

**Meditations on First Philosophy**  
in which are demonstrated the existence of God and the distinction between  
the human soul and body

René Descartes

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[Brackets] enclose editorial explanations. Small ·dots· enclose material that has been added, but can be read as though it were part of the original text. Occasional •bullets, and also indenting of passages that are not quotations, are meant as aids to grasping the structure of a sentence or a thought. Every four-point ellipsis . . . . indicates the omission of a brief passage that seems to present more difficulty than it is worth.—In his title for this work, Descartes is following a tradition (started by Aristotle) which uses ‘first philosophy’ as a label for metaphysics.

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## Fifth Meditation: The essence of material things, and the existence of God considered a second time

There are many enquiries still to be made about God's attributes, and many about my own nature (that is, the nature of my mind). I may take these up at some time; but right now I have a more pressing task. Now that I have seen how to reach the truth—what to do and what to avoid—I must try to escape from the doubts that beset me a few days ago, and see whether anything can be known for certain about material objects.

Before enquiring into whether there are any such things, I should consider the *ideas* of them in my thought, in order to see which of those ideas are distinct and which confused.

I distinctly imagine *quantity*—that is, the length, breadth and depth of the quantity, or rather of the thing that is quantified. I also enumerate the thing's parts, to which I attribute various sizes, shapes, positions and movements; and to the movements I attribute various durations, that is, I say how long each movement lasts.

Size, shape, position and so on are well known and transparent to me as *general kinds* of phenomenon, but there are also countless *particular* facts involving them that I perceive when I attend to them. The truths about all these matters are so open to me, and so much in harmony with my nature, that when I first discover any of them it feels less like •learning something new than like •remembering something I had known before, or •noticing for the first time something that was already in my mind without my having turned my mental gaze onto it.

The most important point is that I find in myself countless ideas of things that can't be called *nothing*, even if they don't exist anywhere outside me. For although I am free to think

of these ideas or not, as I choose, *I didn't invent them*: they have their own true and immutable natures, which are not under my control. Even if there are not and never were any triangles outside my thought, still, when I imagine a triangle I am constrained in how I do this, because there is a determinate nature or essence or form of *triangle* that is eternal, unchanging, and independent of my mind. Consider the things that I can prove about the triangle—that its three angles equal two right angles, that its longest side is opposite its greatest angle, and so on. I now clearly recognize these properties of the triangle, whether I want to or not, even if I didn't give them a thought when the triangle first came into my mind. So they can't have been invented by me.

It does not help to point out that I have sometimes seen triangular bodies, so that the idea of the triangle might have come to me from them through my sense organs. I can prove truths about the properties not only of triangles but of countless other shapes that I know I have never encountered through the senses. These properties must be *something*, not pure nothing: whatever is true is something; and these properties are true because I am clearly aware of them. (I have already proved that everything of which I am clearly aware is true; and even if I hadn't proved it, my mind is so constituted that I *have to* assent to these •geometrical• propositions as long as I perceive them.) I remember, too, that even back in the times when the objects of the senses held my attention, I regarded the clearly apprehended propositions of pure mathematics—including arithmetic and geometry—as the most certain of all.

·The preceding two paragraphs lead to this conclusion·: The mere fact that I find in my thought an idea of something *x*, and vividly and clearly perceive *x* to have a certain property, it follows that *x* really does have that property. Can I not turn this to account in an argument - a demonstrative proof of the existence of God? The idea of God (that is, of a supremely perfect being) is certainly one that I find within me, just as I find the ideas of shapes and numbers; and I understand ·from this idea· that it belongs to God's nature that *he always exists*. This understanding is just as vivid and clear as what is involved in ·mathematical· proofs of the properties of shapes and numbers. So even if I have sometimes gone wrong in my meditations in these past days, I ought still to regard the existence of God as being at least as certain as I have taken the truths of mathematics to be.

