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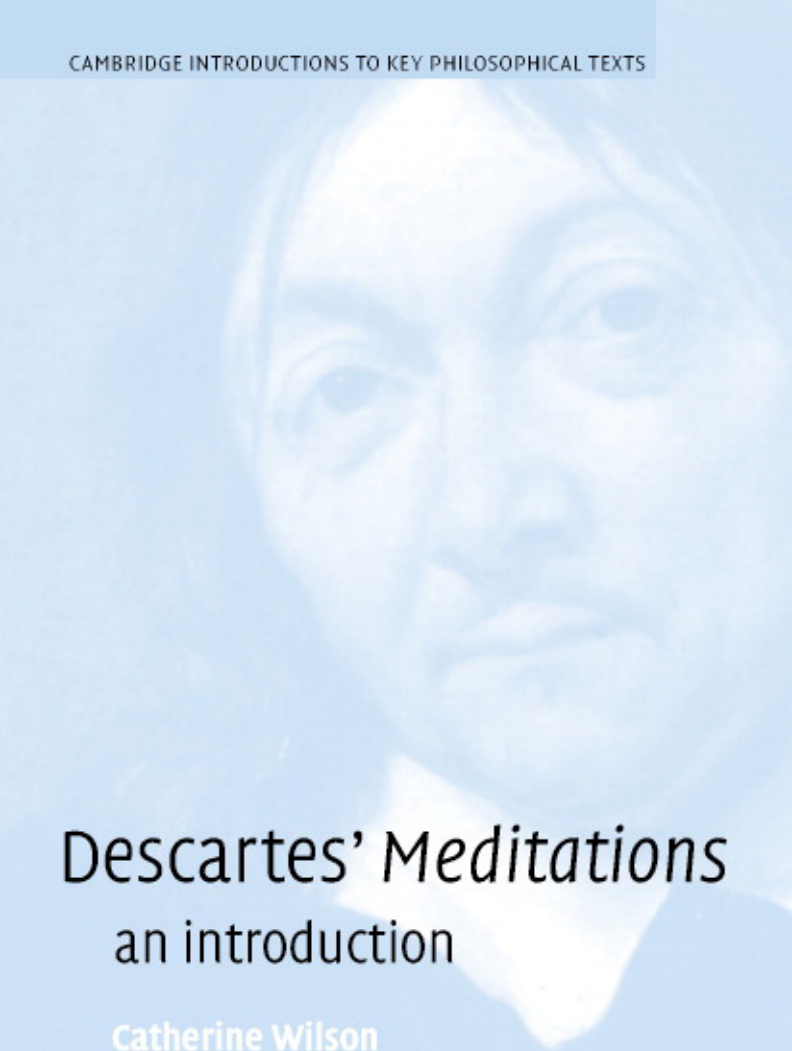

Descartes' *Meditations*

an introduction

Catherine Wilson

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DESCARTES'S *MEDITATIONS*

In this new introduction to a classic philosophical text, Catherine Wilson examines the arguments of Descartes's famous *Meditations*, the book which launched modern philosophy. Drawing on the reinterpretations of Descartes's thought of the past twenty-five years, she shows how Descartes constructs a theory of the mind, the body, nature, and God from a premise of radical uncertainty. She discusses in detail the historical context of Descartes's writings, and their relationship to early modern science, and at the same time she introduces concepts and problems that define the philosophical enterprise as it is understood today. Following closely the text of the *Meditations* and meant to be read alongside them, this survey is accessible to readers with no previous background in philosophy. It is well suited to university-level courses on Descartes, but can also be read with profit by students in other disciplines.

CATHERINE WILSON is Professor of Philosophy at the University of British Columbia, Vancouver. She is the author of *Leibniz's Metaphysics: A Historical and Comparative Study* (1989) and *The Invisible World: Early Modern Philosophy and the Invention of the Microscope, 1620–1720* (1995).

CAMBRIDGE INTRODUCTIONS TO KEY PHILOSOPHICAL TEXTS

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DESCARTES'S *MEDITATIONS* by Catherine Wilson

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An Introduction

CATHERINE WILSON
University of British Columbia

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For my children, Eva and David

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Introduction: About the Meditations

Descartes's *Meditations on First Philosophy*, first published in 1641, are devoted to the following philosophical questions: What can we come to know about the human mind and its powers? Is there a reality behind appearances, and, if so, how can we have access to it? Do our experiences arise from our bodies and our brains, or could we think, feel, and perceive without them? How can we recognize truth and distinguish it from false and confused opinion? Is there is a God, and, if so, is this God benevolent, malevolent, or simply indifferent to us? If this God is benevolent, how should we understand illness, error, and morally wrong actions?

