Discourse on the Method (1637)

Part Four

I do not know whether I should tell you of the first meditations that I had there, for they are perhaps too metaphysical and uncommon for everyone's taste. And yet, to make it possible to judge whether the foundations I have chosen are firm enough, I am in a way obliged to speak of them. For a long time I had observed, as noted above, that in practical life it is sometimes necessary to act upon opinions which one knows to be quite uncertain just as if they were indubitable. But since I now wished to devote myself solely to the search for truth, I thought it necessary to do the very opposite and reject as if absolutely false everything in which I could imagine the least doubt, in order to see if I was left believing anything that was entirely indubitable. Thus, because our senses sometimes deceive us, I decided to suppose that nothing was such as they led us to imagine. And since there are men who make mistakes in reasoning, committing logical fallacies concerning the simplest questions in geometry, and because I judged that I was as prone to error as anyone else, I rejected as unsound all the arguments I had previously taken as demonstrative proofs. Lastly, considering that the very thoughts we have while awake may also occur while we sleep without any of them being at the that time true, I resolved to pretend that all the things that had ever entered my mind were no more true than the illusions of my dreams. But immediately I noticed that while I was trying thus to think everything false, it was necessary that I, who was thinking this, was something. And observing that this truth '*I am thinking, therefore I exist*' was so firm and sure that all the most extravagant suppositions of the sceptics were incapable of shaking it, I decided that I could accept it without scruple as the first principle of the philosophy I was seeking.

Next I examined attentively what I was. I saw that while I could pretend that I had no body and that there was no world and no place for me to be in, I could not for all that pretend that I did not exist. I saw on the contrary that from the mere fact that I thought of doubting the truth of other things, it followed quite evidently and certainly that I existed; whereas if I had merely ceased thinking, even if everything else I had ever imagined had been true, I should have had no reason to believe that I existed. From this I knew I was a substance whose whole essence or nature is simply to think, and which does not require any place, or depend on any material thing, in order to exist. Accordingly this 'I'—that is, the soul by which I am what I am—is entirely distinct from the body, and indeed is easier to know than the body, and would not fail to be whatever it is, even if the body did not exist.

After this I considered in general what is required of a proposition in order for it to be true and certain; for since I had just found one that I knew to be such, I thought that I ought also to know what this certainty consists in. I observed that there is nothing at all in the proposition '*I am thinking, therefore I exist*' to assure me that I am speaking the truth, except that I see very clearly that in order to think it is necessary to exist. So I decided that I could take it as a general rule that the things we conceive very clearly and very distinctly are all true; only there is some difficulty in recognizing which are the things that we distinctly conceive.

Next, reflecting upon the fact that I was doubting and that consequently my being was not wholly perfect (for I saw clearly that it is a greater perfection to know than to doubt), I decided to inquire into the source of my ability to think of something more perfect than I was; and I recognized very clearly that this had to come from some nature that was in fact more perfect. Regarding the thoughts I had of many other things outside me, like the heavens, the earth, light, heat and numerous others, I had no such difficulty in knowing where they came from. For I observed nothing in them that seemed to make them superior to me; and so I could believe that, if they were true, they depended on my nature in so far as it had any perfection, and if they were not true, I got them from nothing—in other words, they were in me because I had some defect. But the same could not hold for the idea of a being more perfect than my own. For it was manifestly impossible to get this from nothing; and I could not have got it from myself since it is no less contradictory that the more perfect should result from the less perfect, and depend on it, than that something should proceed from nothing. So there remained only the possibility that the idea had been put into me by a nature truly more perfect than I was and even possessing in itself all the perfections of which I could have any idea, that is—to explain myself in one word—by God. To this I added that since I knew of some perfections that I did not possess, I was not the only being which existed (here, by your leave, I shall freely use some scholastic terminology), but there had of necessity to be some other, more perfect being on which I depended and from which I had acquired all that I possessed. For if I had existed alone and independently of every other being, so that I had got from myself what little of the perfect being I participated in, then for the same reason I could have got from myself everything else I knew I lacked, and thus been myself infinite, eternal, immutable, omniscient, omnipotent; in short, I could have had all the perfections which I could observe to be in God. For, according to the arguments I have just advanced, in order to know the nature of God, as far as my own nature was capable of knowing it, I had only to consider, for each thing of which I found in myself some idea, whether or not it was a perfection to possess it; and I was sure that none of those which indicated any imperfection was in God, but that all the others were. Thus I saw that doubt, inconstancy, sadness and the like could not be in God, since I myself would have been very glad to be free from them. Besides this, I had ideas of many corporeal things capable of being perceived by the senses; for even if I were to suppose that I was dreaming and that whatever I saw or imagined was false, yet I could not deny that the ideas were truly in my mind. But since I had already recognized very clearly from my own case that the intellectual nature is distinct from the corporeal, and as I observed that all composition is evidence of dependence and that dependence is manifestly a defect, I concluded that it could not be a perfection in God to be composed of these two natures, and consequently that he was not composed of them. But if there were any bodies in the world, or any intelligences or other natures that were not wholly perfect, their being must depend on God's power in such a manner that they could not subsist for a single moment without him.

After that, wishing to seek other truths, I considered the object studied by geometers. I conceived of this as a continuous body, or a space indefinitely extended in length, breadth and height or depth, and divisible into different parts which may have various shapes and sizes, and may be moved or transposed in every way: for all this is assumed by geometers in their object of study. I went

through some of their simpler demonstrations and noted that the great certainty which everyone ascribes to them is founded solely on their being conceived as evident (in accordance with the rule stated above). I noted also that there was nothing at all in these demonstrations which assured me of the existence of their object. For example, I saw clearly that the three angles of any given triangle must equal two right angles; yet for all that, I saw nothing which assured me that there existed any triangle in the world. Whereas when I looked again at the idea I had of a perfect being, I found that this included existence in the same way as—or even more evidently than—the idea of a triangle includes the equality of its three angles to two right angles, or the idea of a sphere includes the equidistance of all the points on the surface from the centre. Thus I concluded that it is at least as certain as any geometrical proof that God, who is this perfect being, is or exists.

But many are convinced that there is some difficulty in knowing God, and even in knowing what their soul is. The reason for this is that they never raise their minds above things which can be perceived by the senses: they are so used to thinking of things only by imagining them (a way of thinking specially suited to material things) that whatever is unimaginable seems to them unintelligible. This is sufficiently obvious from the fact that even the scholastic philosophers take it as a maxim that there is nothing in the intellect which has not previously been in the senses; and yet it is certain that the ideas of God and of the soul have never been in the senses. It seems to me that trying to use one's imagination in order to understand these ideas is like trying to use one's eyes in order to hear sounds or smell odours—though there is this difference, that the sense of sight gives us no less assurance of the reality of its objects than do the senses of smell and hearing, while neither our imagination nor our senses could ever assure us of anything without the intervention of our intellect.

Finally, if there are still people who are not sufficiently convinced of the existence of God and of their soul by the arguments I have proposed, I would have them know that everything else of which they may think themselves more sure—such as their having a body, there being stars and an earth, and the like—is less certain. For although we have a moral certainty about these things, so that it seems we cannot doubt them without being extravagant, nevertheless when it is a question of metaphysical certainty, we cannot reasonably deny that there are adequate grounds for not being entirely sure about them. We need only observe that in sleep we may imagine in the same way that we have a different body and see different stars and a different earth, without there being any of these things. For how do we know that the thoughts which come to us in dreams are any more false than the others, seeing that they are often no less lively and distinct? However much the best minds study this question, I do not believe they will be able to give any reason sufficient to remove this doubt unless they presuppose the existence of God. For in the first place, what I took just now as a rule, namely that everything we conceive very clearly and very distinctly is true, is assured only for the reasons that God is or exists, that he is a perfect being, and that everything in us comes from him. It follows that our ideas or notions, being real things and coming from God, cannot be anything but true, in every respect in which they are clear and distinct. Thus, if we frequently have ideas containing some falsity, this can happen only because there is something confused and obscure in them, for in that respect they participate in nothingness, that is, they are in us in this confused state only because we are not wholly perfect. And it is evident that it is no less contradictory that falsity or imperfection as such should proceed from God than that truth or perfection should proceed from nothingness. But if we did not know that everything real and true within us comes from a perfect and infinite being then, however clear and distinct our ideas were, we would have no reason to be sure that they had the perfection of being true.

But once the knowledge of God and the soul has made us certain of this rule, it is easy to recognize that the things we imagine in dreams should in no way make us doubt the truth of the thoughts we have when awake. For if one happened even in sleep to have some very distinct idea (if, say, a geometer devised some new proof), one's being asleep would not prevent the idea from being true. And as to the most common error of our dreams, which consists in their representing various objects to us in the same way as our external senses do, it does not matter that this gives us occasion to doubt the truth of such ideas, for often they can also mislead us without our being asleep—as when those with jaundice see everything coloured yellow, or when stars or other very distant bodies appear to us much smaller than they are. For after all, whether we are awake or asleep, we ought never to let ourselves be convinced except by the evidence of our reason. It will be observed that I say 'our reason', not 'our imagination' or 'our senses'. Even though we see the sun very clearly, we must not judge on that account that it is only as large as we see it; and we can distinctly imagine a lion's head on a goat's body without having to conclude from this that a chimera exists in the world. For reason does not insist that what we thus see or imagine is true. But it does insist that all our ideas or notions must have some foundation of truth; for otherwise it would not be possible that God, who is all-perfect and all-truthful, should have placed them in us. And our reasonings are never so evident or complete in sleep as in waking life, although sometimes our imaginings in sleep are as lively and distinct as in waking life, or more so. Hence reason also demands that, since our thoughts cannot all be true because we are not wholly perfect, what truth they do possess must inevitably be found in the thoughts we have when awake, rather than in our dreams.

Part Six

[…]

I explained all these matters in sufficient detail in the treatise I previously intended to publish. And then I showed what structure the nerves and muscles of the human body must have in order to make the animal spirits inside them strong enough to move its limbs—as when we see severed heads continue to move about and bite the earth although they are no longer alive. I also indicated what changes must occur in the brain in order to cause waking, sleep and dreams; how light, sounds, smells, tastes, heat and the other qualities of external objects can imprint various ideas on the brain through the mediation of the senses; and how hunger, thirst, and the other internal passions can also send their ideas there. And I explained which part of the brain must be taken to be the 'common' sense, where these ideas are received; the memory, which preserves them; and the corporeal imagination, which can change them in various ways, form them into new ideas, and, by distributing the animal spirits to the muscles, make the parts of this body move in as many different ways as the parts of our bodies can move without being guided by the will, and in a manner which is just as appropriate to the objects of the senses and the internal passions. This will not

seem at all strange to those who know how many kinds of automatons, or moving machines, the skill of man can construct with the use of very few parts, in comparison with the great multitude of bones, muscles, nerves, arteries, veins and all the other parts that are in the body of any animal. For they will regard this body as a machine which, having been made by the hands of God, is incomparably better ordered than any machine that can be devised by man, and contains in itself movements more wonderful than those in any such machine.

I made special efforts to show that if any such machines had the organs and outward shape of a monkey or of some other animal that lacks reason, we should have no means of knowing that they did not possess entirely the same nature as these animals; whereas if any such machines bore a resemblance to our bodies and imitated our actions as closely as possible for all practical purposes, we should still have two very certain means of recognizing that they were not real men. The first is that they could never use words, or put together other signs, as we do in order to declare our thoughts to others. For we can certainly conceive of a machine so constructed that it utters words, and even utters words which correspond to bodily actions causing a change in its organs (e.g. if you touch it in one spot it asks what you want of it, if you touch it in another it cries out that you are hurting it, and so on). But it is not conceivable that such 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. Secondly, even though such machines might do some things as well as we do them, or perhaps even better, they would inevitably fail in others, which would reveal that they were acting not through understanding but only from the disposition of their organs. For whereas reason is a universal instrument which can be used in all kinds of situations, these organs need some particular disposition for each particular action; hence it is for all practical purposes impossible for a machine to have enough different organs to make it act in all the contingencies of life in the way in which our reason makes us act.

Now in just these two ways we can also know the difference between man and beast. For it is quite remarkable that there are no men so dull-witted or stupid—and this includes even madmen—that they are incapable of arranging various words together and forming an utterance from them in order to make their thoughts understood; whereas there is no other animal, however perfect and well-endowed it may be, that can do the like. This does not happen because they lack the necessary organs, for we see that magpies and parrots can utter words as we do, and yet they cannot speak as we do: that is, they cannot show that they are thinking what they are saying. On the other hand, men born deaf and dumb, and thus deprived of speech-organs as much as the beasts or even more so, normally invent their own signs to make themselves understood by those who, being regularly in their company, have the time to learn their language. This shows not merely that the beasts have less reason than men, but that they have no reason at all. For it patently requires very little reason to be able to speak; and since as much inequality can be observed among the animals of a given species as among human beings, and some animals are more easily trained than others, it would be incredible that a superior specimen of the monkey or parrot species should not be able to speak as well as the stupidest child—or at least as well as a child with a defective brain—if their souls were not completely different in nature from ours. And we must not confuse speech with the natural movements which express passions and which can be imitated by machines as well as by animals. Nor should we think, like some of the ancients, that the beasts speak, although we do not understand their language. For if that were true, then since they have many organs that correspond to ours, they could make themselves understood by us as well as by their fellows. It is also a very remarkable fact that although many animals show more skill than we do in some of their actions, yet the same animals show none at all in many others; so what they do better does not prove that they have any intelligence, for if it did then they would have more intelligence than any of us and would excel us in everything. It proves rather that they have no intelligence at all, and that it is nature which acts in them according to the disposition of their organs. In the same way a clock, consisting only of wheels and springs, can count the hours and measure time more accurately than we can with all our wisdom.

After that, I described the rational soul, and showed that, unlike the other things of which I had spoken, it cannot be derived in any way from the potentiality of matter, but must be specially created.' And I showed how it is not sufficient for it to be lodged in the human body like a helmsman in his ship, except perhaps to move its limbs, but that it must be more closely joined and united with the body in order to have, besides this power of movement, feelings and appetites like ours and so constitute a real man. Here I dwelt a little upon the subject of the soul, because it is of the greatest importance. For after the error of those who deny God, which I believe I have already adequately refuted, there is none that leads weak minds further from the straight path of virtue than that of imagining that the souls of the beasts are of the same nature as ours, and hence that after this present life we have nothing to fear or to hope for, any more than flies and ants. But when we know how much the beasts differ from us, we understand much better the arguments which prove that our soul is of a nature entirely independent of the body, and consequently that it is not bound to die with it. And since we cannot see any other causes which destroy the soul, we are naturally led to conclude that it is immortal.

[...]

Objections and Replies (1641)

First Objections and Replies

[Caterus on the *Meditations*]

With regard to the essence of the soul and its distinction from the body, I have only a little to say. For I confess that our highly gifted author has already so exhausted me that I can hardly add one word more. His proof of the supposed distinction between the soul and the body appears to be based on the fact that the two can be distinctly conceived apart from each other. Here I refer the learned gentleman to Scotus, who says that for one object to be distinctly conceived apart from another, there need only be what he calls a *formal and objective* distinction between them (such a distinction is, he maintains, intermediate between a *real* distinction and a *conceptual* distinction). The distinction between God's justice and his mercy is of this kind. For, says Scotus, 'The formal concepts of the

two are distinct prior to any operation of the intellect, so that one is not the same as the other. Yet it does not follow that because justice and mercy can be conceived apart from one another they can therefore exist apart.'

[Descartes to Caterus]

As to the 'formal' distinction which the learned theologian introduces on the authority of Scotus, let me say briefly that this kind of distinction does not differ from a modal distinction; moreover, it applies only to incomplete entities, which I have carefully distinguished from complete entities. It is sufficient for this kind of distinction that one thing be conceived distinctly and separately from another by an abstraction of the intellect which conceives the thing inadequately. It is not necessary to have such a distinct and separate conception of each thing that we can understand it as an entity in its own right, different from everything else; for this to be the case the distinction involved must be a real one. For example, the distinction between the motion and shape of a given body is a formal distinction. I can very well understand the motion apart from the shape, and vice versa, and I can understand either in abstraction from the body. But I cannot have a complete understanding of the motion apart from the thing in which motion occurs, or of the shape apart from the thing which has the shape; and I cannot imagine there to be motion in something which is incapable of possessing shape, or shape in something which is incapable of motion. In the same way, I cannot understand justice apart from the person who is just, or mercy apart from the person who is merciful; and I am not at liberty to imagine that the same person who is just is incapable of mercy. By contrast, I have a complete understanding of what a body is when I think that it is merely something having extension, shape and motion, and I deny that it has anything which belongs to the nature of a mind. Conversely, I understand the mind to be a complete thing, which doubts, understands, wills, and so on, even though I deny that it has any of the attributes which are contained in the idea of a body. This would be quite impossible if there were not a real distinction between the mind and the body.

Second Objections and Replies

[Mersenne, et al. to Descartes]

First, then, may we remind you that your vigorous rejection of the images of all bodies as delusive was not something you actually and really carried through, but was merely a fiction of the mind, enabling you to draw the conclusion that you were exclusively a thinking thing. We point this out in case you should perhaps suppose that it is possible to go on to draw the conclusion that you are in fact nothing more than a mind, or thought, or a thinking thing. And we make the point solely in connection with the first two Meditations, in which you clearly show that, if nothing else, it is certain that you, who are thinking, exist. But let us pause a little here. The position so far is that you recognize that you are a thinking thing, but you do not know what this thinking thing is. What if it turned out to be a body which, by its various motions and encounters, produces what we call thought? Although you think you have ruled out every kind of body, you could have been mistaken here, since you did not exclude yourself, and you may be a body. How do you demonstrate that a body is incapable of thinking, or that corporeal motions are not in fact thought? The whole system of your body, which you think you have excluded, or else some of its parts—for example those which make up the brain—may combine to produce the motions which we call thoughts. You say 'I am a thinking thing'; but how do you know that you are not corporeal motion, or a body which is in motion?

[…]

Seventhly, you say not one word about the immortality of the human mind. Yet this is something you should have taken special care to prove and demonstrate, to counter those people, themselves unworthy of immortality, who utterly deny and even perhaps despise it. What is more, you do not yet appear to have provided an adequate proof of the fact that the mind is distinct from every kind of body, as we mentioned under point one. We now make the additional point that it does not seem to follow from the fact that the mind is distinct from the body that it is incorruptible or immortal. What if its nature were limited by the duration of the life of the body, and God had endowed it with just so much strength and existence as to ensure that it came to an end with the death of the body?

These, Sir, are the points which we wanted you to clarify, so as to enable everyone to derive the utmost benefit from reading your *Meditations*, which are argued with great subtlety and are also, in our opinion, true. And after giving your solutions to these difficulties it would be worthwhile if you set out the entire argument in geometrical fashion, starting from a number of definitions, postulates and axioms. You are highly experienced in employing this method, and it would enable you to fill the mind of each reader so that he could see everything as it were at a single glance, and be permeated with awareness of the divine power.

[Descartes to Mersenne, et al.]