At first sight, this looks like a trick. Where things other than God are involved, I have been accustomed to distinguish a thing's existence from its essence. ·The question 'What is the *essence* of triangles (or flames or sparrows)?' asks what it takes for something to qualify as a triangle (or flame or sparrow). Answering this still leaves open the *existence* question, which asks whether there are any triangles (or flames or sparrows)·. I can easily believe that in the case of God, also, existence can be separated from essence, ·letting us answer the ·essence question about God while leaving the ·existence question open·, so that God can be thought of as not existing. But on more careful reflection it becomes quite evident that, just as having-internal-angles-equal-to-180° can't be separated from the idea ·or essence· of a triangle, and as the idea of highlands can't be separated from the idea of lowlands, so existence can't be separated from the essence of God. Just as it is self-contradictory to think of *highlands in a world where there are no lowlands*, so it is self-contradictory to think of *God as not existing*—that is, to

think of a supremely perfect being as lacking a perfection, namely the perfection of existence. [What Descartes wrote is usually translated as 'mountains in a world where there are no valleys', but that is *obviously* not self-contradictory. The Latin provides no escape from this, but Descartes may have been thinking in French, in which *vallée* can mean 'valley' in our sense but can be used to refer to foothills, the lower slopes of a mountain, or the plain immediately surrounding the mountain. So 'highlands'/'lowlands' has been adopted as a compromise: compact and fairly close to what he presumably meant.]

·Here is a possible objection to the preceding two paragraphs·:

I can't think of God except as existing, just as I can't think of a river without banks. From the latter fact, though, it certainly doesn't follow that there are any rivers in the world; so why should it follow from the former fact that God exists? How things are in reality is not settled by my thought; and just as I can imagine a winged horse even though no horse has wings, so I can attach existence to God in my thought even if no God exists.

This involves false reasoning. From the fact that I can't think of a river without banks, it does not follow that a river with banks exists anywhere, but simply that *river* and *banks*—whether or not there are any in reality—are inseparable. On the other hand, from the fact that I can't think of God except as existing it follows that *God* and *existence* are inseparable, which is to say that God really exists. My thought doesn't make it so; it doesn't create necessities. The influence runs the opposite way: the necessity of the thing constrains how I can think, depriving me of the freedom to think of God without existence (that is, a supremely perfect being without a supreme perfection), like my freedom to imagine a horse with or without wings.

Here is a further possible objection to this line of thought:

Admittedly, once I have supposed that all perfections belong to God, I must suppose that he exists, because existence is one of the perfections. But what entitles me to suppose God to have all perfections? Similarly, if I suppose that all quadrilaterals can be inscribed in a circle, I have to conclude that a rhombus can be inscribed in a circle; but that is plainly false, which shows that the original supposition was wrong.

I agree that I don't have to think about God at all; but whenever I do choose to think of him, bringing the idea of *the first and supreme being* out of my mind's store, I must attribute all perfections to him, even if I don't attend to them individually straight away. This necessity in my thought guarantees that, when I later realize that existence is a perfection, I am right to conclude then that the first and supreme being exists. Similarly, I don't ever have to imagine a triangle; but whenever I do wish to consider a figure with straight sides and three angles, I must attribute to it properties from which it follows that its three angles equal no more than 180°, even if I don't notice this at the time. When on the other hand I examine what figures can be inscribed in a circle, I am not compelled to think that this class includes all quadrilaterals. Indeed, I cannot—while thinking vividly and clearly—even pretend that all quadrilaterals can be inscribed in a circle. This kind of false pretence is vastly different from the true ideas that are innate in me, of which the first and chief is the idea of God. This idea isn't a fiction, a creature of my thought, but rather an image of a true and unchanging nature; and I have several indications that this is so. God is the only thing I can think of whose existence necessarily belongs to its essence. I can't make sense of there being two or more Gods of this kind; and after supposing that

one God exists, I plainly see that it is necessary that he has existed from eternity and will stay in existence for eternity. I perceive many other attributes of God, none of which I can remove or alter.

Whatever method of proof I use, though, I am always brought back to the fact that nothing completely convinces me except what I vividly and clearly perceive. Some things that I vividly and clearly perceive are obvious to everyone; others can be learned only through more careful investigation, but once they are discovered they are judged to be just as certain as the obvious ones. (Compare these two truths about right-angled triangles: 'The square on the hypotenuse equals the sum of the squares on the other two sides' and 'The hypotenuse is opposite the largest angle'. The former is less obvious than the latter; but once one has seen it, one believes it just as strongly.) Truths about God are not in the immediately obvious class, but they ought to be. If I were not swamped by preconceived opinions, and if my thoughts were not hemmed in and pushed around by images of things perceived by the senses, I would acknowledge God sooner and more easily than anything else. The supreme being exists; God, the only being whose essence includes existence, exists; what is more self-evident than that?