This book is intended as a first introduction to the *Meditations* and, at the same time, as an introduction to some basic problems and terminology of analytic philosophy, including the theory of knowledge, metaphysics, philosophy of science, philosophy of perception, and philosophy of language. No previous experience in philosophy is presupposed. Chapter 1 is an introduction to the problem of knowledge in Cartesian terms and Chapters 2–11 lead the reader through the arguments of the *Meditations*, explaining and commenting on the important points along the way. Chapter 12 offers an explanation of the relationship of the *Meditations* to Descartes's other writings, and discusses the conflicting perceptions of Descartes in his own time. It outlines the relationship between Cartesian problems and doctrines and the evolution of modern philosophy. While the *Meditations* are unusual amongst philosophical works, insofar as it is possible to reconstruct and follow Descartes's main arguments without knowing anything about the seventeenth-century background, a brief survey of Descartes's life, character, and aspirations will help to set the stage for a detailed treatment of his text.

DESCARTES'S LIFE

René Descartes was born March 31, 1596, in Touraine, southeast of Paris, and educated at the Jesuit college of La Flêche, to which he was sent as a boarder at the age of ten. His future role as the founder of modern philosophy was not foreshadowed in his early accomplishments and interests. Somewhat sickly and fond of his sleep – not unusual qualities in an adolescent – the young Descartes showed no signs of iconoclasm or even of philosophical acumen. He studied logic, grammar, poetry, and history, and although he was an avid reader and much favored by the schoolmasters, the literary side of his education interested him less than the mathematical. After leaving school, he acquired a law degree but he never practiced. He wrote to a friend that he would have been happy as an artisan.

Returning home, Descartes learned such skills of the minor nobility as how to ride a horse and handle weapons. He was, however, not satisfied with life on a country estate and his family sent him to Paris, where he continued to study mathematics. In 1618, he signed on with Prince Maurice of Nassau who was fighting the Spanish, to experience, he said, the theatre of the world, to learn its manners and customs. He left the Netherlands in 1619 on a long tour through Eastern Europe. Wintering in southern Germany, he sought out learned persons for discussion before moving to Prague, where he encountered Tycho Brahe's new cosmological system, a compromise between the earth-centered system of the universe still in great favor and Copernicus's heliocentric cosmology, which represented our sun as only one of a multitude of stars and our planet as an even smaller speck on the cosmic scene. He studied geometry, optics, mechanics, music theory, and animal physiology. He began to wonder how the mind fitted or did not fit into the world of physical objects and processes.

A series of dreams in 1619 convinced Descartes that he had been specially favored by God and was destined to be a philosopher, which, in the terminology of the time, meant one devoted generally to the pursuit of knowledge of all things. The dreams stimulated nine years of work attempting to perfect a method of discovery, but in 1623 Descartes was still searching for a profession. He had published nothing in philosophy, or in any other field, though his ambitions were

grand. He announced to his friends that mathematics, as it was taught and applied in a haphazard and unsystematic way, was virtually useless, and stated his plan to invent a method of formal reasoning governing proportion and quantity of which ordinary geometry and arithmetic would compose only a part. This *mathesis universalis* or "universal analytical method" would embrace physical questions and, by extension, moral questions, insofar as these depended on human nature and the nature of the world. Returning to Paris, Descartes enjoyed an "agreeable and innocent" life, working on his universal method, and studying the theory of lenses. His *Rules for the Direction of the Mind*, formulated and partially written down in the early 1620s, presented some methodological ideas, along with some ideas about visual perception, but he was not sufficiently satisfied with them to publish them during his lifetime.

A popular image of Descartes represents him as a quiet and meditative person who enjoyed sitting still in his room and thinking. In fact, he was an unusually restless man who moved around and changed his residence frequently. Within a few years, he had decided to leave Paris, to escape the heat of the city, he claimed, and the press of crowds.