First, you warn me to remember that my rejection of the images of bodies as delusive was not something I actually and really carried through, but was merely a fiction of the mind, enabling me to draw the conclusion that I was a thinking thing; and I should not suppose that it followed from this that I was in fact nothing more than a mind. But I already showed that I was quite well aware of this in the Second Meditation, where I said 'Yet may it not perhaps be the case that these very things which I am supposing to be nothing, because they are unknown to me, are in reality identical with the "I" of which I am aware? I do not know, and for the moment I shall not argue the point.' Here I wanted to give the reader an express warning that at that stage I was not yet asking whether the mind is distinct from the body, but was merely examining those of its properties of which I can have certain and evident knowledge. And since I did become aware of many such properties, I cannot without qualification admit your subsequent point that 'I do not yet know what a thinking thing is.' I admit that I did not yet know whether this thinking thing is identical with the body or with something different from the body; but I do not admit that I had no knowledge of it. Surely, no one's knowledge of anything has ever reached the point where he knows that there is absolutely nothing further in the thing beyond what he is already aware of. The more attributes of a thing we perceive the better we are said to know it; thus we know people whom we have lived with for some time better than those whom we only know by sight, or have merely heard of—though even they are

not said to be completely unknown to us. In this sense I think I have demonstrated that the mind, considered apart from those attributes which are normally applied to the body, is better known than the body when it is considered apart from the mind. This was my sole purpose in the passage under discussion.

But I see the suggestion you are making. Given that I wrote only six Meditations on First Philosophy, you think my readers will be surprised that the only conclusion reached in the first two Meditations is the point just mentioned; and you think that as a result they will reckon that the Meditations are extremely thin and not worth publishing. My reply is simply that I am confident that anyone who judiciously reads the rest of what I wrote will have no occasion to suspect that I was short of material. And in the case of topics which required individual attention and needed to be considered on their own, it seemed quite reasonable to deal with them separately, Meditation by Meditation.

Now the best way of achieving a firm knowledge of reality is first to accustom ourselves to doubting all things, especially corporeal things. Although I had seen many ancient writings by the Academics and Sceptics on this subject, and was reluctant to reheat and serve this precooked material, I could not avoid devoting one whole Meditation to it. And I should like my readers not just to take the short time needed to go through it, but to devote several months, or at least weeks, to considering the topics dealt with, before going on to the rest of the book. If they do this they will undoubtedly be able to derive much greater benefit from what follows.

All our ideas of what belongs to the mind have up till now been very confused and mixed up with the ideas of things that can be perceived by the senses. This is the first and most important reason for our inability to understand with sufficient clarity the customary assertions about the soul and God. So I thought I would be doing something worthwhile if I explained how the properties or qualities of the mind are to be distinguished from the qualities of the body. Admittedly, many people had previously said that in order to understand metaphysical matters the mind must be drawn away from the senses; but no one, so far as I know, had shown how this could be done. The correct, and in my view unique, method of achieving this is contained in my Second Meditation. But the nature of the method is such that scrutinizing it just once is not enough. Protracted and repeated study is required to eradicate the lifelong habit of confusing things related to the intellect with corporeal things, and to replace it with the opposite habit of distinguishing the two; this will take at least a few days to acquire. I think that was the best justification for my devoting the whole of the Second Meditation to this topic alone.

You go on to ask how I demonstrate that a body is incapable of thinking. You will forgive me if I reply that I have as yet provided no opportunity for this question to be raised. I first dealt with the matter in the Sixth Meditation where I said 'the fact that I can clearly and distinctly understand one thing apart from another is enough to make me certain that the two things are distinct', etc. And a little later on I said:

It is true that I have a body that is very closely joined to me. But nevertheless on the one hand I have a clear and distinct idea of myself, in so far as I am a thinking, non-extended thing; and on the other hand I have a distinct idea of body, in so far as this is an extended, non-thinking thing. And accordingly it is certain that I (that is, the mind) am really distinct from my body and can exist without it.

From this we may easily go on to say 'whatever can think is a mind, or is called a mind; but since mind and body are in reality distinct, no body is a mind; therefore no body can think'.

I do not see what you can deny here. Do you claim that if we clearly understand one thing apart from another this is not sufficient for the recognition that the two things are really distinct? If so, you must provide a more reliable criterion for a real distinction—and I am confident that none can be provided. What will you suggest? Perhaps that there is a real distinction between two things if one can exist apart from the other? But now I will ask how you know that one thing can exist apart from another. You must be able to know this, if it is to serve as the criterion for a real distinction. You may say that you derive this knowledge from the senses, since you can see, or touch etc., the one thing when the other is not present. But the evidence of the senses is less reliable than that of the intellect: it can variously happen that one and the same thing appears under different forms or in several places or in several different ways, and so be taken for two things. And, after all, if you remember the remarks about the wax at the end of the Second Meditation you will realize that bodies are not strictly speaking perceived by the senses at all, but only by the intellect; so having a sensory perception of one thing apart from another simply amounts to our having an idea of one thing and understanding that this idea is not the same as an idea of something else. The sole possible source of such understanding is that we perceive one thing apart from another, and such understanding cannot be certain unless the idea of each thing is clear and distinct. So if the proposed criterion for a real distinction is to be reliable, it must reduce to the one which I put forward.

If there are those who claim that they do not have distinct ideas of mind and body, I can only ask them to pay careful attention to the contents of the Second Meditation. If, as may well be the case, they take the view that the formation of thoughts is due to the combined activity of parts of the brain, they should realize that this view is not based on any positive argument, but has simply arisen from the fact that, in the first place, they have never had the experience of being without a body and that, in the second place, they have frequently been obstructed by the body in their operations. It is just as if someone had had his legs permanently shackled from infancy: he would think the shackles were part of his body and that he needed them for walking.

[…]

Seventhly, as to why I wrote nothing concerning the immortality of the soul, I did already explain this in the Synopsis of my *Meditations*. And, as I have shown above, I did provide an adequate proof of the fact that the soul is distinct from every body. However, you go on to say that it does not follow from the fact that the soul is distinct from the body that it is immortal, since it could still be claimed that God gave it such a nature that its duration comes to an end simultaneously with the end of the body's life. Here I admit that I cannot refute what you say. For I do not take it upon myself to try to use the power of human reason to settle any of those matters which depend on the free will of God. Our natural knowledge tells us that the mind is distinct from the body, and that it is a substance. But in the case of the human body, the difference between it and other bodies consists merely in the arrangement of the limbs and other accidents of this sort; and the final death of the body depends solely on a division or change

of shape. Now we have no convincing evidence or precedent to suggest that the death or annihilation of a substance like the mind must result from such a trivial cause as a change in shape, for this is simply a mode, and what is more not a mode of the mind, but a mode of the body which is really distinct from the mind. Indeed, we do not even have any convincing evidence or precedent to suggest that any substance can perish. And this entitles us to conclude that the mind, in so far as it can be known by natural philosophy, is immortal.

But if your question concerns the absolute power of God, and you are asking whether he may have decreed that human souls cease to exist precisely when the bodies which he joined to them are destroyed, then it is for God alone to give the answer. And since God himself has revealed to us that this will not occur, there remains not even the slightest room for doubt on this point.

It remains for me to thank you for the helpful and frank way in which you have been kind enough to bring to my notice not only the points which have struck you, but also those which might be raised by atheists and other hostile critics. As far as I can see, all the objections which you raise are ones which I have already answered or ruled out in advance in the *Meditations*. As to the points about the flies generated by the sun, the natives of Canada, the inhabitants of Nineveh, the Turks and so on, the objections you raise cannot occur to those who follow the road which I have indicated and who lay aside for a time whatever they have acquired from the senses, so as to attend to dictates of pure and uncorrupted reason. Hence I thought that I had already adequately ruled out such objections in advance. But despite this, I take the view that these objections of yours will greatly assist my enterprise. For I expect that hardly any of my readers will be prepared to give such careful attention to everything I have written that they will remember all the contents by the time they come to the end. Those who do not remember everything may easily fall prey to certain doubts; and they will subsequently see that their doubts have been dealt with in these replies of mine, or failing that, these replies will at least give them the opportunity to examine the truth more deeply.

I now turn to your proposal that I should set out my arguments in geometrical fashion to enable the reader to perceive them 'as it were at a single glance'. It is worth explaining here how far I have already followed this method, and how far I think it should be followed in future. I make a distinction between two things which are involved in the geometrical manner of writing, namely, the order, and the method of demonstration.

The order consists simply in this. The items which are put forward first must be known entirely without the aid of what comes later; and the remaining items must be arranged in such a way that their demonstration depends solely on what has gone before. I did try to follow this order very carefully in my *Meditations*, and my adherence to it was the reason for my dealing with the distinction between the mind and the body only at the end, in the Sixth Meditation, rather than in the Second. It also explains why I deliberately and knowingly omitted many matters which would have required an explanation of an even larger number of things.

As for the method of demonstration, this divides into two varieties: the first proceeds by analysis and the second by synthesis.

Analysis shows the true way by means of which the thing in question was discovered methodically and as it were *a priori*, so that if the reader is willing to follow it and give sufficient attention to all points, he will make the thing his own and understand it just as perfectly as if he had discovered it for himself. But this method contains nothing to compel belief in an argumentative or inattentive reader; for if he fails to attend even to the smallest point, he will not see the necessity of the conclusion. Moreover there are many truths which—although it is vital to be aware of them—this method often scarcely mentions, since they are transparently clear to anyone who gives them his attention.

Synthesis, by contrast, employs a directly opposite method where the search is, as it were, *a posteriori* (though the proof itself is often more *a priori* than it is in the analytic method). It demonstrates the conclusion clearly and employs a long series of definitions, postulates, axioms, theorems and problems, so that if anyone denies one of the conclusions it can be shown at once that it is contained in what has gone before, and hence the reader, however argumentative or stubborn he may be, is compelled to give his assent. However, this method is not as satisfying as the method of analysis, nor does it engage the minds of those who are eager to learn, since it does not show how the thing in question was discovered.

It was synthesis alone that the ancient geometers usually employed in their writings. But in my view this was not because they were utterly ignorant of analysis, but because they had such a high regard for it that they kept it to themselves like a sacred mystery.

Now it is analysis which is the best and truest method of instruction, and it was this method alone which I employed in my *Meditations*. As for synthesis, which is undoubtedly what you are asking me to use here, it is a method which it may be very suitable to deploy in geometry as a follow-up to analysis, but it cannot so conveniently be applied to these metaphysical subjects.

The difference is that the primary notions which are presupposed for the demonstration of geometrical truths are readily accepted by anyone, since they accord with the use of our senses. Hence there is no difficulty there, except in the proper deduction of the consequences, which can be done even by the less attentive, provided they remember what has gone before. Moreover, the breaking down of propositions to their smallest elements is specifically designed to enable them to be recited with ease so that the student recalls them whether he wants to or not.

In metaphysics by contrast there is nothing which causes so much effort as making our perception of the primary notions clear and distinct. Admittedly, they are by their nature as evident as, or even more evident than, the primary notions which the geometers study; but they conflict with many preconceived opinions derived from the senses which we have got into the habit of holding from our earliest years, and so only those who really concentrate and meditate and withdraw their minds from corporeal things, so far as is possible, will achieve perfect knowledge of them. Indeed, if they were put forward in isolation, they could easily be denied by those who like to contradict just for the sake of it.

This is why I wrote 'Meditations' rather than 'Disputations', as the philosophers have done, or 'Theorems and Problems', as the geometers would have done. In so doing I wanted to make it clear that I would have nothing to do with anyone who was not willing to join me in meditating and giving the subject at-

tentive consideration. For the very fact that someone braces himself to attack the truth makes him less suited to perceive it, since he will be withdrawing his consideration from the convincing arguments which support the truth in order to find counter-arguments against it.

But at this point someone may raise the following objection: 'When we know that the proposition before us is true, we certainly should not look for arguments to contradict it; but so long as we remain in doubt about its truth it is right to deploy all the arguments on either side in order to find out which are the stronger. Nor does it seem that I am making a fair demand if I expect my arguments to be accepted as correct before they have been scrutinized, while at the same time prohibiting consideration of any counter-arguments.'

This is not a just criticism. For the arguments in respect of which I ask my readers to be attentive and not argumentative are not of a kind which could possibly divert their attention from any other arguments which have even the slightest chance of containing more truth than is to be found in mine. Now my exposition includes the highest level of doubt about everything, and I cannot recommend too strongly that each item should be scrutinized with the utmost care, so that absolutely nothing is accepted unless it has been so clearly and distinctly perceived that we cannot but assent to it. By contrast, the only opinions I want to steer my readers' minds away from are those which they have never properly examined—opinions which they have acquired not on the basis of any firm reasoning but from the senses alone. So in my view no one who restricts his consideration to my propositions can possibly think he runs a greater risk of error than he would incur by turning his mind away and directing it to other propositions which are in a sense opposed to mine and which reveal only darkness (i.e. the preconceived opinions of the senses).

I am therefore right to require particularly careful attention from my readers; and the style of writing that I selected was one which I thought would be most capable of generating such attention. I am convinced that my readers will derive more benefit from this than they will themselves realize; for when the synthetic method of writing is used, people generally think that they have learned more than is in fact the case. In addition, I think it is fair for me to reject out of hand, and despise as worthless, the verdict given on my work by those who refuse to meditate with me and who stick to their preconceived opinions.

But I know that even those who do concentrate, and earnestly pursue the truth, will find it very difficult to take in the entire structure of my *Meditations*, while at the same time having a distinct grasp of the individual parts that make it up. Yet I reckon that both the overall and the detailed scrutiny is necessary if the reader is to derive the full benefit from my work. I shall therefore append here a short exposition in the synthetic style, which will, I hope, assist my readers a little. But they must please realize that I do not intend to include as much material as I put in the *Meditations*, for if I did so I should have to go on much longer than I did there. And even the items that I do include will not be given a fully precise explanation. This is partly to achieve brevity and partly to prevent anyone supposing that what follows is adequate on its own. Anyone who thinks this may give less careful attention to the *Meditations* themselves; yet I am convinced that it is the *Meditations* which will yield by far the greater benefit.

Arguments
proving the existence of God and the distinction
between the soul and the body
arranged in geometrical fashion

DEFINITIONS

I. *Thought.* I use this term to include everything that is within us in such a way that we are immediately aware of it. Thus all the operations of the will, the intellect, the imagination and the senses are thoughts. I say 'immediately' so as to exclude the consequences of thoughts; a voluntary movement, for example, originates in a thought but is not itself a thought.

II. *Idea.* I understand this term to mean the form of any given thought, immediate perception of which makes me aware of the thought. Hence, whenever I express something in words, and understand what I am saying, this very fact makes it certain that there is within me an idea of what is signified by the words in question. Thus it is not only the images depicted in the imagination which I call 'ideas'. Indeed, in so far as these images are in the corporeal imagination, that is, are depicted in some part of the brain, I do not call them 'ideas' at all; I call them 'ideas' only in so far as they give form to the mind itself, when it is directed towards that part of the brain.

III. *Objective reality of an idea.* By this I mean the being of the thing which is represented by an idea, in so far as this exists in the idea. In the same way we can talk of 'objective perfection', 'objective intricacy' and so on. For whatever we perceive as being in the objects of our ideas exists objectively in the ideas themselves.

IV. Whatever exists in the objects of our ideas in a way which exactly corresponds to our perception of it is said to exist *formally* in those objects. Something is said to exist *eminently* in an object when, although it does not exactly correspond to our perception of it, its greatness is such that it can fill the role of that which does so correspond.

V. *Substance.* This term applies to every thing in which whatever we perceive immediately resides, as in a subject, or to every thing by means of which whatever we perceive exists. By 'whatever we perceive' is meant any property, quality or attribute of which we have a real idea. The only idea we have of a substance itself, in the strict sense, is that it is the thing in which whatever we perceive (or whatever has objective being in one of our ideas) exists, either formally or eminently. For we know by the natural light that a real attribute cannot belong to nothing.

VI. The substance in which thought immediately resides is called *mind.* I use the term 'mind' rather than 'soul' since the word 'soul' is ambiguous and is often applied to something corporeal.

VII. The substance which is the immediate subject of local extension and of the accidents which presuppose extension, such as shape, position, local motion and so on, is called *body.* Whether what we call mind and body are one and the same substance, or two different substances, is a question which will have to be dealt with later on.

VIII. The substance which we understand to be supremely perfect, and in which we conceive absolutely nothing that implies any defect or limitation in that perfection, is called *God*.

IX. When we say that something is *contained in the nature or concept* of a thing, this is the same as saying that it is true of that thing, or that it can be asserted of that thing.

X. Two substances are said to be *really distinct* when each of them can exist apart from the other.

POSTULATES

The *first* request I make of my readers is that they should realize how feeble are the reasons that have led them to trust their senses up till now, and how uncertain are all the judgements that they have built up on the basis of the senses. I ask them to reflect long and often on this point, till they eventually acquire the habit of no longer placing too much trust in the senses. In my view this is a prerequisite for perceiving the certainty that belongs to metaphysical things.

Secondly, I ask them to reflect on their own mind, and all its attributes. They will find that they cannot be in doubt about these, even though they suppose that everything they have ever acquired from their senses is false. They should continue with this reflection until they have got into the habit of perceiving the mind clearly and of believing that it can be known more easily than any corporeal thing.

Thirdly, I ask them to ponder on those self-evident propositions that they will find within themselves, such as 'The same thing cannot both be and not be at the same time', and 'Nothingness cannot be the efficient cause of anything', and so on. In this way they will be exercising the intellectual vision which nature gave them, in the pure form which it attains when freed from the senses; for sensory appearances generally interfere with it and darken it to a very great extent. And by this means the truth of the following axioms will easily become apparent to them.

Fourthly, I ask them to examine the ideas of those natures which contain a combination of many attributes, such as the nature of a triangle, or of a square, or of any other figure, as well as the nature of mind, the nature of body, and above all the nature of God, or the supremely perfect being. And they should notice that whatever we perceive to be contained in these natures can be truly affirmed of them. For example, the fact that its three angles are equal to two right angles is contained in the nature of a triangle; and divisibility is contained in the nature of body, or of an extended thing (for we cannot conceive of any extended thing which is so small that we cannot divide it, at least in our thought). And because of these facts it can be truly asserted that the three angles of every triangle are equal to two right angles and that every body is divisible.

Fifthly, I ask my readers to spend a great deal of time and effort on contemplating the nature of the supremely perfect being. Above all they should reflect on the fact that the ideas of all other natures contain possible existence, whereas the idea of God contains not only possible but wholly necessary existence. This alone, without a formal argument, will make them realize that God exists; and this will eventually be just as self-evident to them as the fact that the number two is even or that three is odd, and so on. For there are certain truths which some people find self-evident, while others come to understand them only by means of a formal argument.

Sixthly, I ask my readers to ponder on all the examples that I went through in my *Meditations*, both of clear and distinct perception, and of obscure and confused perception, and thereby accustom themselves to distinguishing what is clearly known from what is obscure. This is something that it is easier to learn by examples than by rules, and I think that in the *Meditations* I explained, or at least touched on, all the relevant examples.