Although I came to see this only through careful thought, I am now just as certain of it as I am of anything at all. Not only that, but I see that all other certainties depend on this one, so that without it I can't know anything for sure. The next two paragraphs explain why this is so.

While I am perceiving something vividly and clearly, I can't help believing it to be true. That is a fact about my nature. Here is another: I can't fix my mind's eye continually on the same thing, so as to keep perceiving it clearly; so that sometimes the arguments that led me to a certain conclusion slip out of my focus of attention, though I remember the

conclusion itself. That threatens me with the following state of affairs, from which I am protected only by being aware of the existence of God:

In a case where I am not attending to the arguments that led me to a conclusion, my confidence in the conclusion might be undermined by arguments going the other way. When I think hard about triangles, for instance, it seems quite obvious to me—steeped as I am in the principles of geometry—that a triangle's three angles are equal to  $180^\circ$ ; and while I am attending to the proof of this I can't help believing it. But as soon as I turn my mind's eye away from the proof, then in spite of still remembering *that* I perceived it very clearly ·but without now getting it clear in my mind again·, I can easily doubt its truth. So nothing is ever finally established and settled—I can have no true and certain knowledge, but only shifting and changeable opinions. For I can convince myself that I am naturally liable to go wrong sometimes in matters that I think I perceive as evidently as can be. This seems even more likely when I remember that I have often regarded as certainly true some propositions that other arguments have later led me to think false.

That is what my situation would be if I were not aware of the existence of God.

But now I have seen that God exists, and have understood that everything else depends on him and that he is not a deceiver; from which I have inferred that *everything that I vividly and clearly perceive must be true*. So even when I am no longer attending to the arguments that led me to

accept this (·i.e. the proposition about triangles·), as long as I remember that I vividly and clearly perceived it no counter-arguments can make me doubt it. It is something that I know for certain ·and in an unshakable way· to be true. That applies not only to this one proposition but to anything that I remember ever having proved in geometry and the like. Why should I call these matters into doubt? •Because I am so built as to be prone to frequent error? No: I now know that when I have something in mind in a transparently clear way I cannot be in error about it. •Because I have in the past regarded as certainly true many things that I afterwards recognized to be false? No: the things that I later came to doubt had not been vividly and clearly perceived in the first place: I had come to accept them for reasons that I later found to be unreliable, because I hadn't yet discovered this rule for establishing the truth. •Because I may be dreaming, so that my present thoughts have as little truth as those of a person who is asleep? I put this objection to myself a while ago. It doesn't change anything, because if something is evident to my intellect, even when I am dreaming, then it is true.

Thus I see plainly that the certainty and truth of all knowledge depends strictly on my awareness of the true God. So much so that until I became aware of him I couldn't perfectly know anything. Now I can achieve full and certain knowledge of countless matters, both concerning God himself and other things whose nature is intellectual, and also concerning the whole of the corporeal nature that is the subject-matter of pure mathematics.

## Sixth Meditation: The existence of material things, and the real distinction between mind and body

The remaining task is to consider whether material things exist. Insofar as they are the subject-matter of pure mathematics, I perceive [here = 'conceive'] them vividly and clearly; so I at least know that they *could* exist, because anything that I perceive in that way could be created by God. (The only reason I have ever accepted for thinking that •something could *not* be made by him is that there would be a contradiction in my perceiving •it distinctly.) My faculty of imagination, which I am aware of using when I turn my mind to material things, also suggests that such things really exist. For when I think hard about what imagination is, I find that it is nothing but an application of •the faculty of *knowing* to •a body that is intimately present to it—and that has to be a body that exists.