In fact, he was beginning to find the Parisian intellectual climate too conservative. The liberal atmosphere of Amsterdam enticed him back to the Netherlands, and, in 1628, Descartes settled there, to pursue his thoughts on philosophy in the broad sense, considering especially its claim to independence from theology. He was not interested, he decided, in theological subtleties and the mysteries of eternal salvation but in happiness in this life. It seemed to him that the union of medicine and mathematics through the formulation of a rationally intelligible account of the human body was the key to happiness, since both physical and emotional suffering had their basis in the body. He began to study the structure of animals, buying cadavers in butchers' shops to take home and dissect. He also sketched out a two-part treatise on natural philosophy. The first part would be concerned with the constitution of matter and light, the laws of nature, and the origins and structure of the cosmos, and the second part would be concerned with animal and human bodies, considered as machines.

The treatise was never published, though the first part was amplified and reworked and eventually published as the *Principles of*

Philosophy. Then, in 1637, at the age of forty-one, Descartes brought out anonymously three scientific *Essays*, the *Optics*, the *Geometry*, and the *Meteorology*, the last dealing primarily with celestial phenomena. He appended to them a personal essay, the *Discourse on Method*, that detailed his frustrations with his own education, the uselessness of traditional philosophy, his beliefs about the similarities and differences between humans and animals, and his hope to be able to introduce into other areas of science the analytical techniques he had employed successfully in the *Essays*. He advanced the view that a proper understanding of the functioning of the human body would contribute to the improvement of medicine and morals and that a well-founded theory of the physical world would render us "masters and possessors of Nature."

The *Essays* were followed four years later by the *Meditations on First Philosophy*. To the surprise of some of his followers, Descartes had turned his attention away from anatomy and physiology and from his theories regarding terrestrial and celestial phenomena. Instead, the *Meditations* took up the traditional topics of metaphysics – God and the soul – and the traditional topics of epistemology – truth, error, and the role of the senses in the acquisition of knowledge. Readers curious as to why Descartes set off in this new direction and what its consequences were will find further information and explanation, some of it necessarily speculative, in Chapter 12.

Descartes moved to a pleasant chateau near Leyden in 1643, shortly before releasing his complete system of the natural world as the *Principles of Philosophy* in 1644. Recalled to Paris, he objected to being put on display "like an elephant or a panther" and instead accepted the invitation of Queen Christina of Sweden to move to Stockholm to serve as her instructor, though she made little use of his talents. His interests shifted once more, this time from the physical sciences and metaphysics to what we would today call psychology and ethics. He wanted to understand the function of the "passions" that we suffer through our encounters with persons, objects, and events in the world, especially love, hatred, wonder, desire, joy, and sadness, and to determine how to overcome such psychological evils as anger, depression, and the fear of death. His last work, the *Passions of the Soul*, published after his death in 1650, developed out of an exchange of

letters with the lonely and intellectual Princess Elizabeth of Bohemia. The *Passions* describe the physical symptoms attached to the emotions and offer moral advice about their management.

Descartes's personal life can be reconstructed from the five volumes of letters he left behind. These convey the impression of a proud, sensitive, somewhat emotionally volatile man, anxious as to his reputation and not always perfectly straightforward in his accounts of himself, but whose commitment to clarity and truth is beyond doubt. His irascible and jealous nature did not preclude warmth and tenderness. He had an illegitimate daughter who died in early childhood and for whom he grieved for a long time. His letters touching on love and the passions have recently begun to intrigue commentators, some of whom note the first intimations of a theory of the unconscious.

THE *MEDITATIONS*

Many earlier philosophical books had purported to answer the questions of metaphysics and epistemology posed in the opening paragraph above. For all the precise and subtle reasoning employed by their authors, they were known to contradict one another. Worse, the plurality of opinions seemed to give rise to the following paradox: If we do not know what is *metaphysically* true about God, the mind, and the world, and what is false and confused, how can we establish that a particular philosopher's *epistemological* conception of how to distinguish truth from falsehood is not false and confused? At the same time, if we cannot have confidence in a particular philosopher's epistemology, how can we trust the metaphysical conclusions presented in the philosopher's writings?