Seventhly, and lastly, when they notice that they have never detected any falsity in their clear perceptions, while by contrast they have never, except by accident, found any truth in matters which they grasp only obscurely, I ask them to conclude that it is quite irrational to cast doubt on the clear and distinct perceptions of the pure intellect merely because of preconceived opinions based on the senses, or because of mere hypotheses which contain an element of the unknown. And as a result they will readily accept the following axioms as true and free of doubt. Nevertheless, many of these axioms could have been better explained, and indeed they should have been introduced as theorems rather than as axioms, had I wished to be more precise.

AXIOMS OR COMMON NOTIONS

I. Concerning every existing thing it is possible to ask what is the cause of its existence. This question may even be asked concerning God, not because he needs any cause in order to exist, but because the immensity of his nature is the cause or reason why he needs no cause in order to exist.

II. There is no relation of dependence between the present time and the immediately preceding time, and hence no less a cause is required to preserve something than is required to create it in the first place

III. It is impossible that *nothing*, a non-existing thing, should be the cause of the existence of anything, or of any actual perfection in anything.

IV. Whatever reality or perfection there is in a thing is present either formally or eminently in its first and adequate cause.

V. It follows from this that the objective reality of our ideas needs a cause which contains this reality not merely objectively but formally or eminently. It should be noted that this axiom is one which we must necessarily accept, since on it depends our knowledge of all things, whether they are perceivable through the senses or not. How do we know, for example, that the sky exists? Because we see it? But this 'seeing' does not affect the mind except in so far as it is an idea—I mean an idea which resides in the mind itself, not an image depicted in the corporeal imagination. Now the only reason why we can use this idea as a basis for the judgement that the sky exists is that every idea must have a really existing cause of its objective reality; and in this case we judge that the cause is the sky itself. And we make similar judgements in other cases.

VI. There are various degrees of reality or being: a substance has more reality than an accident or a mode; an infinite substance has more reality than a finite substance. Hence there is more objective reality in the idea of a substance than

in the idea of an accident; and there is more objective reality in the idea of an infinite substance than in the idea of a finite substance.

VII. The will of a thinking thing is drawn voluntarily and freely (for this is the essence of will), but nevertheless inevitably, towards a clearly known good. Hence, if it knows of perfections which it lacks, it will straightaway give itself these perfections, if they are in its power.

VIII. Whatever can bring about a greater or more difficult thing can also bring about a lesser thing.

IX. It is a greater thing to create or preserve a substance than to create or preserve the attributes or properties of that substance. However, it is not a greater thing to create something than to preserve it, as has already been said.

X. Existence is contained in the idea or concept of every single thing, since we cannot conceive of anything except as existing. Possible or contingent existence is contained in the concept of a limited thing, whereas necessary and perfect existence is contained in the concept of a supremely perfect being.

PROPOSITION I

The existence of God can be known merely by considering his nature

Demonstration

To say that something is contained in the nature or concept of a thing is the same as saying that it is true of that thing (Def. IX). But necessary existence is contained in the concept of God (Axiom X). Therefore it may be truly affirmed of God that necessary existence belongs to him, or that he exists.

This is the syllogism which I employed above in replying to the sixth point in your Objections. And its conclusion can be grasped as self-evident by those who are free of preconceived opinions, as I said above, in the Fifth Postulate. But since it is not easy to arrive at such clear mental vision, we shall now endeavour to establish the same result by other methods.

PROPOSITION II

The existence of God can be demonstrated a posteriori *merely from the fact that we have an idea of God within us*

Demonstration

The objective reality of any of our ideas requires a cause which contains the very same reality not merely objectively but formally or eminently (Axiom V). But we have an idea of God (Def. II and VIII), and the objective reality of this idea is not contained in us either formally or eminently (Axiom VI); moreover it cannot be contained in any other being except God himself (Def. VIII). Therefore this idea of God, which is in us, must have God as its cause; and hence God exists (Axiom III).

PROPOSITION III

God's existence can also be demonstrated from the fact that we, who possess the idea of God, exist

Demonstration

If I had the power of preserving myself, how much more would I have the power of giving myself the perfections which I lack (Axioms VIII and IX); for these perfections are merely attributes of a substance, whereas I am a substance. But I do not have the power of giving myself these perfections; if I did, I should already have them (Axiom VII). Therefore I do not have the power of preserving myself.

Now I could not exist unless I was preserved throughout my existence either by myself, if I have that power, or by some other being who has it (Axioms I and II). But I do exist, and yet, as has just been proved, I do not have the power of preserving myself. Therefore I am preserved by some other being.

Moreover, he who preserves me has within himself, either formally or eminently, whatever is in me (Axiom IV). But I have within me the perception of many of the perfections which I lack, as well as an idea of God (Defs. II and VIII). Therefore he who preserves me has a perception of the same perfections.

Finally, this being cannot have the perception of any perfections which he lacks, or which he does not have within himself either formally or eminently (Axiom VII). For since he has the power of preserving me, as I have already said, how much more would he have the power of giving himself those perfections if he lacked them (Axioms VIII and IX). But he has the perception of all the perfections which I know I lack and which I conceive to be capable of existing only in God, as has just been proved. Therefore he has the perfections within himself either formally or eminently, and hence he is God.

COROLLARY

God created the heavens and the earth and everything in them. Moreover he can bring about everything which we clearly perceive in a way exactly corresponding to our perception of it

Demonstration

All this clearly follows from the preceding proposition. For in that proposition we proved that God exists from the fact that there must exist someone who possesses either formally or eminently all the perfections of which we have any idea. But we have the idea of a power so great that the possessor of this power, and he alone, created the heavens and the earth and is capable of producing everything that I understand to be possible. Therefore in proving God's existence we have also proved these other facts about him.

PROPOSITION IV

There is a real distinction between the mind and the body

Demonstration

God can bring about whatever we clearly perceive in a way exactly corresponding to our perception of it (preceding Corollary). But we clearly perceive the mind, that is, a thinking substance, apart from the body, that is, apart from an

extended substance (Second Postulate). And conversely we can clearly perceive the body apart from the mind (as everyone readily admits). Therefore the mind can, at least through the power of God, exist without the body; and similarly the body can exist apart from the mind.

Now if one substance can exist apart from another the two are really distinct (Def. X). But the mind and the body are substances (Defs. V, VI and VII) which can exist apart from each other (as has just been proved). Therefore there is a real distinction between the mind and the body.

Notice that I introduce the power of God as a means to separate mind and body not because any extraordinary power is needed to bring about such a separation but because the preceding arguments have dealt solely with God, and hence there was nothing else I could use to make the separation. Our knowledge that two things are really distinct is not affected by the nature of the power that separates them.

Third Objections and Replies

On the Second Meditation ('The nature of the human mind')

SECOND OBJECTION

[Hobbes on the *Meditations*]

I am a thinking thing.

Correct. For from the fact that I think, or have an image (whether I am awake or dreaming), it can be inferred that I am thinking; for 'I think' and 'I am thinking' mean the same thing. And from the fact that I am thinking it follows that I exist, since that which thinks is not nothing. But when the author adds 'that is, I am a mind, or intelligence, or intellect or reason', a doubt arises. It does not seem to be a valid argument to say 'I am thinking, therefore I am thought' or 'I am using my intellect, hence I am an intellect.' I might just as well say 'I am walking, therefore I am a walk.' M. Descartes is identifying the thing which understands with intellection, which is an act of that which understands. Or at least he is identifying the thing which understands with the intellect, which is a power of that which understands. Yet all philosophers make a distinction between a subject and its faculties and acts, i.e. between a subject and its properties and its essences: an entity is one thing, its essence is another. Hence it may be that the thing that thinks is the subject to which mind, reason or intellect belong; and this subject may thus be something corporeal. The contrary is assumed, not proved. Yet this inference is the basis of the conclusion which M. Descartes seems to want to establish.

In the same passage we find the following: 'I know I exist; the question is, what is this "I" that I know. If the "I" is understood strictly as we have been taking it, then it is quite certain that knowledge of it does not depend on things of whose existence I am as yet unaware.'

It is quite certain that the knowledge of the proposition 'I exist' depends on the proposition 'I am thinking' as the author himself has explained to us. But how do we know the proposition 'I am thinking'? It can only be from our inability to conceive an act without its subject. We cannot conceive of jumping without a jumper, of knowing without a knower, or of thinking without a thinker.

It seems to follow from this that a thinking thing is something corporeal. For it seems that the subject of any act can be understood only in terms of something corporeal or in terms of matter, as the author himself shows later on his example of the wax: the wax, despite the changes in its colour, hardness, shape and other acts, is still understood to be the same thing, that is, the same matter that is the subject of all these changes. Moreover, I do not infer that I am thinking by means of another thought. For although someone may think that he *was* thinking (for this thought is simply an act of remembering), it is quite impossible for him to think that he *is* thinking, or to know that he is knowing. For then an infinite chain of questions would arise: 'How do you know that you know that you know . . . ?'

The knowledge of the proposition 'I exist' thus depends on the knowledge of the proposition 'I am thinking'; and knowledge of the latter proposition depends on our inability to separate thought from the matter that is thinking. So it seems that the correct inference is that the thinking thing is material rather than immaterial.

Reply [Descartes to Hobbes]

When I said 'that is, I am a mind, or intelligence, or intellect or reason', what I meant by these terms was not mere faculties, but things endowed with the faculty of thought. This is what the first two terms are commonly taken to mean by everyone; and the second two are often understood in this sense. I stated this point so explicitly, and in so many places, that it seems to me there was no room for doubt.

There is no comparison here between 'a walk' and 'thought'. 'A walk' is usually taken to refer simply to the act of walking, whereas 'thought' is sometimes taken to refer to the act, sometimes to the faculty, and sometimes to the thing which possesses the faculty.

I do not say that the thing which understands is the same as intellection. Nor, indeed, do I identify the thing which understands with the intellect, if 'the intellect' is taken to refer to a faculty; they are identical only if 'the intellect' is taken to refer to the thing which understands. Now I freely admit that I used the most abstract terms I could in order to refer to the thing or substance in question, because I wanted to strip away from it everything that did not belong to it. This philosopher, by contrast, uses absolutely concrete words, namely 'subject', 'matter' and 'body', to refer to this thinking thing, because he wants to prevent its being separated from the body.

But I am not afraid that anyone will think my opponent's method is better suited to the discovery of the truth than my own; for his method lumps together a large number of different items, whereas I aim to distinguish each individual item as far as I can. But let us stop talking about terminology and discuss the issue itself.

'It may be', he says, 'that the thing that thinks is something corporeal. The contrary is assumed, not proved.' But I certainly did not assume the contrary,

nor did I use it as the 'basis' of my argument. I left it quite undecided until the Sixth Meditation, where it is proved.

He is quite right in saying that 'we cannot conceive of an act without its subject'. We cannot conceive of thought without a thinking thing, since that which thinks is not nothing. But he then goes on to say, quite without any reason, and in violation of all usage and all logic: 'It seems to follow from this that a thinking thing is something corporeal.' It may be that the subject of any act can be understood only in terms of a substance (or even, if he insists, in terms of 'matter', i.e. metaphysical matter); but it does not follow that it must be understood in terms of a body.

Logicians, and people in general, normally say that some substances are spiritual and some are corporeal. All that I proved with the example of the wax was that colour, hardness and shape do not belong to the formal concept of the wax itself. I was not dealing in that passage with the formal concept of the mind or even with that of the body.

It is irrelevant for the philosopher to say that one thought cannot be the subject of another thought. For who, apart from him, ever supposed that it could be? If I may briefly explain the point at issue: it is certain that a thought cannot exist without a thing that is thinking; and in general no act or accident can exist without a substance for it to belong to. But we do not come to know a substance immediately, through being aware of the substance itself; we come to know it only through its being the subject of certain acts. Hence it is perfectly reasonable, and indeed sanctioned by usage, for us to use different names for substances which we recognize as being the subjects of quite different acts or accidents. And it is reasonable for us to leave until later the examination of whether these different names signify different things or one and the same thing. Now there are certain acts that we call 'corporeal', such as size, shape, motion and all others that cannot be thought of apart from local extension; and we use the term 'body' to refer to the substance in which they inhere. It cannot be supposed that one substance is the subject of shape, and another substance is the subject of local motion etc., since all these acts fall under the common concept of extension. There are other acts which we call 'acts of thought', such as understanding, willing, imagining, having sensory perceptions, and so on: these all fall under the common concept of thought or perception or consciousness, and we call the substance in which they inhere a 'thinking thing' or a 'mind'. We can use any other term you like, provided we do not confuse this substance with corporeal substance. For acts of thought have nothing in common with corporeal acts, and thought, which is the common concept under which they fall, is different in kind from extension, which is the common concept of corporeal acts. Once we have formed two distinct concepts of these two substances, it is easy, on the basis of what is said in the Sixth Meditation, to establish whether they are one and the same or different.

THIRD OBJECTION

[Hobbes]

Which of all these activities is distinct from my thinking? Which of them can be said to be separate from myself?

Perhaps someone will answer this question as follows: I who am thinking am distinct from my thought; but my thought, though not separate from me, is distinct from me in the same way in which (as I have said above) jumping is distinct from the jumper. If M. Descartes is suggesting that he who understands is the same as the understanding, we shall be going back to the scholastic way of talking: the understanding understands, the sight sees, the will wills, and, by a very close analogy, the walking (or at least the faculty of walking) walks. All these expressions are obscure, improper, and quite unworthy of M. Descartes' usual clarity.

Reply [Descartes]

I do not deny that I, who am thinking, am distinct from my thought, in the way in which a thing is distinct from a mode. But when I ask 'Which of all these activities is distinct from my thinking?', I mean this to refer to the various modes of thinking which I have just listed, not to myself as a substance. And when I add, 'Which of them can be said to be separate from myself?', I simply mean that all these modes of thinking inhere in me. I do not see how one can pretend that there is any doubt or obscurity here.

FOURTH OBJECTION

[Hobbes]

I must therefore admit that the nature of this piece of wax is in no way revealed by my imagination, but is conceived [*perceived*] by the mind alone.

There is a great difference between imagining, that is, having an idea, and conceiving in the mind, that is, using a process of reasoning to infer that something is, or exists. But M. Descartes has not explained how they differ. Even the Peripatetics of classical times taught clearly enough that a substance is not perceived by the senses but is inferred by reasoning.

Now, what shall we say if it turns out that reasoning is simply the joining together and linking of names or labels by means of the verb 'is'? It would follow that the inferences in our reasoning tell us nothing at all about the nature of things, but merely tell us about the labels applied to them; that is, all we can infer is whether or not we are combining the names of things in accordance with the arbitrary conventions which we have laid down in respect of their meaning. If this is so, as may well be the case, reasoning will depend on names, names will depend on the imagination, and imagination will depend (as I believe it does) merely on the motions of our bodily organs; and so the mind will be nothing more than motion occurring in various parts of an organic body.

Reply [Descartes]

I did explain the difference between imagination and a purely mental conception in this very example, where I listed the features of the wax which we imagine and those which we conceive by using the mind alone. And I also explained elsewhere how one and the same thing, say a pentagon, is understood in one way and imagined in another. As for the linking together that occurs when we reason, this is not a linking of names but of the things that are signified by the

names, and I am surprised that the opposite view should occur to anyone. Who doubts that a Frenchman and a German can reason about the same things, despite the fact that the words that they think of are completely different? And surely the philosopher refutes his own position when he talks of the arbitrary conventions that we have laid down concerning the meaning of words. For if he admits that the words signify something, why will he not allow that our reasoning deals with this something which is signified, rather than merely with the words? And surely on his account, when he concludes that the mind is a motion he might just as well conclude that the earth is the sky, or anything else he likes.

Fourth Objections and Replies

[Arnauld on the *Meditations*]

THE NATURE OF THE HUMAN MIND

The first thing that I find remarkable is that our distinguished author has laid down as the basis for his entire philosophy exactly the same principle as that laid down by St Augustine—a man of the sharpest intellect and a remarkable thinker, not only on theological topics but also on philosophical ones. In Book II chapter 3 of *De Libero Arbitrio*, Alipius, when he is disputing with Euodius and is about to prove the existence of God, says the following: 'First, if we are to take as our starting point what is most evident, I ask you to tell me whether you yourself exist. Or are you perhaps afraid of making a mistake in your answer, given that, if you did not exist, it would be quite impossible for you to make a mistake?' This is like what M. Descartes says: 'But there is a deceiver of supreme power and cunning who is deliberately and constantly deceiving me. In that case I too undoubtedly exist, if he is deceiving me.' But let us go on from here and, more to the point, see how this principle can be used to derive the result that our mind is separate from our body.

I can doubt whether I have a body, and even whether there are any bodies at all in the world. Yet for all that, I may not doubt that I am or exist, so long as I am doubting or thinking.

Therefore I who am doubting and thinking am not a body. For, in that case, in having doubts about my body I should be having doubts about myself.

Indeed, even if I obstinately maintain that there are no bodies whatsoever, the proposition still stands, namely that I am something, and hence I am not a body.

This is certainly very acute. But someone is going to bring up the objection which the author raises against himself: the fact that I have doubts about the body, or deny that it exists, does not bring it about that no body exists. 'Yet may it not perhaps be the case that these very things which I am supposing to be nothing, because they are unknown to me, are in reality identical with the "I" of which I am aware? I do not know,' he says 'and for the moment I shall not argue the point. I know that I exist; the question is, what is this "I" that I know? If the "I" is understood strictly as we have been taking it, then it is quite certain that knowledge of it does not depend on things of whose existence I am as yet unaware.'

But the author admits that in the argument set out in the *Discourse on the Method* the proof excluding anything corporeal from the nature of the mind was not put forward 'in an order corresponding to the actual truth of the matter' but merely in an order corresponding to his 'own perception'. So the sense of the passage was that he was aware of nothing at all which he knew belonged to his essence except that he was a thinking thing. From this answer it is clear that the objection still stands in precisely the same form as it did before, and that the question he promised to answer still remains outstanding: How does it follow, from the fact that he is aware of nothing else belonging to his essence, that nothing else does in fact belong to it? I must confess that I am somewhat slow, but I have been unable to find anywhere in the Second Meditation an answer to this question. As far as I can gather, however, the author does attempt a proof of this claim in the Sixth Meditation, since he takes it to depend on his having clear knowledge of God, which he had not yet arrived at in the Second Meditation. This is how the proof goes:

I know that everything which I clearly and distinctly understand is capable of being created by God so as to correspond exactly with my understanding of it. Hence the fact that I can clearly and distinctly understand one thing apart from another is enough to make me certain that the two things are distinct, since they are capable of being separated, at least by God. The question of what kind of power is required to bring about such a separation does not affect the judgement that the two things are distinct . . . Now on the one hand I have a clear and distinct idea of myself, in so far as I am simply a thinking, non-extended thing; and on the other hand I have a distinct idea of body, in so far as this is simply an extended, non-thinking thing. And accordingly, it is certain that I am really distinct from my body, and can exist without it.

We must pause a little here, for it seems to me that in these few words lies the crux of the whole difficulty.