To make this clear, I will first examine how •imagination differs from •pure understanding. When I imagine a triangle, for example, I don't merely •understand that it is a three-sided figure, but I also •see the three lines with my mind's eye as if they were present to me; that is what imagining is. But if I think of a chiliagon [= 'thousand-sided figure', pronounced *kill-ee-a-gon*], although I •understand quite well that it is a figure with a thousand sides, I don't •imagine the thousand sides or see them as if they were present to me. When I think of a body, I usually form some kind of image; so in thinking of a chiliagon I may construct in my mind—strictly speaking, in my imagination—•a confused representation of some figure. But obviously it won't be a chiliagon, for it is the very same image that I would form if I were thinking of, say, a figure with ten thousand sides. So it wouldn't help me to recognize the properties that distinguish a chiliagon

from other many-sided figures. In the case of a pentagon, the situation is different. I can of course *understand* this figure without the help of the imagination (just as I can understand a chiliagon); but I can also *imagine* a pentagon, by applying my mind's eye to its five sides and the area they enclose. This imagining, I find, takes more mental effort than understanding does; and that is enough to show clearly that imagination is different from pure understanding.

Being able to imagine isn't essential to me, as being able to understand is; for even if I had no power of imagination I would still be the same individual that I am. This seems to imply that my power of imagining depends on something other than myself; and I can easily understand that •if there is such a thing as *my body*—that is, if my mind is joined to a certain body in such a way that it can contemplate that body whenever it wants to—then it *might* be this very body that enables me to imagine corporeal things. So it may be that imagining differs from pure understanding purely like this: •when the mind understands, it somehow turns in on itself and inspects one of its own ideas; but •when it imagines, it turns away from itself and looks at something in the body that *conforms to* an idea—either one understood by the mind or one perceived by the senses). I can, I repeat, easily see that this might be how imagination comes about if the body exists; and since I can think of no other equally good way of explaining what imagination is, I can conjecture that the body exists. But this is only a probability. Even after all my careful enquiry I still can't see how, on the basis of the idea of corporeal nature that I find in my imagination, to prove for sure that some body exists.

As well as the corporeal nature that is the subject-matter of pure mathematics, I am also accustomed to imagining colours, sounds, tastes, pain and so on—though not so distinctly. Now, I perceive these much better by means of the senses, which is how (helped by memory) they appear to have reached the imagination. So in order to deal with them more fully, I must attend to the senses—that is, to the kind of thinking [here = ‘mental activity’] that I call ‘sensory perception’. I want to know whether the things that are perceived through the senses provide me with any sure argument for the existence of bodies.

To begin with, I will (1) go back over everything that I *originally* took to be perceived by the senses, and reckoned to be true; and I will go over my reasons for thinking this. Next, I will (2) set out my reasons for *later* doubting these things. Finally, I will (3) consider what I should *now* believe about them.

(1) First of all, then, I perceived by my senses that I had a head, hands, feet and other limbs making up the body that I regarded as part of myself, or perhaps even as my whole self. I also perceived by my senses that this body was situated among many other bodies that could harm or help it; and I detected the favourable effects by a sensation of pleasure and the unfavourable ones by pain. As well as pain and pleasure, I also had sensations of hunger, thirst, and other such appetites, and also of bodily states tending towards cheerfulness, sadness, anger and similar emotions. Outside myself, besides the extension, shapes and movements of bodies, I also had sensations of their hardness and heat, and of the other qualities that can be known by touch. In addition, I had sensations of light, colours, smells, tastes and sounds, and differences amongst these enabled me to sort out the sky, the earth, the seas and other bodies from one another. All I was *immediately* aware of in each case

were my ideas, but it was reasonable for me to think that what I was perceiving through the senses were external bodies that caused the ideas. For I found that these ideas came to me quite without my consent: I couldn’t have *that* kind of idea of any object, even if I wanted to, if the object was not present to my sense organs; and I couldn’t avoid having the idea when the object *was* present. Also, since the ideas that came through the senses were much more lively and vivid and sharp than •ones that I formed voluntarily when thinking about things, and than •ones that I found impressed on my memory, it seemed impossible that sensory ideas were coming from within me; so I had to conclude that they came from external things. My only way of knowing about these things was through the ideas themselves, so it was bound to occur to me that the things might resemble the ideas. In addition, I remembered that I had the use of my senses before I ever had the use of reason; and I saw that the ideas that I formed were mostly composed of elements of sensory ideas. This convinced me that I had nothing at all in my intellect that I had not previously had in sensation. As for the body that by some special right I called ‘mine’: I had reason to think that it belonged to me in a way that no other body did. •There were three reasons for this. •I could never be separated from it, as I could from other bodies; •I felt all my appetites and emotions *in* it and *on account of* it; and •I was aware of pain and pleasurable ticklings in parts of this body but not in any other body. But why should that curious sensation of pain give rise to a particular distress of mind; and why should a certain kind of delight follow on a tickling sensation? Again, why should that curious tugging in the stomach that I call ‘hunger’ tell me that I should eat, or a dryness of the throat tell me to drink, and so on? I couldn’t explain any of this, except to say that nature taught me so. For there is no connection (or none that I understand)