The *Meditations* address this paradox. Descartes makes no direct reference in this text to past philosophers and their writings. He does not build on, or try to develop or refute the ideas of other philosophers, at least not explicitly. Like a mathematician, he tries to formulate a self-contained proof. (Mathematically inclined readers will be reminded of the method of "indirect proof," in which we assume that a proposition that we suspect is true is actually false.) Like an experimentalist, he changes ordinary conditions to see what happens. (His contemporary Francis Bacon tried carrying a clock down to the

bottom of a mine and stuffing the carcass of a chicken with snow; Galileo Galilei rolled a ball down a carefully constructed inclined plane.) Whether one sees the Meditator as trying out a thought-experiment in which customary ways of thinking are controlled and constrained like experimental objects, or as trying out the equivalent of an indirect proof in mathematics, the starting point of the *Meditations* is largely free of positive assumptions. The Meditator settles on a policy of radical and systematic doubt, uncertain at first whether anything is thereby to be gained. As it turns out, the policy is successful. It leads to significant discoveries in both metaphysics and epistemology – and to the discovery of some fundamental principles of natural philosophy concerning the human body and the bodies surrounding it. The Meditator even becomes convinced that, if future inquirers adopt his method, they will be able to make further discoveries about themselves and about the material world.

The *Meditations* are written from the first-person perspective of a narrator, the Meditator. Is the "I" of the *Meditations* René Descartes himself, recounting what he experienced and thought, over a period of precisely six days in 1640? Many introductions to the *Meditations* treat the Meditator as Descartes and describe Descartes as entertaining certain propositions or as coming to accept certain conclusions. I have not followed this practice for several reasons. First, the assumption that the "I" of the *Meditations* should be identified with the historical Descartes seemed methodologically unsound, insofar as the Six Days of Meditation never occurred, at least as far as we know. A number of the insights that suddenly occur to the Meditator – including the insight immortalized in the phrase *cogito, ergo sum*: I think, therefore I am – had occurred to the historical Descartes years earlier. The historical Descartes had even long since worked out an entire system of the physical universe and the human body of which he was quite certain, which the Meditator gives no hint of having ever done. The Meditator is better regarded as a fictional character (who could have existed) in a story taking the form of a voyage of intellectual (rather than geographical) discovery. The historical Descartes tells the story of the Meditator to a certain purpose, as is explained in Chapter 12.

Descartes believed that anyone who started at the Meditator's starting point and who employed his reasoning powers appropriately

would arrive at precisely the same conclusions as his Meditator does. He was not merely expressing the views *he* had arrived at by following a particular train of thought that could well have gone in a number of other directions. Everyone, according to Descartes, not only those with special aptitude and schooling, can be or become a philosopher. He wanted his audience to identify with his Meditator and to think along with his Meditator – and it is hard not to do so. While it might have seemed appropriate to refer to the Meditator as "It," especially since, for more than five of the six *Meditations*, the Meditator is unpersuaded of the existence of an external world and of the Meditator's own body, custom and clarity dictated the use of the anthropological pronouns, and I have accordingly alternated between "he" and "she," for the most part on a *Meditation*-by-*Meditation* basis.

Descartes believed that, while later investigators might add to the knowledge of nature indefinitely, the answers he had given in the *Meditations* to the metaphysical and epistemological questions posed above were authoritative and final. His arguments were sound and his conclusions could not be overturned. Nor was there anything significant to be added to them. Are Descartes's claims about the nature of truth, God, the mind, and the world really authoritative and final? Many of Descartes's contemporaries – the more famous amongst them as well as the more obscure – strenuously denied that they were. Others became convinced Cartesians. Every reader of the *Meditations* has to try to decide the question for him or herself, by following the arguments and by applying to them the rigorous standards of critical thinking on which Descartes himself insisted.

The question whether Descartes's claims were all true and adequately demonstrated is of course different from the question of his influence on the history of modern philosophy and modern science. This influence is profound, and Descartes can be said to have defined the main problems of modern philosophy for his immediate successors, Spinoza, Malebranche, Leibniz, and Berkeley. The best reason for reading Descartes, however, is not that what he said is beyond criticism, nor that his historical role as founder of modern philosophy makes him a worthy author. Rather, reading Descartes is a good experience, the philosophical equivalent of a journey to an interesting territory undertaken in the company of an agreeable stranger. No matter how many times one has read and annotated a copy of the

Meditations, a fresh reading is virtually guaranteed to bring new ideas and insights.

Besides the sharp distinction preserved in this text between the historical Descartes – the seventeenth-century intellectual combatant, friend and foe of numerous illustrious philosophers – and his solitary Meditator, two other departures from past convention are worth mentioning. First, the present commentary proceeds in strict chronological order, taking the arguments in exactly the sequence in which they come. Each section is geared to a set of quotations from the *Meditations* that are identified by a reference to the standard edition of Descartes's writings. Second, discussion of the *Objections* to the *Meditations* and Descartes's *Replies* to them has been relegated to the end of the main chapters.