First of all, if the major premiss of this syllogism is to be true, it must be taken to apply not to any kind of knowledge of a thing, nor even to clear and distinct knowledge; it must apply solely to knowledge which is adequate. For our distinguished author admits in his reply to the theologian, that if one thing can be conceived distinctly and separately from another 'by an abstraction of the intellect which conceives the thing inadequately', then this is sufficient for there to be a formal distinction between the two, but it does not require that there be a real distinction. And in the same passage he draws the following conclusion:

By contrast, I have a complete understanding of what a body is when I think that it is merely something having extension, shape and motion, and I deny that it has anything which belongs to the nature of a mind. Conversely, I understand the mind to be a complete thing, which doubts, understands, wills, and so on, even though I deny that it has any of the attributes which are contained in the idea of a body. Hence there is a real distinction between the body and the mind.

But someone may call this minor premiss into doubt and maintain that the conception you have of yourself when you conceive of yourself as a thinking, non-extended thing is an inadequate one; and the same may be true of your conception of yourself as an extended, non-thinking thing. Hence we must look at how this is proved in the earlier part of the argument. For I do not think that this matter is so clear that it should be assumed without proof as a first principle that is not susceptible of demonstration.

As to the first part of your claim, namely that you have a complete understanding of what a body is when you think that it is merely something having extension, shape, motion etc., and you deny that it has anything which belongs to the nature of a mind, this proves little. For those who maintain that our mind is corporeal do not on that account suppose that every body is a mind. On their view, body would be related to mind as a genus is related to a species. Now a genus can be understood apart from a species, even if we deny of the genus what is proper and peculiar to the species—hence the common maxim of logicians, 'The negation of the species does not negate the genus.' Thus I can understand the genus 'figure' apart from my understanding of any of the properties which are peculiar to a circle. It therefore remains to be proved that the mind can be completely and adequately understood apart from the body.

I cannot see anywhere in the entire work an argument which could serve to prove this claim, apart from what is suggested at the beginning: 'I can deny that any body exists, or that there is any extended thing at all, yet it remains certain to me that I exist, so long as I am making this denial or thinking it. Hence I am a thinking thing, not a body, and the body does not belong to the knowledge I have of myself.'

But so far as I can see, the only result that follows from this is that I can obtain some knowledge of myself without knowledge of the body. But it is not yet transparently clear to me that this knowledge is complete and adequate, so as to enable me to be certain that I am not mistaken in excluding body from my essence. I shall explain the point by means of an example.

Suppose someone knows for certain that the angle in a semi-circle is a right angle, and hence that the triangle formed by this angle and the diameter of the circle is right-angled. In spite of this, he may doubt, or not yet have grasped for certain, that the square on the hypotenuse is equal to the squares on the other two sides; indeed he may even deny this if he is misled by some fallacy. But now, if he uses the same argument as that proposed by our illustrious author, he may appear to have confirmation of his false belief, as follows: 'I clearly and distinctly perceive', he may say, 'that the triangle is right-angled; but I doubt that the square on the hypotenuse is equal to the squares on the other two sides; therefore it does not belong to the essence of the triangle that the square on its hypotenuse is equal to the squares on the other sides.'

Again, even if I deny that the square on the hypotenuse is equal to the square on the other two sides, I still remain sure that the triangle is right-angled, and my mind retains the clear and distinct knowledge that one of its angles is a right angle. And given that this is so, not even God could bring it about that the triangle is not right-angled.

I might argue from this that the property which I doubt, or which can be removed while leaving my idea intact, does not belong to the essence of the triangle.

Moreover, 'I know', says M. Descartes, 'that everything which I clearly and distinctly understand is capable of being created by God so as to correspond exactly with my understanding of it. And hence the fact that I can clearly and distinctly understand one thing apart from another is enough to make me certain that the two things are distinct, since they are capable of being separated by God.' Yet I clearly and distinctly understand that this triangle is right-angled, without understanding that the square on the hypotenuse is equal to the squares on the other sides. It follows on this reasoning that God, at least, could create a right-angled triangle with the square on its hypotenuse not equal to the squares on the other sides.

I do not see any possible reply here, except that the person in this example does not clearly and distinctly perceive that the triangle is right-angled. But how is my perception of the nature of my mind any clearer than his perception of the nature of the triangle? He is just as certain that the triangle in the semi-circle has one right angle (which is the criterion of a right-angled triangle) as I am certain that I exist because I am thinking.

Now although the man in the example clearly and distinctly knows that the triangle is right-angled, he is wrong in thinking that the aforesaid relationship between the squares on the sides does not belong to the nature of the triangle. Similarly, although I clearly and distinctly know my nature to be something that thinks, may I, too, not perhaps be wrong in thinking that nothing else belongs to my nature apart from the fact that I am a thinking thing? Perhaps the fact that I am an extended thing may also belong to my nature.

Someone may also make the point that since I infer my existence from the fact that I am thinking, it is certainly no surprise if the idea that I form by thinking of myself in this way represents to my mind nothing other than myself as a thinking thing. For the idea was derived entirely from my thought. Hence it seems that this idea cannot provide any evidence that nothing belongs to my essence beyond what is contained in the idea.

It seems, moreover, that the argument proves too much, and takes us back to the Platonic view (which M. Descartes nonetheless rejects) that nothing corporeal belongs to our essence, so that man is merely a rational soul and the body merely a vehicle for the soul—a view which gives rise to the definition of man as 'a soul which makes use of a body'.

If you reply that body is not straightforwardly excluded from my essence, but is ruled out only and precisely in so far as I am a thinking thing, it seems that there is a danger that someone will suspect that my knowledge of myself as a thinking thing does not qualify as knowledge of a being of which I have a complete and adequate conception; it seems instead that I conceive of it only inadequately, and by a certain intellectual abstraction.

Geometers conceive of a line as a length without breadth, and they conceive of a surface as length and breadth without depth, despite the fact that no length exists without breadth and no breadth without depth. In the same way, someone may perhaps suspect that every thinking thing is also an extended thing—an extended thing which, besides the attributes it has in common with other extended things, such as shape, motion, etc., also possesses the peculiar power of thought. This would mean that although, simply in virtue of this power, it can by an intellectual abstraction be apprehended as a thinking thing, in reality bodily attributes may belong to this thinking thing. In the same way, although quantity can be conceived in terms of length alone, in reality breadth and depth belong to every quantity, along with length.

The difficulty is increased by the fact that the power of thought appears to be attached to bodily organs, since it can be regarded as dormant in infants and ex-

tinguished in the case of madmen. And this is an objection strongly pressed by those impious people who try to do away with the soul.

So far I have dealt with the real distinction between our mind and the body. But since our distinguished author has undertaken to demonstrate the immortality of the soul, it may rightly be asked whether this evidently follows from the fact that the soul is distinct from the body. According to the principles of commonly accepted philosophy this by no means follows, since people ordinarily take it that the souls of brute animals are distinct from their bodies, but nevertheless perish along with them.

I had got as far as this in my comments, and was intending to show how the author's principles, which I thought I had managed to gather from his method of philosophizing, would enable the immortality of the soul to be inferred very easily from the real distinction between the mind and the body. But at this point, a little study composed by our illustrious author was sent to me, which apart from shedding much light on the work as a whole, puts forward the same solution to the point at issue which I was on the point of proposing.

As far as the souls of the brutes are concerned, M. Descartes elsewhere suggests clearly enough that they have none. All they have is a body which is constructed in a particular manner, made up of various organs in such a way that all the operations which we observe can be produced in it and by means of it.

But I fear that this view will not succeed in finding acceptance in people's minds unless it is supported by very solid arguments. For at first sight it seems incredible that it can come about, without the assistance of any soul, that the light reflected from the body of a wolf onto the eyes of a sheep should move the minute fibres of the optic nerves, and that on reaching the brain this motion should spread the animal spirits throughout the nerves in the manner necessary to precipitate the sheep's flight.

One point which I will add here is that I wholly agree with the distinguished author's doctrines concerning the distinction between the imagination and the intellect or thought, and the greater certainty which attaches to what we grasp by means of reason as against what we observe by means of the bodily senses. I long ago learned from Augustine, in Chapter 15 of *De Animae Quantitate*, that we must completely dismiss those who believe that what we see with the intellect is less certain than what we see with these bodily eyes, which have to contend with a perpetual discharge of phlegm. This leads Augustine to say in the *Soliloquies*, Book I, Chapter 4, that when doing geometry he found the senses to be like a ship. He goes on:

> For when they had brought me to the place I was aiming for, I sent them away, and, now that I had set foot on the shore, began to examine these matters using my thought alone. But for a long time my footsteps remained unsteady. Hence I think that a man can sooner sail on dry land than he can perceive geometrical matters through the senses, even though the senses do appear to give us some small assistance when we begin to learn.

[…]

Let me add something which I forgot to include earlier. The author lays it down as certain that there can be nothing in him, in so far as he is a thinking thing, of which he is not aware, but it seems to me that this is false. For by 'himself, in so far as he is a thinking thing', he means simply his mind, in so far as it is distinct from the body. But all of us can surely see that there may be many things in our mind of which the mind is not aware. The mind of an infant in its mother's womb has the power of thought, but is not aware of it. And there are countless similar examples, which I will pass over.

[Descartes to Arnauld]

REPLY TO PART ONE, DEALING WITH THE NATURE OF THE HUMAN MIND

I shall not waste time here by thanking my distinguished critic for bringing in the authority of St Augustine to support me, and for setting out my arguments so vigorously that he seems to fear that their strength may not be sufficiently apparent to anyone else.

But I will begin by pointing out where it was that I embarked on proving 'how, from the fact that I am aware of nothing else belonging to my essence (that is, the essence of the mind alone) apart from the fact that I am a thinking thing, it follows that nothing else does in fact belong to it'. The relevant passage is the one where I proved that God exists—a God who can bring about everything that I clearly and distinctly recognize as possible.

Now it may be that there is much within me of which I am not yet aware (for example, in this passage I was in fact supposing that I was not yet aware that the mind possessed the power of moving the body, or that it was substantially united to it). Yet since that of which I am aware is sufficient to enable me to subsist with it and it alone, I am certain that I could have been created by God without having these other attributes of which I am unaware, and hence that these other attributes do not belong to the essence of the mind.

For if something can exist without some attribute, then it seems to me that that attribute is not included in its essence. And although mind is part of the essence of man, being united to a human body is not strictly speaking part of the essence of mind.

I must also explain what I meant by saying that 'a real distinction cannot be inferred from the fact that one thing is conceived apart from another by an abstraction of the intellect which conceives the thing inadequately. It can be inferred only if we understand one thing apart from another completely, or as a complete thing.'

I do not, as M. Arnauld assumes, think that adequate knowledge of a thing is required here. Indeed, the difference between complete and adequate knowledge is that if a piece of knowledge is to be *adequate* it must contain absolutely all the properties which are in the thing which is the object of knowledge. Hence only God can know that he has adequate knowledge of all things.

A created intellect, by contrast, though perhaps it may in fact possess adequate knowledge of many things, can never know it has such knowledge unless God grants it a special revelation of the fact. In order to have adequate knowledge of a thing all that is required is that the power of knowing possessed by the intellect is adequate for the thing in question, and this can easily occur. But in order for the intellect to know it has such knowledge, or that God put nothing in the thing beyond what it is aware of, its power of knowing would

have to equal the infinite power of God, and this plainly could not happen on pain of contradiction.

Now in order for us to recognize a real distinction between two things it cannot be required that our knowledge of them be adequate if it is impossible for us to know that it is adequate. And since, as has just been explained, we can never know this, it follows that it is not necessary for our knowledge to be adequate.

Hence when I said that 'it does not suffice for a real distinction that one thing is understood apart from another by an abstraction of the intellect which conceives the thing inadequately', I did not think this would be taken to imply that *adequate* knowledge was required to establish a real distinction. All I meant was that we need the sort of knowledge that we have not ourselves made *inadequate* by an abstraction of the intellect.

There is a great difference between, on the one hand, some item of knowledge being wholly adequate, which we can never know with certainty to be the case unless it is revealed by God, and, on the other hand, its being adequate enough to enable us to perceive that we have not rendered it inadequate by an abstraction of the intellect.

In the same way, when I said that a thing must be understood *completely*, I did not mean that my understanding must be adequate, but merely that I must understand the thing well enough to know that my understanding is *complete*.

I thought I had made this clear from what I had said just before and just after the passage in question. For a little earlier I had distinguished between 'incomplete' and 'complete' entities, and I had said that for there to be a real distinction between a number of things, each of them must be understood as 'an entity in its own right which is different from everything else'.

And later on, after saying that I had 'a complete understanding of what a body is', I immediately added that I also 'understood the mind to be a complete thing'. The meaning of these two phrases was identical; that is, I took 'a complete understanding of something' and 'understanding something to be a complete thing' as having one and the same meaning.

But here you may justly ask what I mean by a 'complete thing', and how I prove that for establishing a real distinction it is sufficient that two things can be understood as 'complete' and that each one can be understood apart from the other.

My answer to the first question is that by a 'complete thing' I simply mean a substance endowed with the forms or attributes which enable me to recognize that it is a substance.

We do not have immediate knowledge of substances, as I have noted elsewhere. We know them only by perceiving certain forms or attributes which must inhere in something if they are to exist; and we call the thing in which they inhere a 'substance'.

But if we subsequently wanted to strip the substance of the attributes through which we know it, we would be destroying our entire knowledge of it. We might be able to apply various words to it, but we could not have a clear and distinct perception of what we meant by these words.

I am aware that certain substances are commonly called 'incomplete'. But if the reason for calling them incomplete is that they are unable to exist on their own, then I confess I find it self-contradictory that they should be substances, that is, things which subsist on their own, and at the same time incomplete, that is, not possessing the power to subsist on their own. It is also possible to call a substance incomplete in the sense that, although it has nothing incomplete about it *qua* substance, it is incomplete in so far as it is referred to some other substance in conjunction with which it forms something which is a unity in its own right.

Thus a hand is an incomplete substance when it is referred to the whole body of which it is a part; but it is a complete substance when it is considered on its own. And in just the same way the mind and the body are incomplete substances when they are referred to a human being which together they make up. But if they are considered on their own, they are complete.

For just as being extended and divisible and having shape etc. are forms or attributes by which I recognize the substance called *body*, so understanding, willing, doubting etc. are forms by which I recognize the substance which is called *mind*. And I understand a thinking substance to be just as much a complete thing as an extended substance.

It is quite impossible to assert, as my distinguished critic maintains, that 'body may be related to mind as a genus is related to a species'. For although a genus can be understood without this or that specific differentia, there is no way in which a species can be thought of without its genus.

For example, we can easily understand the genus 'figure' without thinking of a circle (though our understanding will not be distinct unless it is referred to some specific figure and it will not involve a complete thing unless it also comprises the nature of body). But we cannot understand any specific differentia of the 'circle' without at the same time thinking of the genus 'figure'.

Now the mind can be perceived distinctly and completely (that is, sufficiently for it to be considered as a complete thing) without any of the forms or attributes by which we recognize that body is a substance, as I think I showed quite adequately in the Second Meditation. And similarly a body can be understood distinctly and as a complete thing, without any of the attributes which belong to the mind.

But here my critic argues that although I can obtain some knowledge of myself without knowledge of the body, it does not follow that this knowledge is complete and adequate, so as to enable me to be certain that I am not mistaken in excluding body from my essence. He explains the point by using the example of a triangle inscribed in a semi-circle, which we can clearly and distinctly understand to be right-angled although we do not know, or may even deny, that the square on the hypotenuse is equal to the squares on the other sides. But we cannot infer from this that there could be a right-angled triangle such that the square on the hypotenuse is not equal to the squares on the other sides.

But this example differs in many respects from the case under discussion.

First of all, though a triangle can perhaps be taken concretely as a substance having a triangular shape, it is certain that the property of having the square on the hypotenuse equal to the squares on the other sides is not a substance. So nei-

ther the triangle nor the property can be understood as a complete thing in the way in which mind and body can be so understood; nor can either item be called a 'thing' in the sense in which I said 'it is enough that I can understand one thing (that is, a complete thing) apart from another' etc. This is clear from the passage which comes next: 'Besides I find in myself faculties' etc. I did not say that these faculties were *things*, but carefully distinguished them from things or substances.

Secondly, although we can clearly and distinctly understand that a triangle in a semi-circle is right-angled without being aware that the square on the hypotenuse is equal to the squares on the other two sides, we cannot have a clear understanding of a triangle having the square on its hypotenuse equal to the squares on the other sides without at the same time being aware that it is right-angled. And yet we can clearly and distinctly perceive the mind without the body and the body without the mind.

Thirdly, although it is possible to have a concept of a triangle inscribed in a semi-circle which does not include the fact that the square on the hypotenuse is equal to the squares on the other sides, it is not possible to have a concept of the triangle such that no ratio at all is understood to hold between the square on the hypotenuse and the squares on the other sides. Hence, though we may be unaware of what that ratio is, we cannot say that any given ratio does not hold unless we clearly understand that it does not belong to the triangle; and where the ratio is one of equality, this can never be understood. Yet the concept of body includes nothing at all which belongs to the mind, and the concept of mind includes nothing at all which belongs to the body.

So although I said 'it is enough that I can clearly and distinctly understand one thing apart from another' etc., one cannot go on to argue 'yet I clearly and distinctly understand that this triangle is right-angled without understanding that the square on the hypotenuse' etc. There are three reasons for this. First, the ratio between the square on the hypotenuse and the squares on the other sides is not a complete thing. Secondly, we do not clearly understand the ratio to be equal except in the case of a right-angled triangle. And thirdly, there is no way in which the triangle can be distinctly understood if the ratio which obtains between the square on the hypotenuse and the squares on the other sides is said not to hold.

But now I must explain how the mere fact that I can clearly and distinctly understand one substance apart from another is enough to make me certain that one excludes the other.

The answer is that the notion of a *substance* is just this—that it can exist by itself, that is without the aid of any other substance. And there is no one who has ever perceived two substances by means of two different concepts without judging that they are really distinct.

Hence, had I not been looking for greater than ordinary certainty, I should have been content to have shown in the Second Meditation that the mind can be understood as a subsisting thing despite the fact that nothing belonging to the body is attributed to it, and that, conversely, the body can be understood as a subsisting thing despite the fact that nothing belonging to the mind is attributed to it. I should have added nothing more in order to demonstrate that there is a real distinction between the mind and the body, since we commonly judge that the order in which things are mutually related in our perception of them corresponds to the order in which they are related in actual reality. But one of the exaggerated doubts which I put forward in the First Meditation went so far as to make it impossible for me to be certain of this very point (namely whether things do in reality correspond to our perception of them), so long as I was supposing myself to be ignorant of the author of my being. And this is why everything I wrote on the subject of God and truth in the Third, Fourth and Fifth Meditations contributes to the conclusion that there is a real distinction between the mind and the body, which I finally established in the Sixth Meditation.

And yet, says M. Arnauld, 'I have a clear understanding of a triangle inscribed in a semi-circle without knowing that the square on the hypotenuse is equal to the squares on the other sides.' It is true that the triangle is intelligible even though we do not think of the ratio which obtains between the square on the hypotenuse and the squares on the other sides; but it is not intelligible that this ratio should be denied of the triangle. In the case of the mind, by contrast, not only do we understand it to exist without the body, but, what is more, all the attributes which belong to a body can be denied of it. For it is of the nature of substances that they should mutually exclude one another.