between the tugging sensation and the decision to eat, or between the sensation of something causing pain and the mental distress that arises from it. It seems that *nature* taught me to make these judgments about objects of the senses, for I was making them before I had any arguments to support them.

(2) Later on, however, my experiences gradually undermined all my faith in the senses. A tower that had looked round from a distance appeared square from close up; an enormous statue standing on a high column didn't look large from the ground. In countless such cases I found that the judgments of the external senses were mistaken, and the same was true of the internal senses. What can be more internal than pain? Yet I heard that an amputee might occasionally seem to feel pain in the missing limb. So even in my own case, I had to conclude, it was not quite certain that a particular limb was hurting, even if I felt pain in it. To these reasons for doubting, I recently added two very general ones. •The first was that every sensory experience I ever thought I was having while awake I can also think of myself as having while asleep; and since I don't believe that what I seem to perceive in sleep comes from things outside me, I didn't see why I should be any more inclined to believe this of what I think I perceive while awake. •The second reason for doubt was that for all I knew to the contrary I might be so constituted that I am liable to error even in matters that seem to me most true. (I couldn't rule this out, because I did not know—or at least was pretending not to know—who made me.) And it was easy to refute the reasons for my earlier confidence about the truth of what I perceived by the senses. Since I seemed to be naturally drawn towards many things that reason told me to avoid, I reckoned that I should not place much confidence in what I was taught by nature. Also, I decided, the mere fact that the perceptions of the

senses didn't depend on my will was not enough to show that they came from outside me; for they might have been produced by some faculty of mine that I didn't yet know.

(3) But now, when I am beginning to know myself and my maker better, I don't think I should recklessly accept everything I seem to have acquired from the senses, but I don't think I should call it all into doubt.

First, I know that if I have a vivid and clear thought of something, God could have created it in a way that exactly corresponds to my thought. So the fact that I can vividly and clearly think of one thing apart from another assures me that the two things are distinct from one another—that is, that they are *two*—since they can be separated by God. Never mind *how* they could be separated; that does not affect the judgment that they are distinct. •So my mind is a distinct thing from my body. Furthermore, my mind is *me*, for the following reason. I know that I exist and that nothing else belongs to my nature or essence except that I am a thinking thing; from this it follows that my essence consists solely in my being a thinking thing, even though there may be a body that is very closely joined to me. I have a vivid and clear idea of •myself as something that thinks and isn't extended, and a clear idea of •body as something extended that does not think. So it is certain that •I am really distinct from •my body and can exist without it.

Besides this, I find that I am capable of certain special kinds of thinking [= 'mental activity'], namely imagination and sensory perception. Now, I can vividly and clearly understand •myself as a whole without •these faculties; but I can't understand •them without •me, that is, without an intellectual substance for them to belong to. A faculty or ability essentially involves *acts*, so it involves some *thing* that acts; so I see that •I differ from •my faculties as •a thing differs from •its properties. Of course there are other

