprehensive philosophical and scientific system.<sup>15</sup>

### The development of Descartes’s methodology

Returning to Paris after his travels, Descartes began work on a treatise in Latin entitled *Regulæ ad Directionem Ingenii*, the *Rules for the Direction of our Native Intelligence*. Though never completed (and never published during his lifetime), the *Regulæ* inaugurates the project, glimpsed in Descartes’s dream, of founding a universal scientific system. The inspiration, as with so much of his work (particularly so during this early period) is mathematical, and much of the book is concerned with devising of ‘rules’ or methods for the solution of problems in arithmetic and

<sup>15</sup> The dreams are described in some detail by A. Baillet (*La Vie de Monsieur Des-Cartes*, Paris, Horthemels, 1691; photographic reprint Hildesheim, Olms, 1972, vol. 1, pp. 81ff.), but some of his embellishments are almost certainly apocryphal; see Rodis-Lewis, ‘Descartes’ Life’ (pp. 30–2). Fragments which have survived from Descartes’s own early notebooks provide more reliable, if somewhat sparse, information. See CSM I 2ff.

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geometry. But Descartes pointedly observes that he ‘would not value these Rules so highly if they were good only for solving those pointless problems with which arithmeticians and geometers are inclined to while away their time’. He goes on to speak of a general discipline that contains the ‘rudiments of human reason’ and can ‘extend to the discovery of truths in any field whatever’: ‘there must be a general science which explains all the points that can be raised concerning order and measure irrespective of the subject-matter’.<sup>16</sup> The tool for the discovery of such truths would not be a study of traditional methods and authorities, but, instead, the ordinary ‘native intelligence’ of each individual: the simple and clear perceptions of the intellect, uncluttered by considerations of ‘what other people have thought or what we ourselves conjecture’.<sup>17</sup>

This vision of how to proceed in philosophy remained Descartes’s guiding principle when he came to write the *Meditations*, over ten years later. In the *Regulae*, Descartes uses the term ‘intuition’ (in Latin *intuitus*) for the kind of reliable cognition he is seeking – a word which suggests looking directly at something, a kind of straightforward inspection or vision (though of a purely intellectual, not an ocular, kind):

By ‘intuition’ I do not mean the fluctuating testimony of the senses or the deceptive judgement of the imagination as it botches things together, but the conception of a clear and attentive mind, which is so easy and distinct that there can be no room for doubt about what we are understanding. Alternatively, and this comes to the same thing, intuition is the indubitable conception of a clear and attentive mind which proceeds solely from the light of reason.<sup>18</sup>

The ‘light of reason’ (*lux rationis*) which is invoked in this passage (and which reappears in the *Meditations* and elsewhere as the ‘natural light’) has a long ancestry. Plato, in the *Republic* (c. 380 BC), had used the simile of the sun to describe the Form of the Good which makes manifest the objects of abstract intellectual cognition (just as the sun sheds light on ordinary visible objects). In St John’s Gospel (c. AD 100), the *Logos*, the ‘Word’ or divine creative intelligence, is identified with ‘the Light that lighteth every man coming into the world’ (1:9). And Augustine, in the *De Trinitate* (c. 410), welding together Platonic and Christian ideas,

<sup>16</sup> *Regulae*, Rule Four (AT X 374, 378; CSM I 17, 19).

<sup>17</sup> Ibid., Rule Three (AT X 366; CSM I 13).

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asserts that ‘the mind, when directed to intelligible things in the natural order, according to the disposition of the Creator, sees them in a certain incorporeal light which has a nature all of its own, just as the body’s eye sees nearby objects in the ordinary light’.<sup>19</sup> Descartes certainly shares with Platonic and Augustinian ‘rationalism’ a distrust of the ‘fluctuating testimony’ of the senses, and a belief in the pure inner light of the intellect as a vastly more reliable source of knowledge than anything which is received from the external world via the sensory organs.<sup>20</sup> This rationalist perspective remains strikingly present in the way the argument of the *Meditations* was later developed. And beyond this there is the deeper theological dimension (though this aspect tends to be played down by many modern commentators): Descartes’s faith in the reliability of the intellectual light comes to be closely linked, in his later metaphysics, with the fact that it is bestowed on us by God, the source of all truth. Our own route to secure knowledge is, ultimately, illuminated by the ‘immense light’ proceeding from the perfect divine nature, and shining, albeit with diminished scope, in each individual mind.<sup>21</sup>

Back in the late 1620s, however, the relationship between the divine nature and the attainment of reliable human knowledge was an issue that Descartes had probably not examined in any detail. Despite the underlying theological implications of the notion of the ‘light of reason’, his early work in the *Rules for the Direction of our Native Intelligence* contains little if any metaphysical argument, and tends instead to proceed as if epistemology and methodology are relatively self-standing and self-contained disciplines capable of providing an autonomous route to ‘certain and evident cognition’.<sup>22</sup> We know, however, that Descartes had at least begun to work on metaphysics around this time, since a letter to Marin Mersenne, mentions a ‘little treatise’ started in 1629, soon after he had decided to leave France to take up permanent residence in Holland. The ‘little treatise’ (now lost) aimed to prove ‘the existence of God and of our souls when they are separate from the

<sup>19</sup> *De Trinitate*, XII xv 24. Cf. Plato, *Republic*, 514–18.