M. Arnauld goes on to say: 'Since I infer my existence from the fact that I am thinking, it is certainly no surprise if the idea that I form in this way represents me simply as a thinking thing.' But this is no objection to my argument. For it is equally true that when I examine the nature of the body, I find nothing at all in it which savours of thought. And we can have no better evidence for a distinction between two things than the fact that if we examine either of them, whatever we find in one is different from what we find in the other.

Nor do I see why this argument 'proves too much'. For the fact that one thing can be separated from another by the power of God is the very least that can be asserted in order to establish that there is a real distinction between the two. Also, I thought I was very careful to guard against anyone inferring from this that man was simply 'a soul which makes use of a body'. For in the Sixth Meditation, where I dealt with the distinction between the mind and the body, I also proved at the same time that the mind is substantially united with the body. And the arguments which I used to prove this are as strong as any I can remember ever having read. Now someone who says that a man's arm is a substance that is really distinct from the rest of his body does not thereby deny that the arm belongs to the nature of the whole man. And saying that the arm belongs to the nature of the whole man does not give rise to the suspicion that it cannot subsist in its own right. In the same way, I do not think I proved too much in showing that the mind can exist apart from the body. Nor do I think I proved too little in saying that the mind is substantially united with the body, since that substantial union does not prevent our having a clear and distinct concept of the mind on its own, as a complete thing. The concept is thus very different from that of a surface or a line, which cannot be understood as complete things unless we attribute to them not just length and breadth but also depth.

Finally the fact that 'the power of thought is dormant in infants and extinguished in madmen' (I should say not 'extinguished' but 'disturbed'), does not show that we should regard it as so attached to bodily organs that it cannot exist without them. The fact that thought is often impeded by bodily organs, as we know from our own frequent experience, does not at all entail that it is produced

by those organs. This latter view is one for which not even the slightest proof can be adduced.

I must admit, however, that the fact that the mind is closely conjoined with the body, which we experience constantly through our senses, does result in our not being aware of the real distinction between mind and body unless we attentively meditate on the subject. But I think that those who repeatedly ponder on what I wrote in the Second Meditation will be easily convinced that the mind is distinct from the body, and distinct not just by a fiction or abstraction of the intellect: it can be known as a distinct thing because it is in reality distinct.

I will not answer my critic's further observations regarding the immortality of the soul, because they do not conflict with my views. As far as the souls of the brutes are concerned, this is not the place to examine the subject, and, short of giving an account of the whole of physics, I cannot add to the explanatory remarks I made in Part 5 of the *Discourse on the Method*. But to avoid passing over the topic in silence, I will say that I think the most important point is that, both in our bodies and those of the brutes, no movements can occur without the presence of all the organs or instruments which would enable the same movements to be produced in a machine. So even in our own case the mind does not directly move the external limbs, but simply controls the animal spirits which flow from the heart via the brain into the muscles, and sets up certain motions in them; for the spirits are by their nature adapted with equal facility to a great variety of actions. Now a very large number of the motions occurring inside us do not depend in any way on the mind. These include heartbeat, digestion, nutrition, respiration when we are asleep, and also such waking actions as walking, singing and the like, when these occur without the mind attending to them. When people take a fall, and stick out their hands so as to protect their head, it is not reason that instructs them to do this; it is simply that the sight of the impending fall reaches the brain and sends the animal spirits into the nerves in the manner necessary to produce this movement even without any mental volition, just as it would be produced in a machine. And since our own experience reliably informs us that this is so, why should we be so amazed that the 'light reflected from the body of a wolf onto the eyes of a sheep' should equally be capable of arousing the movements of flight in the sheep?

But if we wish to determine by the use of reason whether any of the movements of the brutes are similar to those which are performed in us with the help of the mind, or whether they resemble those which depend merely on the flow of the animal spirits and the disposition of the organs, then we should consider the differences that can be found between men and beasts. I mean the differences which I set out in Part 5 of the *Discourse on the Method*, for I think these are the only differences to be found. If we do this, it will readily be apparent that all the actions of the brutes resemble only those which occur in us without any assistance from the mind. And we shall be forced to conclude from this that we know of absolutely no principle of movement in animals apart from the disposition of their organs and the continual flow of the spirits which are produced by the heat of the heart as it rarefies the blood. We shall also see that there was no excuse for our imagining that any other principle of motion was to be found in the brutes. We made this mistake because we failed to distinguish the two principles of motion just described; and on seeing that the principle depending solely on the animal spirits and organs exists in the brutes just as it does in us, we jumped to the conclusion that the other principle, which consists in mind or thought, also exists in them. Things which we have become convinced of since our earliest years, even though they have subsequently been shown by rational arguments to be false, cannot easily be eradicated from our beliefs unless we give the relevant arguments our long and frequent attention.

[…]

As to the fact that there can be nothing in the mind, in so far as it is a thinking thing, of which it is not aware, this seems to me to be self-evident. For there is nothing that we can understand to be in the mind, regarded in this way, that is not a thought or dependent on a thought. If it were not a thought or dependent on a thought it would not belong to the mind qua thinking thing; and we cannot have any thought of which we are not aware at the very moment when it is in us. In view of this I do not doubt that the mind begins to think as soon as it is implanted in the body of an infant, and that it is immediately aware of its thoughts, even though it does not remember this afterwards because the impressions of these thoughts do not remain in the memory.

But it must be noted that, although we are always actually aware of the acts or operations of our minds, we are not always aware of the mind's faculties or powers, except potentially. By this I mean that when we concentrate on employing one of our faculties, then immediately, if the faculty in question resides in our mind, we become actually aware of it, and hence we may deny that it is in the mind if we are not capable of becoming aware of it.

Fifth Objections and Replies

[Gassendi to Descartes]

On the Second Meditation: 'The nature of the human mind, and how it is better known than the body'

1. Turning to the Second Meditation, I see that you still persist with your elaborate pretence of deception, but you go on to recognize at least that you, who are the subject of this deception, exist. And thus you conclude that this proposition, *I am, I exist*, is true whenever it is put forward by you or conceived in your mind. But I do not see that you needed all this apparatus, when on other grounds you were certain, and it was true, that you existed. You could have made the same inference from any one of your other actions, since it is known by the natural light that whatever acts exists.

You add that you do not yet have a sufficient understanding of what you are. Here I agree with you in earnest and readily accept what you say; this is the point at which all the hard work begins. But it seems that you could have raised this question without all the circumlocutions and elaborate suppositions.

You next decide to meditate on what you formerly believed yourself to be, so that when the doubtful elements are removed only what is 'certain and unshakeable' may remain. Here your procedure will meet with universal approval. You now get to grips with the problem. You formerly believed you were a man; and now you ask 'What is a man?' You deliberately dismiss the common definitions and concentrate on 'the first thought that came to mind', namely that you had a face and hands and the other limbs making up what you called the body. The next thought was that you were nourished, that you moved about, and that you

engaged in sense-perception and thinking—actions which you attributed to the soul. Fair enough—provided we are careful to remember your distinction between the soul and the body. You say that you did not know what the soul was, but imagined it to be merely 'something like a wind or fire or ether' which permeated the more solid parts of your body. That is worth remembering. As for the body, you had no doubt that its nature consists in its being 'capable of taking on shape and having boundaries and filling a space so as to exclude any other body from it, and in its being perceived by touch, sight, hearing, smell and taste and being moved in various ways'. But you can continue to attribute these things to bodies even now, provided you do not attribute all of them to every single body (thus wind is a body, and yet it is not perceived by sight). But you cannot exclude the other attributes you go on to mention, since wind and fire are capable of moving many things. When you go on to say that you previously denied that a body has the 'power of self-movement', it is not clear how you can still maintain this. For it would imply that every body must by its nature be immobile, and that all its movements come from some incorporeal principle, and that we cannot suppose that water flows or an animal moves without some incorporeal power of movement.

2. You go on to ask whether, now that you are supposing you are being deceived, you can still affirm that you possess any of the attributes which you believed to belong to the nature of body. And after a very careful examination you say that you can find in yourself no attributes of this kind. But in this passage you are already regarding yourself not as a whole man but as an inner or hidden component—the kind of component which you had previously considered the soul to be. I ask you then, Soul, or whatever name you want me to address you by, have you by this time corrected the thought which previously led you to imagine that you were something like a wind diffused through the parts of the body? Certainly not. So why is it not possible that you are a wind, or rather a very thin vapour, given off when the heart heats up the purest type of blood, or produced by some other source, which is diffused through the parts of the body and gives them life? May it not be this vapour which sees with the eyes and hears with the ears and thinks with the brain and performs all the other functions which are commonly ascribed to you? If this is so, why should you not have the same shape as your whole body has, just as the air takes on the same shape as the vessel that contains it? Why should you not suppose that you are enclosed within the body's skin, or in the same medium as that which surrounds the body? Why should you not occupy space, or the parts of a space which the solid body or its parts do not fill? I mean that the solid body has pores through which you may be diffused, in such a way that your own parts and the parts of the body are not to be found in the same areas, just as in a mixture of wine and water the parts of the wine are not to be found where the parts of the water are, although our sight is unable to separate out the two. Again, why should you not be able to exclude any other body from the space which you occupy, given that the spaces which you occupy cannot be occupied at the same time by the parts of the more solid body? Why should you not be in motion in many different ways? For, given that you move many of your limbs, how could you accomplish this unless you were in motion yourself? You certainly cannot be immobile, since exertion is required when you move the limbs, nor can you be at rest if you are to produce movement in the body. If all this is so, then why do you say that you have within you 'none of the attributes which belong to the nature of the body'?

3. You go on to say that, of the attributes ascribed to the soul, neither nutrition nor movement are to be found in you. But, in the first place, something may be a body without receiving nutrition. Next, if you are the kind of body which we have described as a vapour, then given that the limbs, being more solid, are nourished by a more solid substance, why should you, being more rarefied, not also be nourished by a more rarefied substance? Moreover, when the body to which these limbs belong is growing, are not you growing also? And when the body is weak, are not you weak too? As far as movement is concerned, since it is you who cause your limbs to move, and they never assume any position unless you make them do so, how can this occur without movement on your part? You say 'since now I do not have a body, these are mere fabrications'. But if you are fooling with us or being fooled yourself, there is nothing to delay us here. If, however, you are speaking seriously, then you have to prove that you do not have a body which you inform, and also that your nature is not such that you are nourished and move in conjunction with the body.

You go on to say that you do not have sense-perception. But surely it is you who see colours, hear sounds etc. 'This', you say, 'does not occur without a body.' I agree. But in the first place you have a body, and you yourself are present within the eye, which obviously does not see without you. And secondly, you could be a rarefied body operating by means of the sense organs. You say 'in my dreams I have appeared to perceive through the senses many things which I afterwards realized I did not perceive through the senses at all'. Admittedly, you may be deceived when, although the eye is not in use, you seem to have sense-perception of something that cannot in fact be perceived without the eye. But this kind of falsity is not something you have experienced all the time; and indeed you have normally used your eyes in order to see and to take in the images which you may now have without the eyes being in use.

Finally, you reach the conclusion that *thinking* belongs to you. This must be accepted, but it remains for you to prove that the power of thought is something so far beyond the nature of a body that neither a vapour nor any other mobile, pure and rarefied body can be organized in such a way as would make it capable of thought. You will have to prove at the same time that the souls of the brutes are incorporeal, given that they think or are aware of something internal over and above the functions of the external senses, not only when they are awake but also when dreaming. You will also have to prove that this solid body of yours contributes nothing whatever to your thought (for you have never been without it, and have so far never had any thoughts when separated from it). You will thus have to prove that you think independently of the body in such a way that you can never be hampered by it or disturbed by the foul and dense vapours or fumes which from time to time have such a bad effect on the brain.

4. You conclude: 'I am, then, in the strict sense a thing that thinks; that is, I am a mind, or intelligence, or intellect, or reason.' Here I must admit that I had been labouring under a misapprehension. I thought that I was addressing a human soul, or the internal principle by which a man lives, has sensations, moves around and understands. Instead I find I was addressing a mind alone, which has divested itself not just of the body but also of the very soul. Are you, Sir, following the example of the ancients who, although believing that the soul was diffused through the whole body, nonetheless thought that the principal part—the {egemonikon} or 'controlling element'—had its seat in a specific part of the

body, such as the brain or the heart? They did of course believe that the soul was also to be found in this part, but they thought that the mind was, as it were, added to and united with the soul that existed there, thus informing this part along with the soul. I ought to have remembered this from the discussion in your *Discourse on the Method*, where you seemed to want to say that all the functions which are attributed to the vegetative and sensitive soul do not depend on the rational soul but can be exercised before the rational soul arrives in the body, as is the case with the brutes who, on your view, possess no reason. How I forgot this I do not know, unless it was because I was still in doubt about whether you preferred not to use the word 'soul' to apply to the principle responsible for the vegetative and sensory functions in both us and the brutes, but wanted instead to say that the soul in the strict sense was our mind. But since it is the vegetative and sensitive principle that is properly speaking said to 'animate' us, the only function performed by the mind is to enable us to think—and this you do in fact assert. Since this is so, let us use the term 'mind', and let it be strictly a 'thinking thing'.

You add that thought alone cannot be separated from you. Certainly there is no reason not to grant you this, particularly if you are simply a mind, and you are not prepared to allow that your substance is distinct from the substance of the soul except conceptually. Nonetheless I want to stop here and ask whether, in saying that thought cannot be separated from you, you mean that you continue to think indefinitely, so long as you exist. This would accord with the claims of those noted philosophers who, to prove that we are immortal, assume that we are in perpetual motion or, as I interpret it, that we are perpetually thinking. But it will hardly convince those who do not see how you are able to think during deep sleep or indeed in the womb. And here I pause again and ask whether you think that you were infused into the body, or one of its parts, while still in the womb or at birth. But I do not want to press the point too insistently and ask whether you remember what you thought about in the womb or in the first few days or months or even years after you were born; nor, if you answer that you have forgotten, shall I ask why this is so. I do suggest, however, that you should bear in mind how obscure, meagre and virtually non-existent your thought must have been during those early periods of your life.

You go on to say that you are not 'that structure of limbs which is called a human body'. We must accept this, since you are considering yourself solely as a thinking thing and as a part of the whole composite that is a human being—a part that is distinct from the external and more solid part. 'I am not', you say, 'some thin vapour which permeates the limbs—a wind, fire, air, breath, or whatever I depict in my imagination; for these are things which I have supposed to be nothing. Let this supposition stand.' But stop here, O Mind, and let those 'suppositions', or rather fictions, finally depart. You say 'I am not a vapour or anything of this kind.' But if the entire soul is something of this kind, why should you, who may be thought of as the noblest part of the soul, not be regarded as being, so to speak, the flower, or the most refined and pure and active part of it? You say: 'It may be that these very things which I am supposing to be nothing are something real, and that they are not distinct from the "I" of which I am aware. I do not know, and for the moment I shall not argue the point.' But if you do not know, if you are not arguing the point, why do you assume that you are none of these things? You say: 'I know I exist; and knowledge of this thing taken strictly cannot depend on that of which I am unaware.' Fair enough; but remember that you have not yet made certain that you are not air or a vapour or something else of this sort.

5. You next take what you call the imagination and proceed to describe what it is. You say that 'imagining is simply the contemplation of the shape or image of a corporeal thing', and you say this so that you can go on to infer that it is some form of thought other than imagination that enables you to know your nature. But since you are allowed to define imagination as you like, then if you are corporeal—and you have not yet proved the contrary—why, may I ask, cannot your contemplation of yourself involve some corporeal form or image? And when you do contemplate yourself in this way, I ask you whether you find that anything comes to mind apart from some pure, transparent, rarefied substance like a wind, which pervades the whole body or at least the brain or some other part, and which animates you and performs all your functions. 'I realize', you say, 'that none of the things that the imagination enables me to grasp is at all relevant to this knowledge of myself which I possess.' But you do not say how you recognize this. And since you had decided a little earlier that you did not yet know whether these things belonged to you, how, may I ask, do you now arrive at the conclusion just quoted?

6. You say next that 'the mind must be most carefully diverted from such things if it is to perceive its own nature as distinctly as possible'. Good advice. But after you have most carefully diverted yourself from these things, tell me, please, how distinctly you have managed to perceive your nature? In saying that you are simply 'a thing that thinks' you mention an operation of which all of us were already well aware; but you tell us nothing of the substance which performs this operation—what kind of substance it is, and what it consists of, how it organizes itself to perform so many different functions in so many different ways, and other matters of this kind, of which we have been ignorant up till now.

You say that we can perceive by the intellect what we cannot perceive by the imagination (and you identify the imagination with the 'common' sense). But, my good Mind, can you establish that there are several internal faculties and not one simple and universal one, which enables us to know whatever we know? When I see the sun with open eyes, sensory perception obviously occurs. And when I then think about the sun with my eyes closed, internal cognition obviously occurs. But how, ultimately, can I tell that I am perceiving the sun with the 'common' sense or faculty of imagination, as opposed to the mind or intellect, which implies that I can at will apprehend the sun now by means of the intellect, which is distinct from the imagination, and now by means of the imagination, which is distinct from the intellect? If, after brain damage or some injury to the imaginative faculty, the intellect remained as before, performing its proper functions all unimpaired, then we could say that the intellect was as distinct from the imagination as the imagination is distinct from the external senses. But since things do not happen this way, there is surely no ready way of establishing the distinction.

To say, as you do, that imagination occurs when we contemplate the image of some corporeal thing, surely implies that since there is no other way in which we may contemplate bodies, our knowledge of them must be derived from the imagination alone—or at any rate that no other faculty of knowing can be recognized.

You say that you cannot stop thinking that the corporeal things of which you form images in your thought, and which the senses investigate, are known with much more distinctness than this puzzling 'you' which cannot be pictured in the imagination; and thus it is surprising that you should have a more distinct knowledge and grasp of things which are doubtful and foreign to you. First of all, you are quite right in using the phrase 'this puzzling "you"'. For you really do not know what you are or what your nature is, and hence you cannot be any more confident that your nature is such as to be incapable of falling under the imagination. Next, all our knowledge appears to have its source in our senses, and although you deny the maxim 'Whatever is in the intellect must previously have existed in the senses', it seems that it is nevertheless true. For unless our knowledge enters in a single rush—{kata periptosin} or 'at a stroke' as they say—it is slowly established by analogy, composition, division, extrapolation and restriction, and in other similar ways which I need not list here. So it is no surprise if the things which rush in of their own accord and strike the senses should make a more vivid impression on the mind than things which the mind itself, when the occasion arises, constructs and compounds for itself out of the material which impinges on the senses. Moreover, you call corporeal things doubtful but, if you are prepared to admit the truth, you are just as certain of the existence of the body which you inhabit and of all the objects which surround you as you are of your own existence. And if it is solely the operation called 'thought' which makes you manifest to yourself, what happens with regard to the way in which other things are manifested? They are made manifest not just by various operations but also by many very evident attributes, such as size, shape, solidity, colour, taste, etc.; and thus, although they exist outside you, it is no surprise that your knowledge and grasp of them should be more distinct than your knowledge and grasp of yourself. But as to how it is possible for you to understand something that is foreign to you better than you understand yourself, I answer that the same thing happens in the case of the eye, which sees other things but does not see itself.