THE *OBJECTIONS* AND *REPLIES*

The seven sets of *Objections* and *Replies* that Descartes appended to his *Meditations* are indispensable to an understanding of his main text. Recognizing their importance, past studies have moved back and forth between exposition and interpretation of Descartes's doctrine and analysis of the reactions to it by the more notable of his commentators. As well as forcing the reader to identify Descartes and the Meditator, this treatment interrupts the flow of the *Meditations.* Descartes could have written a dialectical treatise, considering and answering objections as he went along. He explains his reasons for not doing so and, as they are entirely credible, I resolved to respect them, even when some explanatory digressions were required to explain the main text. Young persons of my acquaintance pointed out that some readers would be tempted to skip the discussion of the *Objections* and *Replies* at the end of each chapter. Well, an author is not after all a policeman . . . I can only hope that readers will not succumb to this temptation, even if it is only for self-interested reasons. The criticisms raised and parried not only clarify the meaning of the earlier text and deepen the reader's appreciation of the issues, but are an excellent source of topics for examinations and term papers.

Though I have tried to represent Descartes's arguments and intentions as objectively as possible, every commentary is at the same time

an interpretation and the present commentary is no exception. I have taken the doctrine of the good body of *Meditation Six* to be Descartes's intended contribution to natural philosophy and have laid more than usual emphasis on the preoccupation of his critics with the possibility that God is fictional and that corporeal substance can think. My intellectual debts to the books and articles cited in the section on Further Reading and to colleagues and students are at the same time substantial. Discussions with Husain Sarkar and Gábor Boros helped especially to shape my understanding of Descartes's procedures on one hand and of the theodicy hidden in his metaphysics on the other. I am also grateful to Tim Christie for assistance with the Index, and to Hilary Gaskin for proposing the project and for sound advice along the way. The edition cited is *The Philosophical Writings of Descartes*, 3 volumes, translated by John Cottingham, Robert Stoothoff, Dugald Murdoch and Anthony Kenny (Cambridge, Cambridge University Press, 1984–91). References in the text (AT) are to the standard edition, *Oeuvres de Descartes*, 11 volumes, edited by Charles Adam and Paul Tannery (Paris, Vrin/CNRS, 1964–76). Citations are by volume number and page, as these are given in the English translation.

CHAPTER I

The situation of the Meditator is described and his desire to demolish everything and begin again is explored, while the Reader is introduced to some basic philosophical concepts

I THE MEDITATOR – THE BUILDING METAPHOR–"KNOWLEDGE-CONDITIONS" – SCIENTIFIC AND UNSCIENTIFIC MENTALITIES (AT VII:17–18)

> Some years ago I was struck by the large number of falsehoods that I had accepted as true in my childhood, and by the highly doubtful nature of the whole edifice that I had subsequently based on them. I realized that it was necessary, once in the course of my life, to demolish everything completely and start again right from the foundations if I wanted to establish anything at all in the sciences that was stable and likely to last. (VII:17)

Our first introduction to the Meditator finds him in a mood of disillusion but, at the same time, full of confident resolve.

The Meditator's aim, it seems, is to establish something in the sciences that will be "stable and likely to last." He has apparently just realized that he is going to have to "demolish everything completely" and start again "right from the foundations" in order to accomplish this task.

This announcement raises a number of questions. Who is the Meditator and why is he so disenchanted? How did the Meditator discover "some years ago" that the beliefs he had acquired in childhood and built on subsequently were falsehoods? Why did he wait so long to do anything about this grievous state of affairs? What is the plan to demolish "everything" completely and why does the Meditator

think demolishing everything is the essential first step to establishing "something" firm in the sciences?

We know very little about the Meditator. He must be an adult, since he refers to his childhood as past. He seems to be at least temporarily relieved of the pressures of having to make a living, though he refers to "worries" that he has for the moment set aside. He has some leisure in which to reflect. Otherwise, we know nothing about the Meditator, not his age, his educational and family background, or his customary occupation, only that he is dissatisfied with the number of falsehoods he has accepted and that he sees the need to remedy this situation.