<sup>20</sup> Though he is very much *not* the caricature ‘rationalist’ who holds there is no role whatever for the senses in the development of science: see *Discourse*, Part Six (AT VI 65; CSM I 144).

<sup>21</sup> For the immensity of the divine light, see the resounding final paragraph of the Third Meditation, p. 41. For the limited scope of the natural light within the individual soul, see the Fourth Meditation, p. 47.

<sup>22</sup> AT X 362; CSM I 10.

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body’,<sup>23</sup> but the work was laid aside, and Descartes did not come back to a full treatment of these issues until the late 1630s.

The reasons for Descartes’s self-imposed exile from his native land have been much disputed. He certainly complained of the ‘innumerable distractions’ of Paris,<sup>24</sup> but though many of his residences in Holland were in secluded country locations, he was not wholly averse to town life (soon after arriving he took lodgings in the bustling city of Amsterdam). It has been suggested that he hoped the Netherlands would provide a more tolerant and free-thinking atmosphere for the reception of his ‘modern’ views on physics and cosmology; but in the event his philosophical views provoked as much controversy and hostility from Protestant Dutch academics as any he might have expected from Catholic scholars in France. Most likely, Descartes experienced (at least at first) that sense of freedom and release which many expatriates discover on moving away from the culture in which they were born and brought up; the ‘masked man’, as Descartes had earlier called himself, spoke in his first (anonymously) published work of his pleasure at living amidst a mass of busy people ‘more concerned with their own affairs than curious about those of others’.<sup>25</sup>

The main preoccupations of Descartes during the early and middle 1630s were scientific. His treatise on physics, *Le Monde* (already mentioned above), was completed by 1633. It contained a complete description of the origins and workings of the physical universe in accordance with the ‘laws of mechanics’, and a concluding section, known as the *Traité de l’homme* (*Treatise on Man*), supplied an account of human physiology employing the self-same mechanical principles. Descartes had a keen interest in physiology (which stayed with him all his life), and when he lived in Kalverstraat (‘Calf Street’) in Amsterdam he made a habit of collecting carcasses from the butcher for dissection. His approach to the processes and functions of the living human body was strongly reductionistic: the body was essentially a ‘machine’, which, like ‘clocks, artificial fountains and mills’, has the power to operate purely in

<sup>23</sup> AT I 182; CSMK 29.      <sup>24</sup> Letter to Mersenne of 27 May 1638 (AT II 151–2).

<sup>25</sup> *Discourse*, Part Three (AT VI 31; CSM I 126). The image of the ‘masked man’ (*larvatus*) occurs in one of Descartes’s early notebooks probably composed during his travels in Europe during the years 1619–22: ‘Actors, taught not to let any embarrassment show on their faces, put on a mask. I will do the same. So far, I have been a spectator in this theatre which is the world, but I am now about to mount the stage, and I come forward masked’ (AT X 213; CSM I 2).

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accordance with its own internal principles, depending ‘solely on the disposition of our organs’.<sup>26</sup> Cartesian physiology and biology entirely dispenses with the traditional Scholastic apparatus that had tried to explain such functions as movement, digestion and sensation by appeal to the operation of the so-called locomotive, nutritive and sensory ‘souls’. In Descartes’s programme for science, mechanism replaces psychism, and the workings of the animal, and indeed human, organism become no different, in principle, from the workings of any other material structure in the universe; all is to be explained purely in terms of size, shape and motion of the component parts. Only in the case of *thought* does Descartes find it necessary to have recourse to a ‘rational soul’ (*âme raisonnable*), specially created by God and ‘united’ to the complex machinery of the human body.<sup>27</sup>

By 1637, Descartes was ready to publish three ‘specimen essays’ illustrating his new scientific method. The first was the *Optics* (*La Dioptrique*), which applied mathematical and mechanical principles to the explanation of ‘refraction and the manufacture of lenses, . . . of the eye, of light, of vision, and of everything belonging to catoptrics and optics’.<sup>28</sup> The achievement was a considerable one: in the course of the work, Descartes accurately sets out, in precise mathematical terms, a version of what is now known as Snell’s law of refraction. The second essay, the *Meteorology* (*Les Météores*), applies the reductionistic mechanical approach to a wide variety of phenomena including ‘vapours and exhalations, salt, winds, clouds, snow, rain and hail, storms and lightning, and the rainbow’.<sup>29</sup> The guiding principle here is one that remains dominant throughout Cartesian science: differences in the size, shape and motion of constituent particles are sufficient to explain all the phenomena we observe in the world around us and the sky above us, without the need to posit any of the traditional ‘substantial forms’, or indeed any qualitative differences between supposedly different ‘kinds’ of matter. ‘I regard [these particles] as all being composed of one single kind of matter,’ Descartes observes in the *Meteorology*, ‘and believe that

<sup>26</sup> *Treatise on Man*, AT XI 120; CSM I 99. <sup>27</sup> Ibid., AT XI 143; CSM I 102.