7. 'But what then am I?' you ask. 'A thing that thinks. What is that? A thing that doubts, understands, affirms, denies, is willing, is unwilling, and also imagines and has sensory perceptions.' This is a long list, but I will not query each individual item. The only point I would question is your statement that you are a thing which has sensory perceptions. This is surprising, since you had previously maintained the opposite. Or did you perhaps mean that in addition to yourself there is a bodily faculty which resides in the eyes, ears and other organs? Is it perhaps this faculty that receives the forms of sensible things and thus initiates the act of sense-perception which you then complete, it being you who really sees and hears and has the other sensory perceptions? This, I think, is what makes you class both sense-perception and imagination as kinds of thought. Fair enough; but in that case you must consider whether the sense-perception which the brutes have does not also deserve to be called 'thought', since it is not dissimilar to your own. This would mean that the brutes, too, have a mind which is not unlike yours.

You may say that you occupy the citadel in your brain and there receive whatever messages are transmitted by the animal spirits which move through the nerves, and sense-perception thus occurs there, where you dwell, despite the fact that it is said to occur throughout the body. Let us accept this; but the brutes have nerves, animal spirits and a brain, and in the brain there is a principle of cognition that receives the messages from the spirits in an exactly similar fashion and thus completes the act of sense-perception. You may say that this principle in the brains of animals is simply the corporeal imagination or faculty of forming images. But in that case you must show that you who reside in the brain are something different from the corporeal imagination or the human faculty of forming images. I asked you a little while ago for a criterion which would prove that you are something different, but I do not think you will be able to supply one. You may cite operations which far surpass those performed by animals. But although man is the foremost of the animals, he still belongs to the class of animals; and similarly, though you prove yourself to be the most outstanding of imaginative faculties, you still count as one of these faculties. You may attach the special label 'mind' to yourself, but although the name may be more impressive, this does not mean that your nature is therefore different. To prove that your nature is different (that is, incorporeal, as you maintain), you ought to produce some operation which is of a quite different kind from those which the brutes perform—one which takes place outside the brain, or at least independently of the brain; and this you do not do. On the contrary, when the brain is disturbed, you are disturbed, and when the brain is overwhelmed you are overwhelmed, and if the images of things leave the brain you do not retain any trace of them. You may say that everything which occurs in animals happens by means of a blind impulse of the animal spirits and the other organs, in just the same way as motion is produced in a clock or other machine. This may be true in the case of functions like nutrition or the pulsing of the arteries, which occur in exactly similar fashion in the case of man. But can you cite any sensory acts or so-called 'passions of the soul' which are produced by a blind impulse in the case of the brutes but not in our case? A scrap of food transmits its image into the eye of a dog, and the image is then transferred to the brain and as it were hooks on to the soul, so that the soul and the entire body joined to it is drawn towards the morsel as if by the most tiny and delicate chains. And if someone aims a stone, the stone transmits its image and, like a lever, pushes the soul away and simultaneously drives off the body or forces it to flee. But does not all this occur in the case of man? Perhaps you have in mind some quite different way in which this occurs in man, in which case I should be much obliged if you would explain it.

You may say that you are free and the soul has the power of preventing a man from both fleeing and advancing. But the principle of cognition does just this in the case of an animal: a dog, despite his fear of threats and blows may rush forward to grab a morsel it has seen—and a man often does just the same sort of thing! You may say that a dog barks simply from impulse and not, as happens when a man speaks, from choice. But in the case of man, too, there are causes at work which may lead us to judge that he speaks from some impulse. What you attribute to choice occurs as a result of a stronger impulse, and indeed the brute, too, exercises choice, when one impulse is greater than another. Indeed, I have seen a dog matching his barks to the sound of a trumpet, so as to imitate all the changes in the notes, whether sharp or flat, or slow or fast. And it managed to do this even when the tempo of the notes was arbitrarily and unexpectedly speeded up, or when the notes were unexpectedly drawn out. You say that the brutes lack reason. Well, of course they lack human reason, but they do not lack their own kind of reason. So it does not seem appropriate to call them {aloga} ['irrational'] except by comparison with us or with our kind of reason; and in any case {logos} or reason seems to be a general term, which can be attributed to them no less

than the cognitive faculty or internal sense. You may say that animals do not employ rational argument. But although they do not reason so perfectly or about as many subjects as man, they still reason, and the difference seems to be merely one of degree. You may say they do not speak. But although they do not produce human speech (since of course they are not human beings), they still produce their own form of speech, which they employ just as we do ours. You may say that even a delirious man can still string words together to express his meaning, which even the wisest of the brutes cannot do. But surely you are not being fair if you expect the brutes to employ human language and are not prepared to consider their own kind of language. But to go into this would need a much longer discussion.

8. Next you introduce the example of the wax, and you spend some time explaining that the so-called accidents of the wax are one thing, and the wax itself, or substance of the wax, is another. You say that in order to have a distinct perception of the wax itself or its substance we need only the mind or intellect, and not sensation or imagination. But the first point is just what everyone commonly asserts, *viz.* that the concept of the wax or its substance can be abstracted from the concepts of its accidents. But does this really imply that the substance or nature of the wax is itself distinctly conceived? Besides the colour, the shape, the fact that it can melt, etc. we conceive that there is something which is the subject of the accidents and changes we observe; but what this subject is, or what its nature is, we do not know. This always eludes us; and it is only a kind of conjecture that leads us to think that there must be something underneath the accidents. So I am amazed at how you can say that once the forms have been stripped off like clothes, you perceive more perfectly and evidently what the wax is. Admittedly, you perceive that the wax or its substance must be something over and above such forms; but what this something is you do not perceive, unless you are misleading us. For this 'something' is not revealed to you in the way in which a man can be revealed when, after first of all seeing just his hat and garments, we then remove the clothes so as to find out who and what he is. Moreover, when you think you somehow perceive this underlying 'something', how, may I ask, do you do so? Do you not perceive it as something spread out and extended? For you do not conceive of it as a point, although it is the kind of thing whose extension expands and contracts. And since this kind of extension is not infinite but has limits, do you not conceive of the thing as having some kind of shape? And when you seem as it were to see it, do you not attach to it some sort of colour, albeit not a distinct one? You certainly take it to be something more solid, and so more visible, than a mere void. Hence even your 'understanding' turns out to be some sort of imagination. If you say you conceive of the wax apart from any extension, shape or colour, then you must in all honesty tell us what sort of conception you do have of it.

What you have to say about 'men whom we see, or perceive with the mind, when we make out only their hats or cloaks' does not show that it is the mind rather than the imagination that makes judgements. A dog, which you will not allow to possess a mind like yours, certainly makes a similar kind of judgement when it sees not its master but simply his hat or clothes. Indeed, even if the master is standing or sitting or lying down or reclining or crouching down or stretched out, the dog still always recognizes the master who can exist under all these forms, even though like the wax, he does not keep the same proportions or always appear under one form rather than another. And when a dog chases a hare that is running away, and sees it first intact, then dead, and afterwards skinned and chopped up, do you suppose that he does not think it is the same hare? When you go on to say that the perception of colour and hardness and so on is 'not vision or touch but is purely mental scrutiny', I accept this, provided the mind is not taken to be really distinct from the imaginative faculty. You add that this scrutiny 'can be imperfect and confused or perfect and distinct depending on how carefully we concentrate on what the wax consists in'. But this does not show that the scrutiny made by the mind, when it examines this mysterious something that exists over and above all the forms, constitutes clear and distinct knowledge of the wax; it shows, rather, that such knowledge is constituted by the scrutiny made by the senses of all the possible accidents and changes which the wax is capable of taking on. From these we shall certainly be able to arrive at a conception and explanation of what we mean by the term 'wax'; but the alleged naked, or rather hidden, substance is something that we can neither ourselves conceive nor explain to others.

9. You now go on as follows:

What am I to say about this mind, or about myself? (So far, remember, I am not admitting that there is anything else in me except a mind.) What, I ask, is this 'I' which seems to perceive the wax so distinctly? Surely my awareness of my own self is not merely much truer and more certain than my awareness of the wax, but also much more distinct and evident. For if I judge that the wax exists from the fact that I see it, how much more does this prove that I exist? It is possible that what I see is not really the wax; it is possible that I do not even have eyes with which to see anything. But when I see, or think I see (I am not here distinguishing the two), it is simply not possible that I who am now thinking am not something. By the same token, if I judge that the wax exists from the fact that I touch it, the same result follows, namely that I exist. If I judge that it exists from the fact that I imagine it, or for any other reason, exactly the same thing follows. And the result that I have grasped in the case of the wax may be applied to everything else located outside me.

I give this long quotation so that you may realize that it demonstrates that you do indeed distinctly know that you exist because of the fact that you distinctly see and know that the wax and its accidents exist. But it does not prove that you therefore know, either distinctly or indistinctly, what you are or what your nature is. Such a proof would have been well worthwhile, since your existence is not in doubt. Note, however, that I do not propose to press this point, any more than I insisted on a point that arose earlier. This was that although you are not here admitting that you have anything apart from a mind, and hence you are excluding eyes, hands and the other bodily organs, you nevertheless speak of the wax and its accidents which you see and touch, etc. Yet to see these things without eyes or touch them without hands (or, as you put it, think that you see and touch them) is obviously impossible.

You proceed as follows.

If my perception of the wax seemed more distinct after it was established not just by sight or touch but by many other considerations, it must be admitted that I know myself even more distinctly. This is because every consideration whatsoever which contributes to my perception of the wax, or of any other body, cannot but establish even more effectively the nature of my own mind.

But just as your conclusions about the wax merely establish your perception of the existence of your mind and not its nature, so all your other considerations will fail to establish any result beyond this. If you aim to deduce anything further from your perception of the substance of the wax or other things, your only valid conclusion will be that since our conception of this substance is merely a confused perception of something unknown, the same applies to our conception of the mind. Hence you may well repeat your earlier phrase 'this puzzling "I"'.

Now for your conclusion.

I see that without any effort I have now finally got back to where I wanted. I now know that even bodies are not strictly perceived by the senses or the faculty of imagination but by the intellect alone, and that this perception derives not from their being touched or seen; and hence I know plainly that I can achieve an easier and more evident perception of my own mind than of anything else.

This is what you claim; but I do not see how you can deduce or 'know plainly' that anything more can be perceived concerning your mind beyond the fact that it exists. So what you promised in the title of this Meditation, namely that it would establish that the human mind is better known than the body, has not, so far as I can see, been achieved. Your aim was not to prove that the human mind exists, or that its existence is better known than the existence of the body, since its existence, at all events, is something which no one questions. Your intention was surely to establish that its nature is better known than the nature of the body, and this you have not managed to do. As regards the nature of the body, you have, O Mind, listed all the things we know: extension, shape, occupation of space, and so on. But what, after all your efforts, have you told us about yourself? You are not a bodily structure, you are not air, not a wind, not a thing which walks or senses, you are not this and not that. Even if we grant these results (though some of them you did in fact reject), they are not what we are waiting for. They are simply negative results; but the question is not what you are not, but what you are. And so you refer us to your principal result, that you are a thing that thinks—i.e. a thing that doubts, affirms etc. But to say first of all that you are a 'thing' is not to give any information. This is a general, imprecise and vague word which applies no more to you than it does to anything in the entire world that is not simply a nothing. You are a 'thing'; that is, you are not nothing, or, what comes to the same thing, you are something. But a stone is something and not nothing, and so is a fly, and so is everything else. When you go on to say that you are a *thinking* thing, then we know what you are saying; but we knew it already, and it was not what we were asking you to tell us. Who doubts that you are thinking? What we are unclear about, what we are looking for, is that inner substance of yours whose property is to think. Your conclusion should be related to this inquiry, and should tell us not that you are a thinking thing, but what sort of thing this 'you' who thinks really is. If we are asking about wine, and looking for the kind of knowledge which is superior to common knowledge, it will hardly be enough for you to say 'wine is a liquid thing, which is compressed from grapes, white or red, sweet, intoxicating' and so on. You will have to attempt to investigate and somehow explain its internal substance, showing how it can be seen to be manufactured from spirits, tartar, the distillate, and other ingredients mixed together in such and such quantities and proportions. Similarly, given that you are looking for knowledge of yourself which is superior to common knowledge (that is, the kind of knowledge we have had up till now), you must see that it is certainly not enough for you to announce that you are a thing that thinks and doubts and understands etc. You should carefully scrutinize yourself and conduct a kind of chemical investigation of yourself, if you are to succeed in uncovering and explaining to us your internal substance. If you provide such an explanation, we shall ourselves doubtless be able to investigate whether or not you are better known than the body whose nature we know so much about through anatomy, chemistry, so many other sciences, so many senses and so many experiments.

On the Sixth Meditation: 'The existence of material things and the real distinction between mind and body'

[…]

3. You next come to the task you have set yourself, but in a way which looks like petty skirmishing. You say: 'But now, when I am beginning to achieve a better knowledge of myself and the author of my being, although I do not think I should heedlessly accept everything I seem to have acquired from the senses, neither do I think that everything should be called into doubt.' This is quite right, though undoubtedly you must have thought this before.

The next passage is as follows:

First, I know that everything that I clearly and distinctly understand is capable of being created by God so as to correspond exactly with my understanding of it. Hence the fact that I can clearly and distinctly understand one thing apart from another is enough to make me certain that the two things are distinct, since they are capable of being separated, at least by God. The question of what kind of power is required to bring about such a separation does not affect the judgement that the two things are distinct.

The point that must be made about this is that you are using something which is obscure to prove something which is clear (though I do not suggest that the inference itself contains any obscurity). I will not complain that you should previously have proved the existence of God and the extent of his power in order to show that he is capable of bringing about whatever you are capable of understanding. I should like to ask only about the property of the triangle—that its longest side subtends the greatest angle: do you understand this property of the triangle separately from its other property of having its three angles equal to two right angles? And do you therefore admit that God could separate the former property from the latter and isolate it, enabling the triangle to have one property and not the other, or enabling the property to exist apart from the triangle?

But I shall not detain you any further on this point, since the separation in question is of little relevance. You go on as follows: 'Thus, simply by knowing I exist and seeing at the same time that absolutely nothing else belongs to my nature or essence except that I am a thinking thing, I can infer correctly that my essence consists solely in the fact that I am a thinking thing.' Here I ought to detain you, but it is enough to repeat what I said in connection with the Second Meditation. Alternatively, let us wait and see what inference you intend to draw.

Here it is:

It is true that I may have (or, to anticipate, that I certainly have) a body that is very closely joined to me. But, nevertheless, on the one hand, I have a clear and distinct idea of myself, in so far as I am simply a thinking, non-extended thing, and, on the other hand, I have a distinct idea of body, in so far as it is simply an extended, non-

thinking thing. And accordingly, it is certain that I am really distinct from my body and can exist without it.

This, then, was the result you were aiming for. And therefore, since the crux of the problem lies here, we must stop for a while to see how you manage to establish this conclusion. The principal point concerns the distinction between you and *body*. What body do you mean? Obviously this solid body composed of limbs which you undoubtedly refer to when you say 'I have a body which is joined to me' and 'It is certain that I am distinct from my body' etc.

And yet, O Mind, there is no difficulty about this body. There would be a problem if I were to follow the majority of philosophers and object that you are an *entelechy*, perfection, actuality, form, appearance, or, in common speech, 'mode', of the body. Such philosophers do not acknowledge that you are any more distinct or separable from this body than a shape or other mode is separable from it; and this point holds whether you are the entire soul or else some additional {nous dynamei} (the so-called 'potential intellect') or {nous pathetikos} (the 'passive intellect'). But I would like to be more generous and consider you as the {nous poietikos} or 'active intellect', and indeed to regard you as {choristos} or 'separable', albeit in another sense than the usual one.

The philosophers I have just referred to regarded the active intellect as common to all men (if not to all things) and as enabling the passive intellect to understand in exactly the same way—and with exactly the same necessity—as that in which light enables the eye to see (hence they frequently compared it with the light from the sun and regarded it as coming from outside). But I shall consider you instead (and you will be quite happy with this) as a specific sort of intellect exercising control in the body.

Now the difficulty, to repeat, is not about whether or not you are separable from this body (and this is why I suggested above that you had no need to have recourse to God's power in order to establish that things which you understand apart from each other are separate). Rather, the difficulty concerns the body which you yourself are—for you may be a rarefied body infused into this solid one or occupying some part of it. At all events you have not yet convinced us that you are something wholly incorporeal. And although in the Second Meditation you declared that you are not a wind, fire, air or breath, I did warn you that you had asserted this without any proof.

You said there that you were not arguing about these things at that stage; but you never went on to discuss them, and you never gave any sort of proof that you are not a body of this sort. I had hoped that you would now offer one; but what discussion and proof you do offer simply establishes that you are not this solid body, and, as I have just said, there is no difficulty about this.

4. 'But', you say, 'on the one hand I have a clear and distinct idea of myself, in so far as I am simply a thinking, non-extended thing; and on the other hand I have a distinct idea of body, in so far as it is simply an extended, non-thinking thing.' Now as far as the idea of body is concerned, it does not seem that it ought to cause us too much trouble. If you are talking of the idea of body in the general sense, then we must repeat our objection that you still have to prove that being capable of thought is inconsistent with the nature of body. For you would be begging the question, if you set up the inquiry as to whether you are a rarefied body in such a way as to presuppose that thought and body are incompatible.

But your claim undoubtedly concerns merely this solid body from which you maintain you are distinct and separable. And thus I do not so much dispute that you have an idea of this body as insist that you could not have such an idea if you were really an unextended thing. For how, may I ask, do you think that you, an unextended subject, could receive the semblance or idea of a body that is extended? If such a semblance comes from a body then it is undoubtedly corporeal, and has a number of parts or layers, and so is extended. If it is imprinted in you from some other source, since it must still represent an extended body, it must still have parts and hence be extended. For if it lacks parts, how will it manage to represent parts? If it lacks extension, how will it represent an extended thing? If it lacks shape, how will it represent a thing that has a shape? If it has no position, how will it represent a thing which has upper and lower parts, parts on the right and parts on the left, and parts in the middle? If it lacks all variation, how will it represent various colours and so on? It seems, then, that the idea does not wholly lack extension. Yet if it is extended, how can you, if you are unextended, have become its subject? How will you adapt it to yourself or make use of it? And how will you gradually experience its fading and disappearing?

As far as your idea of yourself is concerned, there is nothing to add to what I have already said, especially regarding the Second Meditation. For what emerges there is that, far from having a clear and distinct idea of yourself you have no idea of yourself at all. This is because although you recognize that you are thinking, you still do not know what kind of thing you, who are thinking, are. And since it is only this operation that you are aware of, the most important element is still hidden from you, namely the substance which performs this operation. This leads me to suggest that you may be compared to a blind man who, on feeling heat and being told that it comes from the sun, thinks he has a clear and distinct idea of the sun in that, if anyone asks him what the sun is, he can reply: 'It is a heating thing.'

But I should add that you say not only that you are a thinking thing but also that you are a thing which is unextended. I shall ignore the fact that this is asserted without proof, even though it is still in question, and simply ask you first of all: do you therefore have a clear and distinct idea of yourself? You say that you are not extended; that is, you say what you are not, not what you are. In order to have a clear and distinct, or, what is the same thing, a true and authentic idea of something, is it not necessary to know the thing positively and, so to speak, affirmatively? Or is it enough to know that it is not some other thing? Would someone have a clear and distinct idea of Bucephalus if he simply knew that he was not a fly?