The sudden emergence of a decision to change one's life completely after years of inaction is not beyond comprehension. One who has lived in the same city for twenty years might come to the realization that a large number of the friendships established in childhood and maintained since are weighing him down. One who has lived all her life in an apartment inherited from her deceased parents might come in time to appreciate the inadequacy of the roof, the faulty plumbing, and the defects in the appliances. Regardless of feelings of familiarity and attachment, one might become convinced that these fixtures have to go.

Of course, in order to build, it is not usually necessary to demolish "everything completely." Even if your circle of friends seems tiresome, there are usually one or two you would just as soon keep. Sometimes an old flat can be restored and refurbished. At other times, partial measures do not seem to work. The old structure can get in the way of the new structure. The old building may have to be dynamited and carted away before new construction goes up.

The two vignettes capture something of the Meditator's situation. Like familiar companions and familiar surroundings, his old beliefs served him well enough for a time, but increasingly he sees them as unsatisfactory, in the same way that the people and surroundings of one's childhood can come to seem limited. The Meditator even expresses his dissatisfactions through an analogy between what might be called his "knowledge-condition" and an old building he inhabits. An individual's knowledge-condition can be thought of on analogy with his or her "health-status" or "financial condition." My knowledge-condition is the good, bad, or indifferent condition I am in with

respect to possessing knowledge, as opposed to possessing health or money.

There are many respects in which possessing knowledge is not much like owning or living in a house. There are, however, several similarities that make the analogy work, beyond the fact that both knowledge and houses can be expensive to acquire. A house is *constructed*: it is built up out of various materials – wood, metal, sand – collected in the environment or acquired from others. These are not thrown into a pile together, but are given a structure. Knowledge, too, is built up out of observations collected in the environment or acquired from others. The data of experience have to be assembled in a certain way or we will have nothing more than a chaos of sensations such as we suppose infants to have. A house is *functional*: it offers a place to eat, rest, and store things. A mind well-stocked with knowledge-items provides psychological nourishment and recreation. Moreover, being well informed is a precondition of making sensible decisions in practical matters. Finally, a house can be *expanded* and *improved*: I can clean out musty corners, upgrade the plumbing or wiring, add rooms, terraces, balconies, or entire stories. My knowledge can be upgraded, expanded, and improved as well. I can rid myself of misconceptions, refine my knowledge of particular topics, and master entirely new subject areas.

There are several further similarities. A house can be erected carelessly, without a proper foundation, leaving it in danger of collapse. A house, however elaborate and ornate, can also be only a dream-castle that has no substantiality and that will vanish as soon as I wake up or come out of my reverie. Analogously, my knowledge-condition can be without good and proper foundations and accordingly shaky, or even purely illusory.

When a sweet illusion vanishes – say, the illusion that one was going to capture some attractive prize with little trouble – one's feeling is often that the props that were holding up one's view of the world have been kicked out and that something has collapsed. Nevertheless, the Meditator has two distinct worries, one about the *foundations* of his knowledge, another about its possibly *illusory* character. A dream-edifice cannot collapse – though it can be dreamed to collapse. Dream castles do not come with dream-foundations, or dream-plumbing and wiring, for that matter. An edifice without a foundation cannot,

in the ordinary course of things, vanish into nothing. Still, what is "groundless" or "unfounded" merges in our experience with what is delusory. Both are threats to the stability and permanence of the house the Meditator imagines himself to possess.

The Meditator has not explained where his feelings of insecurity and doubt with respect to his knowledge-condition stem from. Why does he think that a complete overhaul of his existing beliefs is called for? This question is perhaps best approached by scrutinizing his wish to establish something in the sciences that is "stable and likely to last," since this is the avowed purpose of the planned destructive activity.

Which sciences is the Meditator interested in, one might wonder? After all, there are many sciences – anatomy, chemistry, mathematics, physics, physiology, astronomy – representing the various specialties. No one can seriously wish to contribute significantly to all of them. The Meditator does not say to which science he wishes to contribute. He does not present the familiar profile of the enthusiast for black holes, sharks, prime numbers, or some other particular type of object or phenomenon that has produced total scientific dedication in this person. The Meditator may, for all we know, be fascinated by some particular type of object, or some phenomenon, but he has not given any clue so far. All we know is that he has general scientific ambitions. So it is appropriate to ask: What differentiates the general orientation of the scientist from the nonscientist's? What is it to want, in a general way, to establish something in the sciences without being an enthusiast for a particular subject?