faculties—such as those of moving around, changing shape, and so on—which also need a substance to belong to; but it must be a bodily or extended substance and not a thinking one, because a vivid and clear conception of those faculties includes extension but not thought. Now, I have a *passive* faculty of sensory perception, that is, an ability to *receive* and recognize ideas of perceptible objects; but I would have no use for this unless something—myself or something else—had an *active* faculty for *producing* those ideas in the first place. But this faculty can't be in me, since clearly it does not presuppose any thought on my part, and sensory ideas are produced without my cooperation and often even against my will. So sensory ideas must be produced by some substance other than me—a substance that actually *has* (either in a straightforward way or in a higher form) all the reality that is *represented* in the ideas that it produces. Either (a) this substance is a body, in which case it will •straightforwardly contain everything that is represented in the ideas; or else (b) it is God, or some creature more noble than a body, in which case it will contain •in a higher form whatever is to be found in the ideas. I can •reject (b), and• be confident that God does not transmit sensory ideas to me either directly from himself or through some creature that does not straightforwardly contain what is represented in the ideas. God has given me no way of recognizing any such 'higher form' source for these ideas; on the contrary, he has strongly inclined me to believe that bodies produce them. So if the ideas were transmitted from a source other than corporeal things, God would be a deceiver; and he is not. So bodies exist. They may not all correspond exactly with my sensory intake of them, for much of what comes in through the senses is obscure and confused. But at least bodies have all the properties that I vividly and clearly understand, that is, all that fall within the province of pure mathematics.

•Those are the •clearly understood properties of bodies •in general•. What about •less clearly understood properties (for example light or sound or pain), and properties of •particular bodies (for example the size or shape of the sun)? Although there is much doubt and uncertainty about them, I have a sure hope that I can reach the truth even in these matters. That is because God isn't a deceiver, which implies that he has given me the ability to correct any falsity there may be in my opinions. Indeed, everything that I am 'taught by nature' certainly contains some truth. For by 'nature' as a general term I now mean nothing other than God himself or the ordered system of created things established by him. And my own nature is simply the totality of things bestowed on me by God.

As vividly as it teaches me anything, my own nature teaches me that I have a body, that when I feel pain there is something wrong with this body, that when I am hungry or thirsty it needs food and drink, and so on. So I shouldn't doubt that there is some truth in this.

Nature also teaches me, through these sensations of pain, hunger, thirst and so on, that I (a thinking thing) am not merely *in* my body as a sailor is in a ship. Rather, I am *closely joined to it*—intermingled with it, so to speak—so that it and I form a unit. If this were not so, I wouldn't *feel* pain when the body was hurt but would *perceive* the damage in an intellectual way, like a sailor seeing that his ship needs repairs. And when the body needed food or drink I would intellectually understand this fact instead of (as I do) having confused sensations of hunger and thirst. These sensations are confused mental events that arise from the union—the intermingling, as it were—of the mind with the body.

Nature also teaches me that various other bodies exist in the vicinity of my body, and that I should seek out some of these and avoid others. Also, I perceive by my senses a

great variety of colours, sounds, smells and tastes, as well as differences in heat, hardness and so on; from which I infer that the bodies that cause these sensory perceptions differ from one another in ways that *correspond to* the sensory differences, though perhaps they don't *resemble* them. Furthermore, some perceptions are pleasant while others are nasty, which shows that my body—or rather my whole self insofar as I am a combination of body and mind—can be affected by the various helpful or harmful bodies that surround it.

However, some of what I thought I had learned from nature really came not from nature but from a habit of rushing to conclusions; and those beliefs could be false. Here are a few examples:

- that if a region contains nothing that stimulates my senses, then it must be empty;
- that the heat in a body resembles my idea of heat;
- that the colour I perceive through my senses is also present in the body that I perceive;
- that in a body that is bitter or sweet there is the same taste that I experience, and so on;
- that stars and towers and other distant bodies have the same size and shape that they present to my senses.

To think clearly about this matter, I need to define exactly what I mean when I say that 'nature teaches me' something. I am not at this point taking 'nature' to refer to the totality of what God has given me. From that totality I am excluding things that belong to the mind alone, such as my knowledge that *what has been done can't be undone* (I know this through the natural light, without help from the body). I am also excluding things that relate to the body alone, such as the tendency bodies have to fall downwards. My sole concern here is with what God has given to me as a combination of

mind and body. My 'nature', then, in this limited sense, does indeed teach me to avoid what hurts and to seek out what gives pleasure, and so on. But it doesn't appear to teach us to rush to conclusions about things located outside us without pausing to think about the question; for knowledge of the truth about such things seems to belong to the mind alone, not to the combination of mind and body. So, although a star has no more effect on my eye than a candle's flame, my thinking of the star as no bigger than the flame does not come from any positive 'natural' inclination to believe this; it's just a habit of thought that I have had ever since childhood, with no rational basis for it. Similarly, although I feel heat when I approach a fire and feel pain when I go too near, there is no good reason to think that something in the fire resembles the heat, or resembles the pain. There is merely reason to suppose that something or other in the fire causes feelings of heat or pain in us. Again, even when a region contains nothing that stimulates my senses, it does not follow that it contains no bodies. I now realize that in these cases and many others I have been in the habit of misusing the order of nature. The right way to use the sensory perceptions that nature gives me is as a guide to what is beneficial or harmful for my mind-body complex; and they are vivid and clear enough for *that*. But it is a misuse of them to treat them as reliable guides to the essential nature of the bodies located outside me, for on that topic they give only very obscure and confused information.