But I will not press this point, but ask you this instead. You say you are a thing which is not extended; but are you not diffused throughout the body? I have no idea what reply you will give, for although from the start I gathered that you were in the brain, this was something I arrived at by conjecture rather than by simply following your views. The source of my conjecture was a later passage, where you say that you are 'not affected by all parts of the body but only by the brain, or only by one small part of it'. But I was not at all certain whether this meant that you were in fact present only in the brain (or a part of it); for you might be present throughout the body but affected only in one part of it—just as we commonly say that the soul is diffused throughout the whole body but sees only in the eye.

A similar doubt was raised by the phrase 'although the whole mind seems to be united to the whole body'. For in this passage you do not actually assert that you are united to the whole body, but neither do you deny it. Whatever your view is, let me, if I may, assume to begin with that you are diffused throughout the entire body. Now whether you are identical with one soul or something different from it, my question is this: are you really unextended, given that you stretch from head to foot, are coextensive with the body and have parts corresponding to all its parts? Will you reply that you are unextended because you are wholly in the whole body and wholly in every part of it? But if this is your view, what, may I ask, do you mean by it? Can one thing exist simultaneously and in its entirety in several places? Our faith tells us this is true in the case of the sacred mystery of the Eucharist. But the discussion here concerns you, as a natural object, and is being conducted in accordance with the natural light. Is it really permissible to understand there to be several different places simultaneously occupied by no more than one object? And is not a hundred more than one? Again, if a thing is wholly in one place, can it also be in other places unless it is itself outside itself just as one place is outside another? Whatever you say, it will remain obscure and uncertain whether you are entirely present in any given part, or else present in each part by means of your various parts. What is much clearer is that nothing can exist simultaneously and in its entirety in several places; and hence it will turn out to be even more evident that you are not wholly in all the individual parts but wholly in the whole body. This means that you are diffused throughout the body by means of your parts, and thus have extension.

Let us now assume instead that you are in the brain alone, or simply in a small part of it. You will see that the same awkwardness arises. For however small the part in question is, it is still extended, and since you are coextensive with it, you too are therefore extended and have particular parts corresponding to its parts. Will you say that you take the relevant part of the brain to be a point? This is surely incredible; but let it be a point. If it is a physical point, the difficulty still stands, since such a point is extended and does not wholly lack parts. If it is a mathematical point, then such a point, as you are aware, is purely imaginary. But let us grant this imaginary point, or rather let us pretend that there is in the brain a mathematical point to which you are joined and in which you exist. Look what a useless fiction this will turn out to be. For if we adopt it, we shall have to imagine that you exist at the conjunction of the nerves by means of which all the regions informed by the soul transmit to the brain the ideas or images of the things perceived by the senses. But, first, all the nerves do not meet at one point: for one thing the brain joins up with the spinal column, and many nerves from all over the back terminate there; and, for another thing, the nerves which do go into the middle of the head are not found to terminate in the same part of the brain. But even if we grant that all the nerves do meet, they cannot meet at a mathematical point, since they are corporeal things, not mathematical lines, and so cannot come together at a mathematical point. And even if we grant that they do come together, the spirits which pass through the nerves cannot enter or leave the nerves since they are bodies and a body cannot exist in a non-place or pass through a non-place (which is what a mathematical point is). And even if we grant that they can exist in and pass through a non-place, if you exist in a point which has no right-hand or left-hand or upper or lower regions etc., you cannot possibly judge where the spirits come from or what messages they bring.

The same problem, I maintain, arises concerning the spirits which you must transmit in order to communicate feelings or instructions, or to initiate movement. I will pass over the fact that we cannot grasp how, if you exist in a point, you can set up motions in the spirits without being a body or having a body that would allow you to be in contact with them and make them move. If you say they move by themselves and you merely direct their movements, remember that you elsewhere denied that a body can move by itself, which implies that you are the cause of the movement. Then you must explain to us how this 'directing' of movement can occur without some effort—and therefore motion—on your part. How can there be effort directed against anything, or motion set up in it, unless there is mutual contact between what moves and what is moved? And how can there be contact without a body when, as is transparently clear by the natural light, 'naught apart from body, can touch or yet be touched'.

But why should I spend any more time on this when the onus is on you to prove that you are an unextended and hence incorporeal thing? You will hardly, I think, support your claim by pointing out that man is commonly said to consist of a body and a rational soul—as if it followed from the fact that one part is said to be a body that we must not call the other part a body. If you did take this line, you would give us the chance to make a distinction and say that man consists of two kinds of body, a solid one and a rarefied one, the common name 'body' being retained by the former, while the latter is called the 'soul'. I will pass over the fact that the same could then be said of the other animals to whom you are not prepared to grant a mind like your own; they would then be lucky indeed, since on your account they would at least have a soul! So when you conclude that it is certain that you are really distinct from your body, you see that I will grant you this conclusion, but will not therefore grant that you are incorporeal, as opposed to being a kind of very rarefied body distinct from your more solid body.

You add that hence you 'can exist apart from the body'. But once we have granted you that you can exist without your solid body—just as the vapour with its distinctive smell can exist when it passes out of the apple and is dispersed into the atmosphere—what will you have gained? Well, you will certainly have established more than is intended by those philosophers we mentioned who consider that you will wholly perish when you die; for on their view you are like a shape which, if the surface is altered, disappears in such a way as to become nothing at all. Indeed, supposing you are some corporeal or tenuous substance, you would not be said to vanish wholly at your death or to pass into nothingness; you would be said to subsist by means of your dispersed parts. We would, however, have to say that, because of this dispersal, you would not continue to think, or be a thinking thing, a mind or a soul. In raising all these objections I am, as always, not casting doubt on the conclusion you are trying to prove; I am simply unhappy about the force of the argument you have presented.

5. In the course of your discussion you go on to mention several points relevant to your thesis, and I will not stop to deal with all of them. One passage that strikes me is this:

Nature teaches me by these sensations of pain, hunger, thirst and so on, that I am not merely present in my body as a sailor is present in a ship, but that I am very closely joined and, as it were, intermingled with it, so that I and the body form a unit. If this were not so, I, who am nothing but a thinking thing, would not feel pain when the body was hurt, but would perceive the damage purely by the intel-

lect, just as a sailor perceives by sight if anything in his ship is broken. Similarly, when the body needed food or drink, I should have an explicit understanding of the fact, instead of having confused sensations of hunger and thirst. For these sensations of hunger, thirst, pain and so on are nothing but confused modes of thinking which arise from the union and, as it were, intermingling of the mind with the body.

All this is quite right, but you still have to explain how that 'joining and, as it were, intermingling' or 'confusion' can apply to you if you are incorporeal, unextended and indivisible. If you are no larger than a point, how are you joined to the entire body, which is so large? How can you be joined even to the brain, or a tiny part of it, since (as noted above) no matter how small it is, it still has size or extension? If you wholly lack parts, how are you intermingled or 'as it were intermingled', with the particles of this region? For there can be no intermingling between things unless the parts of each of them can be intermingled. And if you are something separate, how are you compounded with matter so as to make up a unity? Moreover, since all compounding, conjunction or union takes place between the component parts, must there not be some relationship between these parts? Yet what relationship can possibly be understood to exist between corporeal and incorporeal parts? Can we grasp how stone and air are compressed together, e.g. in a pumice stone, so as to make a genuine compound? Yet there is a much closer relationship between a stone and air, which is also a body, than there is between the body and a soul, or wholly incorporeal mind. Again, must not every union occur by means of close contact? And, as I asked before, how can contact occur without a body? How can something corporeal take hold of something incorporeal so as to keep it joined to itself? And how can the incorporeal grasp the corporeal to keep it reciprocally bound to itself, if it has nothing at all to enable it to grasp or be grasped?

Hence, since you admit that you feel pain, how, may I ask, do you think you are capable of having this sensation if you are incorporeal and unextended? Pain involves being acted upon and cannot be understood as occurring except as a result of something pushing in and separating the components and thus interfering with their continuity. The state of pain is an unnatural state, but if something is by its nature homogeneous, simple, indivisible and immutable, how can it get into an unnatural state or be acted upon unnaturally? Again, since pain either is an alteration, or involves an alteration, how can something be altered if it has no more parts than a point, and hence cannot change or alter its nature without being reduced to nothing? I may add that pain comes from the foot and the arm and other regions at the same time, and hence surely you would have to have various parts enabling you to receive pain in various ways if you are not to have a confused sensation which seems to come from only one part. In a word, the general difficulty still remains of how the corporeal can communicate with the incorporeal and of what relationship may be established between the two.

[Descartes to Gassendi]

Objections raised against the Second Meditation

1. Here you continue to employ rhetorical tricks instead of reasoning. You pretend that I am playing a game when I am serious, and you take me to be making serious statements and genuine assertions when I am merely raising questions and putting forward commonly held views in order to inquire into them further. When I said that the entire testimony of the senses should be regarded as uncertain and even as false, I was quite serious; indeed this point is so necessary for an understanding of my *Meditations* that if anyone is unwilling or unable to accept it, he will be incapable of producing any objection that deserves a reply. However, we must note the distinction which I have insisted on in several passages, between the actions of life and the investigation of the truth. For when it is a question of organizing our life, it would, of course, be foolish not to trust the senses, and the sceptics who neglected human affairs to the point where friends had to stop them falling off precipices deserved to be laughed at. Hence I pointed out in one passage that no sane person ever seriously doubts such things. But when our inquiry concerns what can be known with complete certainty by the human intellect, it is quite unreasonable to refuse to reject these things in all seriousness as doubtful and even as false; the purpose here is to come to recognize that certain other things which cannot be rejected in this way are thereby more certain and in reality better known to us.

My statement that I did not yet have a sufficient understanding of what this 'I' who thinks is is one that you do not accept as having been made seriously and in good faith; but I did provide a full explanation of the statement. You also question my statements that I had no doubts about what the nature of the body consisted in, and that I attributed to it no power of self-movement, and that I imagined the soul to be like a wind or fire, and so on; but these were simply commonly held views which I was rehearsing so as to show in the appropriate place that they were false.

It is hardly honest to say that I refer nutrition, motion, sensation, etc. to the soul and then immediately to add 'Fair enough, provided we are careful to remember your distinction between the soul and the body.' For shortly afterwards I expressly referred nutrition to the body alone; and as for movement and sensation, I refer them to the body for the most part, and attribute nothing belonging to them to the soul, apart from the element of thought alone.

Again, what reason have you for saying that I 'did not need all this apparatus' to prove I existed? These very words of yours surely show that I have the best reason to think that I have not used enough apparatus, since I have not yet managed to make you understand the matter correctly. When you say that I 'could have made the same inference from any one of my other actions' you are far from the truth, since I am not wholly certain of any of my actions, with the sole exception of thought (in using the word 'certain' I am referring to metaphysical certainty, which is the sole issue at this point). I may not, for example, make the inference 'I am walking, therefore I exist', except in so far as the awareness of walking is a thought. The inference is certain only if applied to this awareness, and not to the movement of the body which sometimes—in the case of dreams—is not occurring at all, despite the fact that I seem to myself to be walking. Hence from the fact that I think I am walking I can very well infer the existence of a mind which has this thought, but not the existence of a body that walks. And the same applies in other cases.

2. You then adopt a droll figure of speech and pretend to interrogate me as if I were present; and you address me no longer as a whole man but as a disembodied soul. I think that you are indicating here that these objections of yours did not originate in the mind of a subtle philosopher but came from flesh alone. I ask you then, O Flesh, or whatever name you want me to address you by, have

you so little to do with the mind that you were unable to notice when I corrected the common view whereby that which thinks is supposed to be like a wind or similar body? I of course corrected this view when I showed that it can be supposed that there is no wind or any other body in the world, yet nonetheless everything which enables me to recognize myself as a thinking thing still remains. Hence all your subsequent questions as to whether I might not still be a wind or occupy space or be in motion in several ways, and so on, are so fatuous as to need no reply.

3. There is no more force in your next question as to why, if I am a rarefied body, I cannot be nourished, and so on. For I deny that I am a body. Let me clear up one point once and for all. You almost always use the same style, not attacking my arguments but ignoring them as if they did not exist, or quoting them in an imperfect or truncated form; and you string together various difficulties of the sort commonly raised by philosophical novices against my conclusions or against others like them—or even unlike them. These difficulties are irrelevant, or else I have discussed and resolved them in the appropriate place. In view of this it is not worth my while to answer all your questions individually; if I did so, I should have to repeat a hundred times what I have already written. I shall simply deal briefly with the points which might possibly cause difficulty to readers who are not utterly stupid. As for readers who are impressed by the number of words employed rather than the force of the arguments, I do not value their approval so highly that I am prepared to become more verbose in order to merit it.

First of all then, let me point out that I do not accept your statement that the mind grows and becomes weak along with the body. You do not prove this by any argument. It is true that the mind does not work so perfectly when it is in the body of an infant as it does when in an adult's body, and that its actions can often be slowed down by wine and other corporeal things. But all that follows from this is that the mind, so long as it is joined to the body, uses it like an instrument to perform the operations which take up most of its time. It does not follow that it is made more or less perfect by the body. Your inference here is no more valid than if you were to infer from the fact that a craftsman works badly whenever he uses a faulty tool that the good condition of his tools is the source of his knowledge of his craft.

It should also be noted, O Flesh, that you seem to misunderstand completely what the use of rational argument involves. To prove that I should not suspect the trustworthiness of the senses you say that even if, when the eye is not in use, I have seemed to have sense-perception of things that cannot in fact be perceived without the eye, this kind of falsity is not something I have experienced all the time. This makes it seem as if the fact that we have discovered error on some occasions is not a sufficient reason for doubt. You also talk as if it were possible for us, whenever we make a mistake, to notice that we are mistaken; but on the contrary the error consists precisely in the fact that we do not recognize it as a case of error.

Finally, O Flesh, since you often demand arguments from me when you have none yourself and the onus of proof is on you, you should realize that in order to philosophize correctly there is no need for us to prove the falsity of everything which we do not admit because we do not know whether or not it is true. We simply have to take great care not to admit anything as true when we cannot prove it to be so. Hence, when I discover that I am a thinking substance, and form a clear and distinct concept of this thinking substance that contains none of the things that belong to the concept of corporeal substance, this is quite sufficient to enable me to assert that I, in so far as I know myself, am nothing other than a thinking thing. This is all that I asserted in the Second Meditation, which is what we are dealing with here. I did not have to admit that this thinking substance was some mobile, pure and rarefied body, since I had no convincing reason for believing this. If you have such a reason, it is your job to explain it; you should not demand that I prove the falsity of something which I refused to accept precisely because I had no knowledge of it. It is as if, when I said that I now live in Holland, you were to say that this must not be accepted unless I can prove that I am not also in China or in any other part of the world, on the grounds that it is perhaps possible, through the power of God, that the same body should exist in two different places. When you add that I will also have to prove that 'the souls of the brutes are incorporeal' and that 'this solid body contributes nothing to my thought', you show that you are ignorant both of where the onus of proof lies and of what must be proved by each party. For I do not think that the souls of the brutes are incorporeal, or that this solid body contributes nothing to our thought; it is simply that this is not at all the place to consider these topics.

4. The next question you raise concerns the obscurity arising from the ambiguity in the word 'soul'. But I took such care to eliminate this ambiguity when it arose that it is tiresome to repeat myself here. I shall say only that it is generally the ignorant who have given things their names, and so the names do not always fit the things with sufficient accuracy. Our job, however, is not to change the names after they have been adopted into ordinary usage; we may merely emend their meanings when we notice that they are misunderstood by others. Thus, primitive man probably did not distinguish between, on the one hand, the principle by which we are nourished and grow and accomplish without any thought all the other operations which we have in common with the brutes, and, on the other hand, the principle in virtue of which we think. He therefore used the single term 'soul' to apply to both; and when he subsequently noticed that thought was distinct from nutrition, he called the element which thinks 'mind', and believed it to be the principal part of the soul. I, by contrast, realizing that the principle by which we are nourished is wholly different—different in kind—from that in virtue of which we think, have said that the term 'soul', when it is used to refer to both these principles, is ambiguous. If we are to take 'soul' in its special sense, as meaning the 'first actuality' or 'principal form of man', then the term must be understood to apply only to the principle in virtue of which we think; and to avoid ambiguity I have as far as possible used the term 'mind' for this. For I consider the mind not as a part of the soul but as the thinking soul in its entirety.

You say you want to stop and ask whether I think the soul always thinks. But why should it not always think, since it is a thinking substance? It is no surprise that we do not remember the thoughts that the soul had when in the womb or in a deep sleep, since there are many other thoughts that we equally do not remember, although we know we had them when grown up, healthy and wide-awake. So long as the mind is joined to the body, then in order for it to remember thoughts which it had in the past, it is necessary for some traces of them to be imprinted on the brain; it is by turning to these, or applying itself to them,

that the mind remembers. So is it really surprising if the brain of an infant, or a man in a deep sleep, is unsuited to receive these traces?

Lastly, there is the passage where I said that it may perhaps be that that of which I do not yet have knowledge (namely my body) is not distinct from the 'I' of which I am aware (namely my mind); 'I do not know', I said, 'and I shall not argue the point.' Here you object: 'If you do not know, if you are not arguing the point, why do you assume that you are none of these things?' But it is false that I assumed anything I did not know. On the contrary, since I did not know whether the body was identical with the mind or not, I did not make any assumptions on this matter, but considered only the mind; it was only afterwards, in the Sixth Meditation, that I said there was a real distinction between the mind and the body, and here I did not assume it but demonstrated it. But you, O Flesh, are utterly at fault here, because, despite having little or no rational basis for proving that the mind is not distinct from the body, you nonetheless assume this.

5. What I wrote about the imagination will be clear enough to those who study it closely, but it is not surprising if those who do not meditate on it find it very obscure. But I should point out to such people that there is no inconsistency between my assertion that certain things do not belong to the knowledge I have of myself and my previous statement that I did not know whether certain things belong to me or not. For 'belonging to me' is clearly quite different from 'belonging to the knowledge which I have of myself'.

6. The things you say here, O best of Flesh, seem to me to amount to grumblings more than objections, and so they require no answer.

7. Here again you produce a lot of grumblings, but they do not require a reply any more than the previous lot. Your questions about the brutes are not appropriate in this context since the mind, when engaged in private meditation, can experience its own thinking but cannot have any experience to establish whether the brutes think or not; it must tackle this question later on, by an *a posteriori* investigation of their behaviour. I will not pause to disown the foolish claims which you then put into my mouth; I am content to have pointed out once that you do not report everything I say accurately. In fact I did frequently provide a criterion to establish that the mind is different from the body, namely that the whole nature of the mind consists in the fact that it thinks, while the whole nature of the body consists in its being an extended thing; and there is absolutely nothing in common between thought and extension. I also distinctly showed on many occasions that the mind can operate independently of the brain; for the brain cannot in any way be employed in pure understanding, but only in imagining or perceiving by the senses. Admittedly, when imagination or sensation is strongly active (as occurs when the brain is in a disturbed state), it is not easy for the mind to have leisure for understanding other things. But when the imagination is less intense, we often have the experience of understanding something quite apart from the imagination. When, for example, we are asleep and are aware that we are dreaming, we need imagination in order to dream, but to be aware that we are dreaming we need only the intellect.