Here is a provisional, doubtless somewhat controversial, characterization: Both the scientist and the nonscientist are interested in "things" – natural things, manufactured things, social things, experienced things. The nonscientist (more precisely, the person whose attitude towards things at the moment is not scientific) thinks about, looks at, interacts with, describes, imagines, dreams of, tries to obtain, hopes for, ignores, or fears things. The scientist (more precisely, the person adopting at the moment the scientific stance towards things) is in pursuit of nonobvious truths about things – truths that can only be discovered by long observation, or by observation under controlled circumstances, by experimentation, by precise measurement. One can have either a scientific or a nonscientific attitude towards any and all

of the following: dreams, tropical birds, hairstyles, soil . . . depending on whether one is trying to find out some nonobvious truth about them, or just thinking about them, or liking, or not liking, some of them.

Often, scientists voice the opinion that knowing nonobvious truths about things is useful, claiming that possession of the truth enables human beings to change the world for the better. Advances in scientific knowledge, it is often said, can be applied to the relief of physical and psychological suffering and deprivation, prolonging life and health and making us less susceptible to misfortune. Scientists may even explain why they wanted to become or are gratified to be scientists by reference to their altruistic motives. Yet – think on what happened to Pandora with her Box, or the development of the atomic bomb – the pursuit of nonobvious truths about what things are really like, or what is inside them, can be dangerous. Scientists can be deluded about the benefits to humanity that will flow from the pursuit of some nonobvious truth, or about the appropriateness of some kinds of science for someone with genuinely altruistic motives. Just as often, however, scientists express their opinion that the successful pursuit of nonobvious truth provides them with a unique kind of personal satisfaction that cannot be obtained in any other way. To have a scientific orientation is not necessarily to be interested in power and control, or even in providing benefits to humanity. One can want to be a scientist because one finds knowledge of nonobvious truths worth having for its own sake.

The scientist – whether practically inclined and altruistically motivated or disinterested – (we can ignore the rare malevolent scientist who truly wishes to worsen the condition of the world) – has a further, important, goal in addition to that of getting to know many nonobvious truths. He or she does not want to believe anything that is false. It is just as important not to accept as true many nonobvious errors and superstitions as not to be ignorant of the truth. Skepticism is an important feature of the scientific attitude.

The provisional characterization of the scientific attitude just given does not permit us decisively to classify all orientations towards a thing as scientific or nonscientific. Is my study of the prices, heights, and colors of tulips for sale over the Internet "scientific?" Yes, but only weakly so; for the knowledge I am seeking, though not obvious to

everybody, is relatively superficial. Are the detailed investigations of a jealous lover into the beloved's behavior "scientific?" They are certainly intended to get at some nonobvious truths that will change the condition of the world for the better – in the eyes of the investigator, anyway. However, the distanced, skeptical attitude may be conspicuously lacking. There is a continuum between scientific and nonscientific interests, with some kinds of investigation resembling more closely our stereotype of scientific activity as laboratory work carried out in a white coat with a microscope. The definition given should, however, be enough to start with. As an aspiring scientist, the Meditator is oriented to the discovery of some nonobvious truths about things, and likely believes both that practical benefits will flow from their discovery and that their discovery is intrinsically satisfying.

There are two ways to address the question of the Meditator's dissatisfaction with his knowledge-condition, keeping in mind the analogy between knowledge and houses. One can take a *historical* perspective and ask why someone of a certain background, living like the author of the *Meditations* in Amsterdam in the middle of the seventeenth-century, might have come to doubt whether his or her knowledge was in good condition. One can also take a *timeless* perspective and ask why anyone, in any historical era – for example, in the early twenty-first century – might come to doubt whether his or her knowledge was in good condition. Let us take up the historical question first.

Today, we are accustomed to the idea that scientific discovery builds on previous discovery, that scientific knowledge is cumulative. From Copernicus's astronomy, the modern theory of the universe was born. From the theory of elements discovered in the eighteenth century, modern chemistry was born. Furthermore, our latest methods and techniques seem to build on our experience with previous methods and techniques. "Scientific method," as we know it, comprises certain tests and procedures. For example, it is often said that scientific hypotheses must be verifiable or falsifiable by experiment, that experimental results must be reproducible, and that quantitative relationships should be sought corresponding to all qualitative differences. Science also comprises certain techniques – the employment of statistical inference based on the laws of probability, methods for