I have already looked closely enough at how I may come to make false judgments, even though God is good. Now it occurs to me that there is a problem about •mistakes I make regarding the things that nature tells me to seek out or avoid, and also regarding •some of my internal sensations. Some cases of this are unproblematic. Someone may be tricked into eating pleasant-tasting food that has poison

concealed in it; but here nature urges the person towards the pleasant food, not towards the poison, which it doesn't know about. All this shows is that the person's nature doesn't know everything, and that is no surprise.

But often enough we go wrong about things that nature urges us towards. Sick people, for example, may want food or drink that is bad for them. 'They go wrong because they are ill'—true, but the difficulty remains. A sick man is one of God's creatures just as a healthy one is, and in each case it seems a contradiction to suppose that God has given him a nature that deceives him.

A badly made clock conforms to the laws of its nature in telling the wrong time, just as a well made and accurate clock does; and we might look at the human body in the same way. We could see it as a kind of machine made up of bones, nerves, muscles, veins, blood and skin in such a way that, even if there were no mind in it, it would still move exactly as it now does in all the cases where movement isn't under the control of the will or, therefore, of the mind. If such a body suffers from dropsy [a disease in which abnormal quantities of water accumulate in the body], for example, and is affected by the dryness of the throat that normally produces in the mind a sensation of thirst, that will affect the nerves and other bodily parts in such a way as to dispose the body to take a drink, which will make the disease worse. Yet this is as *natural* as a healthy body's being stimulated by a similar dryness of the throat to take a drink that is good for it. 'In a way, we might say, it is *not* natural'. Just as we could say that a clock that works badly is 'departing from its nature', we might say that the dropsical body that takes a harmful drink is 'departing from its nature', that is, from the pattern of movements that usually occur in human bodies. But that involves using 'nature' as a way of comparing one thing with another—a sick man with a healthy one, a badly made clock

with an accurate one—whereas I have been using 'nature' not to make comparisons but to speak of what can be found in the things themselves; and this usage is legitimate.

When we describe a dropsical body as having 'a disordered nature', therefore, we are using the term 'nature' merely to compare sick with healthy. What has gone wrong in the mind-body complex that suffers from dropsy, however, is not a mere matter of comparison with something else. There is here a real, intrinsic error of nature, namely that the body is thirsty at a time when drink will cause it harm. We have to enquire how it is that the goodness of God does not prevent nature from deceiving us in this way. 'This enquiry will fall into four main parts'.

•There is a great difference between the mind and the body. Every body is by its nature divisible, but the mind can't be divided. When I consider the mind—i.e. consider myself purely as a thinking thing—I can't detect any parts within myself; I understand myself to be something single and complete. The whole mind seems to be united to the whole body, 'but not by a uniting of parts to parts, because:'. If a foot or arm or any other part of the body is cut off, nothing is thereby taken away from the mind. As for the faculties of willing, of understanding, of sensory perception and so on, these are not *parts* of the mind, since it is one and the same mind that wills, understands and perceives. 'They are (I repeat) not *parts* of the mind, because they are *properties* or *powers* of it'. By contrast, any corporeal thing can easily be divided into parts in my thought; and this shows me that it is really divisible. This one argument would be enough to show me that the mind is completely different from the body, even if I did not already know as much from other considerations 'in (3) on page 29'.

•The mind isn't immediately affected by all parts of the body but only by the brain—or perhaps just by the small part

of it which is said to contain the 'common sense'. [Descartes is referring to the pineal gland. The 'common sense' was a supposed faculty, postulated by Aristotle, whose role was to integrate the data from the five specialized senses.] The signals that reach the mind depend upon what state this part of the brain is in, irrespective of the condition of the other parts of the body. There is abundant experimental evidence for this, which I needn't review here.