<sup>28</sup> Letter to Mersenne of March 1636 (AT I 339–40; CSMK 51). The scope of Descartes’s essay was thus wider than its original French title *La Dioptrique* (literally ‘Dioptrics’) suggests. (‘Dioptrics’ was the traditional name given to the study of refracted light; ‘catoptrics’ to reflected light.)

<sup>29</sup> AT VI 231ff.; CSM I 175.

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each of them could be divided repeatedly in infinitely many ways, and that there is no more difference between them than there is between stones of various different shapes cut from the same rock'.<sup>30</sup> Finally, in the published trio of specimen essays, comes the *Geometry* (*La Géométrie*), an accomplished work, reflecting Descartes's long-standing interest in pure mathematics, which laid down the foundations for what we now know as coordinate geometry.

### The core of Descartes's philosophy

Prefaced to the three essays just mentioned was an extended introduction in six parts, the *Discourse on the Method of rightly conducting one's reason and seeking the truth in the sciences* (*Discours de la Méthode pour bien conduire sa raison, et chercher la vérité dans les sciences*). The whole volume consisting of the *Discourse* and *Essays* was published anonymously in Leiden in June 1637; in an earlier letter to Mersenne, Descartes had compared himself to the painter who wished to 'hide behind the picture in order to hear what people will say about it'.<sup>31</sup> The *Discourse*, which next to the *Meditations* is nowadays Descartes's best-known and most widely-read work, provides a remarkably clear and accessible overview of his philosophical and scientific ideas, though it is very different both in tone and content from the *Meditations*, published four years later. The latter work was composed in Latin, the international language of scholarship in the seventeenth century, whereas Descartes chose to write the *Discourse* in French, precisely in order to present his views more informally, and to a wider audience. Though the author's name did not appear on the title page, the *Discourse* is an intensely personal work, a kind of intellectual autobiography which describes (in Part One) the influences on Descartes's early development and his dissatisfaction with the traditional philosophical curriculum, and (in Part Two) his determination to establish a new, clear and orderly method, modelled on the reasoning found in mathematics: 'provided we refrain from accepting anything as true which is not, and always keep to the order required for deducing one thing from another, there can be nothing too remote to be reached in the end or too well hidden to be discovered'.<sup>32</sup> The project is

<sup>30</sup> AT VI 239; CSM II 173, n. 2.

<sup>32</sup> AT VI 19; CSM I 120.

<sup>31</sup> Letter of 8 October 1629 (AT I 23; CSMK 6).

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nothing less than the construction of a new system of knowledge, starting from scratch – a complete ‘rebuilding of the house’ as Descartes puts it.<sup>33</sup>

Part Three of the *Discourse* then goes on to set out a ‘provisional moral code’,<sup>34</sup> which will provide a reliable practical shelter while the edifice of knowledge is being reconstructed; and Part Four (to be discussed below) gives a compelling account of how the metaphysical foundations of the new edifice are to be laid down. Part Five provides a discussion of some of Descartes’s scientific work, and is by way of being a summary of the cosmology, physics and physiology covered in the earlier suppressed treatise on the universe and man (*Le Monde* and the *Traité de l’homme*). It includes a detailed account of the circulation of the blood,<sup>35</sup> as well as a series of arguments designed to show that the mechanistic schema which suffices to explain all observed functions in animals totally breaks down when it comes to explaining the capacity for thought and language in human beings. ‘It is not conceivable’, Descartes argues, that ‘a machine should produce different arrangements of words so as to give an appropriately meaningful answer to whatever is said in its presence, as the dullest of men can do’. This leads to the idea of a radical difference between animals and men. The former are simply mechanical automata – natural machines (albeit highly complex ones) made, ‘by the hand of God’, out of the same material ingredients which compose the rest of the physical universe. But human beings, whose conceptual and linguistic abilities cannot be explained in this way, must possess a rational soul which ‘cannot be derived in any way from the potentiality of matter, but must be specially created’.<sup>36</sup> Finally, in Part Six of the *Discourse*, Descartes says something of his plans for future research, and underlines the need for empirical observation to establish which hypotheses, of the several alternatives consistent with the general principles of his science, are in fact correct:

<sup>33</sup> *Discourse*, Part Three (AT VI 22; CSM I 122).      <sup>34</sup> Ibid.

<sup>35</sup> In supporting the idea of the circulation of the blood, Descartes praises the ‘English physician, who . . . [broke] the ice on this subject’, referring to William Harvey, whose *De Motu Cordis* was published in 1628. But Descartes takes the cause of circulation to be expansion caused by the ‘heat of the heart’, a view which led him to insist that the blood gushes from heart to arteries during the diastole phase, not (as Harvey had correctly maintained) during the systole (contraction) phase (AT VI 50, 52; CSM I 136, 137).

<sup>36</sup> AT VI 55–9; CSM I 139–41.