•Whenever any part of the body is moved by another part that is some distance away, it can be moved in the same fashion by any of the parts that lie in between, without the more distant part doing anything. For example, in a cord ABCD, if one end D is pulled so that the other end A moves, A could have been moved in just the same way if B or C had been pulled and D had not moved at all. Similarly, when I feel a pain in my foot, this happens by means of nerves that run from the foot up to the brain. When the nerves are pulled in the foot, they pull on inner parts of the brain and make them move; and nature has laid it down that this motion should produce in the mind a sensation of *pain as though occurring in the foot*. But since these nerves stretch from the foot to the brain through the calf, the thigh, the lumbar region, the back and the neck, that same sensation of 'pain in the foot' can come about when one of the intermediate parts is pulled, even if nothing happens in the foot. This presumably holds for any other sensation.

•One kind of movement in the part of the brain that immediately affects the mind always produces just one kind of sensation; and it would be best for us if it were always the kind that would contribute the most to keeping us alive and well. Experience shows that the sensations that nature has given us are all of just such kinds; so everything about them bears witness to the power and goodness of God. For example, when the nerves in the foot are set in motion in a

violent and unusual manner, this motion reaches the inner parts of the brain via the spinal cord, and gives the mind its signal for having a sensation of a pain as occurring in the foot. This stimulates the mind to do its best to remove the cause of the pain, which it takes to be harmful to the foot. God could have made our nature such that this motion in the brain indicated something else to the mind—for example, making the mind aware of the actual motion occurring in the brain, or in the foot, or in any of the intermediate regions. [Descartes is here contrasting the foot with other parts of the body, *and* contrasting a feeling of pain with a merely intellectual awareness that a movement is occurring.] But nothing else would have been so conducive to the continued well-being of the body. In the same way, when we need drink a certain dryness arises in the throat; this moves the nerves of the throat, which in turn move the inner parts of the brain. That produces in the mind a sensation of thirst, because the most useful thing for us to know at this point is that we need drink in order to stay healthy. Similarly in the other cases.

All of this makes it clear that, despite God's immense goodness, the nature of man as a combination of mind and body is such that it is bound to mislead him from time to time. For along the route of the nerves from the foot to the brain, or even in the brain itself, something may happen that produces the same motion that is usually caused by injury to the foot; and then pain will be felt as if it were in the foot. This deception of the senses is natural, because a given kind of motion in the brain must always produce the same kind of sensation in the mind; and, given that this kind of motion usually originates in the foot, it is reasonable that it should produce a sensation indicating a pain in the foot. Similarly with dryness of the throat: it is much better that it should mislead on the rare occasion when the person has dropsy than that it should always mislead when the body is in good

health. The same holds for the other cases.

This line of thought greatly helps me to be aware of all the errors to which my nature is liable, and also to correct or avoid them. For I know that so far as bodily well-being is concerned my senses usually tell the truth. Also, I can usually employ more than one sense to investigate the same thing; and I can get further help from my memory, which connects present experiences with past ones, and from my intellect, which has by now examined all the sources of error. So I should have no more fears about the falsity of what my senses tell me every day; on the contrary, the exaggerated doubts of the last few days should be dismissed as laughable. This applies especially to the chief reason for doubt, namely my inability to distinguish dreams from waking experience. For I now notice that the two are vastly different, in that dreams are never linked by memory with all the other actions of life as waking experiences are. If, while I am awake, a

man were suddenly to appear to me and then disappear immediately, as happens in sleep, so that I couldn't see where he had come from or where he had gone to, I could reasonably judge that he was a ghost or an hallucination rather than a real man. But if I have a firm grasp of when, where and whence something comes to me, and if I can connect my perception of it with the whole of the rest of my life without a break, then I am sure that in encountering it I am not asleep but awake. And I ought not to have any doubt of its reality if that is unanimously confirmed by all my senses as well as my memory and intellect. From the fact that God isn't a deceiver it follows that in cases like this I am completely free from error. But since everyday pressures don't always allow us to pause and check so carefully, it must be admitted that human life is vulnerable to error about particular things, and we must acknowledge the weakness of our nature.