8. Here, as frequently elsewhere, you merely show that you do not have an adequate understanding of what you are trying to criticize. I did not abstract the concept of the wax from the concept of its accidents. Rather, I wanted to show how the substance of the wax is revealed by means of its accidents, and how a reflective and distinct perception of it (the sort of perception which you, O Flesh, seem never to have had) differs from the ordinary confused perception. I do not see what argument you are relying on when you lay it down as certain that a dog makes discriminating judgements in the same way as we do. Seeing that a dog is made of flesh you perhaps think that everything which is in you also exists in the dog. But I observe no mind at all in the dog, and hence believe there is nothing to be found in a dog that resembles the things I recognize in a mind.

9. I am surprised that you should say here that all my considerations about the wax demonstrate that I distinctly know that I exist, but not that I know what I am or what my nature is; for one thing cannot be demonstrated without the other. Nor do I see what more you expect here, unless it is to be told what colour or smell or taste the human mind has, or the proportions of salt, sulphur and mercury from which it is compounded. You want us, you say, to conduct 'a kind of chemical investigation' of the mind, as we would of wine. This is indeed worthy of you, O Flesh, and of all those who have only a very confused conception of everything, and so do not know the proper questions to ask about each thing. But as for me, I have never thought that anything more is required to reveal a substance than its various attributes; thus the more attributes of a given substance we know, the more perfectly we understand its nature. Now we can distinguish many different attributes in the wax: one, that it is white; two, that it is hard; three, that it can be melted; and so on. And there are correspondingly many attributes in the mind: one, that it has the power of knowing the whiteness of the wax; two, that it has the power of knowing its hardness; three, that it has the power of knowing that it can lose its hardness (i.e. melt), and so on. (Someone can have knowledge of the hardness without thereby having knowledge of the whiteness, e.g. a man born blind; and so on in other cases.) The clear inference from this is that we know more attributes in the case of our mind than we do in the case of anything else. For no matter how many attributes we recognize in any given thing, we can always list a corresponding number of attributes in the mind which it has in virtue of knowing the attributes of the thing; and hence the nature of the mind is the one we know best of all. Finally, in this section, you make an incidental criticism as follows: although I have not admitted that I have anything apart from a mind, I nevertheless speak of the wax which I see and touch, and yet this is impossible without eyes and hands. But you should have noticed that I had carefully pointed out that I was not here dealing with sight and touch, which occur by means of bodily organs, but was concerned solely with the thought of seeing and touching, which, as we experience every day in our dreams, does not require these organs. Of course you cannot have failed to notice this—your purpose was simply to show us what absurd and unjust quibbles can be thought up by those who are more anxious to attack a position than to understand it.

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3. I shall not stop to deal with your tedious and repetitious assertions here, e.g. that I did not prove various truths when in fact I demonstrated them, or that I discussed only this solid body, when in fact I dealt with every kind of body—even the most rarefied kind. What counter, other than a flat denial, should one offer to assertions of this kind, which are not supported by any argument? But I should like to know in passing what evidence you have to establish that I dealt with this solid body rather than rarefied ones. Was it that I said 'I have a body

which is joined to me', and 'it is certain that I am distinct from my body'? I do not see why these words should not apply equally to a rarefied as to a solid body, and I do not think anyone but you will fail to see this. In any case, in the Second Meditation I did show that the mind can be understood as an existing substance even though we understand that nothing exists such as a wind or fire or vapour or breath or any other body, however thin and rarefied. But whether this substance was in actual fact distinct from any body whatsoever is something that I said I was not arguing about at that point; I discussed and demonstrated this claim in the Sixth Meditation. But you show that you have completely failed to understand any of this, since you confuse the question of what we may understand this substance to be with the question of what it really is.

4. Here you ask how I think that I, an unextended subject, could receive the semblance or idea of a body that is extended. I answer that the mind does not receive any corporeal semblance; the pure understanding both of corporeal and incorporeal things occurs without any corporeal semblance. In the case of imagination, however, which can have only corporeal things as its object, we do indeed require a semblance which is a real body: the mind applies itself to this semblance but does not receive it.

Your point about the idea of the sun, which a man born blind derives merely from its heat, is easily refuted. The blind man can have a clear and distinct idea of the sun as a thing that gives heat, even though he does not have an idea of it as a thing that gives light. Your comparison between me and the blind man is incorrect. First, our knowledge of a thinking thing is much more extensive than the blind man's knowledge of a 'heating thing'—indeed it is much more extensive than our knowledge of anything else, as I showed in the appropriate place. Secondly, the only people who can prove that the idea of the sun formed by the blind man does not contain everything that can be perceived of the sun are those who are endowed with sight and detect in addition its light and shape. You, by contrast, so far from knowing more of the mind than I do, are not even aware of the one thing that I do know; so in this respect you are more like the blind man, whereas I, and all the rest of the human race, can at least be said to have one good eye.

When I added that the mind is not extended, I did not intend to explain what the mind is, but merely to point out that those who think it is extended are in error. In the same way, if anyone asserted that Bucephalus was Music, there would be every point in someone else saying that this was false. You go on to try to prove that the mind is extended on the grounds that it makes use of a body that is extended; but here your argument seems no better than if you were to infer that Bucephalus is Music on the grounds that he neighs and whinnies, thus producing sounds which have some relation to music. Even though the mind is united to the whole body, it does not follow that it is extended throughout the body, since it is not in its nature to be extended, but only to think. Nor does it understand extension by means of an extended semblance which is present within it (although it does *imagine* extension by turning to a corporeal semblance which is extended, as I have explained). Finally, it is not necessary for the mind itself to be a body, although it has the power of moving the body.

5. Your comments on the union of the mind with the body are similar to what you have said earlier. At no point do you produce objections to my arguments; you merely put forward doubts that you think follow from my conclusions, though in fact they merely arise from your desire to call in the imagination to examine matters which are not within its proper province. Thus when you try to compare the intermingling of mind and body with the intermingling of two bodies, it is enough for me to reply that we should not set up any comparison between such things, because they are quite different in kind; and we should not imagine that the mind has parts on the grounds that it has an understanding of parts in the body. How do you arrive at the conclusion that everything the mind understands must be in the mind? If this were so, then, since the mind has an understanding of the magnitude of the terrestrial globe, it would surely have to possess this magnitude within itself, and hence not just be extended but have a greater extension than the earth.

[Descartes against Gassendi's *Counter-Objections*]

Your friends note six objections against the Second Meditation. The first is this. The author of the *Counter-Objections* claims that when I say 'I am thinking, therefore I exist' I presuppose the major premiss 'Whatever thinks exists', and hence I have already adopted a preconceived opinion. Here he once more misuses the term 'preconceived opinion'. For although we can apply the term to the proposition in question when it is put forward without attention and believed to be true only because we remember that we judged it to be true previously, we cannot say that it is always a preconceived opinion. For when we examine it, it appears so evident to the understanding that we cannot but believe it, even though this may be the first time in our life that we have thought of it—in which case we would have no preconceived opinion about it. But the most important mistake our critic makes here is the supposition that knowledge of particular propositions must always be deduced from universal ones, following the same order as that of a syllogism in Dialectic. Here he shows how little he knows of the way in which we should search for the truth. It is certain that if we are to discover the truth we must always begin with particular notions in order to arrive at general ones later on (though we may also reverse the order and deduce other particular truths once we have discovered general ones). Thus when we teach a child the elements of geometry we will not be able to get him to understand the general proposition 'When equal quantities are taken from equal amounts the remaining amounts will be equal', or 'The whole is greater than its parts', unless we show him examples in particular cases. It is by failing to take heed of this that our author has gone astray and produced all the invalid arguments with which he has stuffed his book. He has simply made up false major premisses whenever the mood takes him, as though I had used them to deduce the truths which I expounded.

The second objection which your friends note is that in order to know that I am thinking I must know what thought is; and yet, they say, I do not know this at all, since I have denied everything. But I have denied only preconceived opinions—not notions like these, which are known without any affirmation or denial.

The third objection is that thought cannot exist without an object, e.g. the body. Here we must avoid the ambiguity in the word 'thought', which can be taken to apply both to the thing which thinks and also to the activity performed by that thing. Now I deny that the thing which thinks needs any object apart from itself in order to exercise its activity (though it may also extend the scope of this activity to material things when it examines them).

The fourth objection is that even though I have a thought of myself, I do not know if this thought is a corporeal action, or a self-moving atom, rather than an immaterial substance. Here the ambiguity in the word 'thought' is repeated, and apart from this I can see only a question without any basis to it, rather like the following: 'You judge that you are a man because you perceive in yourself all the things which lead you to give the name "men" to those who possess them; but how do you know that you are not an elephant rather than a man, for various other reasons which you do not perceive?' Similarly, after the substance which thinks has judged that it is intellectual, because it has noticed in itself all the properties of intellectual substances, and has not been able to detect any properties belonging to a body, the objector still continues to ask how it knows that it is not a body rather than an immaterial substance.

The fifth and sixth objections are similar to this. The fifth is that even if I find no extension in my thought, it does not follow that my thought is not extended, because my thought is not the standard which determines the truth of things. The sixth is that although my thought finds a distinction between thought and body, it is possible that this distinction may be false. Now we must be particularly careful to notice the ambiguity in the phrase 'my thought is not the standard which determines the truth of things'. If the claim is that my thought must not be the standard for others, obliging them to believe something just because I think it is true, then I entirely agree. But this is quite irrelevant in the present context, since I never wanted to force anyone to follow my authority. On the contrary, I pointed out in several places that one should allow oneself to be convinced only by quite evident reasoning. Again, if we take the word 'thought' to apply indifferently to any kind of operation of the soul, it is certain that we can have many thoughts which do not provide any basis for inferring the truth about things which are outside us. But this is irrelevant in the present context, where we are dealing only with the thoughts that are clear and distinct perceptions and the judgements which each of us must make within himself as a result of these perceptions. This is why I say that, in the sense in which the phrase should be understood here, the thought of each person—i.e. the perception or knowledge which he has of something—should be for him the 'standard which determines the truth of the thing'; in other words, all the judgements he makes about this thing must conform to his perception if they are to be correct. Even with respect to the truths of faith, we should perceive some reason which convinces us that they have been revealed by God, before deciding to believe them. Although ignorant people would do well to follow the judgement of the more competent on matters which are difficult to know, it is still necessary that it be their own perception which tells them they are ignorant; they must also perceive that those whose judgement they want to follow are not as ignorant as they are, or else they would be wrong to follow them and would be behaving more like automatons or beasts than men. Thus the most absurd and grotesque mistake that a philosopher can make is to want to make judgements which do not correspond to his perception of things. Yet I fail to see how our author could be cleared of having committed this blunder in most of his objections. For he is not prepared to allow each person to abide by his own perception, but claims that we should give more credence to the opinions or fantasies which he pleases to set before us, despite our complete lack of any proper perception of them

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There are two further questions which they add at the end: how can the soul move the body if it is in no way material, and how can it receive the forms of corporeal objects? These questions simply give me the opportunity to point out that the author of the *Counter-Objections* was being quite unfair when, under the pretext of objecting to my views, he put to me large numbers of such questions which do not require to be answered in order to prove what I asserted in my writings. The most ignorant people could, in a quarter of an hour, raise more questions of this kind than the wisest men could deal with in a lifetime; and this is why I have not bothered to answer any of them. These questions presuppose amongst other things an explanation of the union between the soul and the body, which I have not yet dealt with at all. But I will say, for your benefit at least, that the whole problem contained in such questions arises simply from a supposition that is false and cannot in any way be proved, namely that, if the soul and the body are two substances whose nature is different, this prevents them from being able to act on each other. And yet, those who admit the existence of real accidents like heat, weight and so on, have no doubt that these accidents can act on the body; but there is much more of a difference between them and it, i.e. between accidents and a substance, than there is between two substances.

For the rest, since I have my pen in my hand, I will go on to point out two ambiguities which I have found in this book of *Counter-Objections*, because they are the kinds of ambiguity which, in my view, could most easily trap the less attentive reader. My aim in dealing with them is to show you that if I had found any other point that I believed to deserve an answer, I would not have neglected to deal with it.

The first ambiguity is on page 63, and arises as follows. I said in one place that while the soul is in doubt about the existence of all material things, it knows itself *praecise tantum*—'in the strict sense only'—as an immaterial substance; and seven or eight lines further down I showed that by the words 'in the strict sense only' I do not at all mean an entire exclusion or negation, but only an abstraction from material things; for I said that in spite of this we are not sure that there is nothing corporeal in the soul, even though we do not recognize anything corporeal in it. Here my critic is so unfair to me as to try to persuade the reader that when I used the phrase 'in the strict sense only' I meant to exclude the body, and that I thus contradicted myself afterwards when I said that I did not mean to exclude it. He subsequently accuses me of committing a logical blunder in assuming something in the Sixth Meditation which I had not previously proved. But I will offer no reply to this, since it is easy to recognize the falsity of this accusation, which occurs all too often throughout his book. This sort of thing could make me suspect that the author was not acting in good faith did I not know his nature and believe that he was in fact the first to be trapped by such a false supposition.

The other ambiguity is on page 84, where he wants *distinguishing* and *abstracting* to be the same thing. But there is a great difference between the two. In *distinguishing* a substance from its accidents we must consider both the one and the other, and this is very useful in helping us to gain knowledge of a substance. But if we merely separate the substance from its accidents by *abstraction*, i.e. consider it all on its own without thinking of the accidents, this prevents our being able to gain sound knowledge of it, because it is by means of the accidents that the nature of the substance is revealed.

Sixth Objections and Replies

[Mersenne, et al. to Descartes]

After a very careful reading of your *Meditations* and of your replies to the objections so far raised, we find there are still some difficulties remaining, which it is only fair to ask you to remove.

The *first* point is that from the fact that we are thinking it does not seem to be entirely certain that we exist. For in order to be certain that you are thinking you must know what thought or thinking is, and what your existence is; but since you do not yet know what these things are, how can you know that you are thinking or that you exist? Thus neither when you say 'I am thinking' nor when you add 'therefore, I exist' do you really know what you are saying. Indeed, you do not even know that you are saying or thinking anything, since this seems to require that you should know that you know what you are saying; and this in turn requires that you be aware of knowing that you know what you are saying, and so on *ad infinitum*. Hence it is clear that you cannot know whether you exist or even whether you are thinking.

To come to the *second* difficulty, when you say you are thinking and that you exist, someone might maintain that you are mistaken, and are not thinking but are merely in motion, and that you are nothing else but corporeal motion. For no one has yet been able to grasp that demonstration of yours by which you think you have proved that what you call thought cannot be a kind of corporeal motion. Have you used your method of analysis to separate off all the motions of that rarefied matter of yours? Is this what makes you so certain? And can you therefore show us (for we will give our closest attention and our powers of perception are, we think, reasonably keen) that it is self-contradictory that our thoughts should be reducible to these corporeal motions?

The *third* difficulty is very like the second. Several of the Church Fathers believed, along with the Platonists, that angels are corporeal, which led the Lateran Council to decide that they can be depicted; the Fathers took exactly the same view of the rational soul, some of them maintaining that it was passed on in procreation. But in spite of this, they still maintained that angels think, and that the soul thinks. They appear to have believed that this could occur by means of corporeal motions, or even that angels were themselves corporeal motions; at any rate they drew no distinction between thought and such motions. This view can be confirmed by reference to the thoughts of apes, dogs and other animals. For dogs bark in their sleep as if they were chasing hares or robbers, and when they are awake they know that they are running, just as in their dreams they know that they are barking; yet, like you, we do not recognize any element in them which is distinct from their bodies. If you say that a dog does not know that it is running or thinking, then this is an assertion that cannot be proved; the dog might well make a similar judgement about us, and suppose that when we are running or thinking, we do not know that we are running or thinking. You do not see the dog's internal mode of operation any more than he sees yours; and there are plenty of distinguished men, both now and in the past, who have been prepared to allow that the beasts have reason. So far are we from accepting that all their operations can be satisfactorily explained by means of mechanics, without invoking any sensation, life or soul, that we are willing to wager anything you like that this is an impossible and ridiculous claim. Finally, there are plenty of people who will say that man himself lacks sensation and intellect, and can do everything by means of mechanical structures, without any mind, given that apes, dogs and elephants can perform all their operations by mechanical means. For if the limited reasoning power to be found in animals differs from human reason, the difference is merely one of degree and does not imply any essential difference.

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There now follow a number of points suggested by other critics. These are included to give you the opportunity to reply to them in conjunction with the preceding objections, since they belong to the same argument. Some of your most learned and acute critics have asked for clarification on the following three points:

(1) How do I know for certain that I have a clear idea of my soul?

(2) How do I know for certain that this idea is wholly different from any other thing?

(3) How do I know for certain that this idea contains nothing of a corporeal nature?

The following argument has been put forward by another group of critics.

FROM A GROUP OF PHILOSOPHERS AND GEOMETERS TO M. DESCARTES

However much we ponder on the question of whether the idea of our mind (or a human mind), i.e. our knowledge and perception of it, contains anything corporeal, we cannot go so far as to assert that what we call thought cannot in any way belong to a body subject to some sort of motion. For since we see that there are some bodies that do not think, and others, namely human bodies and perhaps those of the brutes, which do think, will not you yourself convict us of sophistry and of making rash judgements if we infer from this that there are no bodies that think? We can hardly doubt that we would deserve your lasting ridicule if it was we who had originally devised this argument from ideas to establish the nature of the mind and the existence of God, and you had then condemned it by using your method of analysis. But you seem to be so preoccupied and prepossessed by this method that you seem to have dulled your mind with it, so that you are no longer free to see that the individual properties or operations of the soul which you find in yourself depend upon corporeal motions.

If you do not accept this, then you must untie the knot which in your view must be binding us with adamantine bonds and preventing our mind from soaring above every kind of body. The knot is this. We perceive very well that three and two make five and that if you take equals from equals the remainders will be equal; we are convinced of these and numerous other matters, just as you find yourself to be. But why are we not similarly convinced on the basis of your ideas, or our own, that the soul of man is distinct from the body, or that God exists? You will say that you cannot graft this truth into us unless we are prepared to meditate along with you. Well, we have read what you have written seven times, and have lifted up our minds, as best we could, to the level of the angels, but we are still not convinced. We do not believe you will allege that our minds are in the grip of a brutish stupor and are wholly unfitted for metaphysical subjects,

when we have had thirty years practice in them! Surely you will prefer to accept that your arguments derived from the ideas of the mind and of God do not have the kind of weight or strength that could or should conquer the minds of learned men who have tried with all their might to detach themselves from corporeal stuff. Indeed we think you will readily admit this if you re-read your *Meditations* in the spirit of analytical scrutiny which you would adopt if they had been put forward for your examination by an opponent.

Lastly, since we do not know what can be done by bodies and their motions, and since you confess that without a divine revelation no one can know everything which God has imparted or could impart to any object, how can you possibly have known that God has not implanted in certain bodies a power or property enabling them to doubt, think etc.?

These are our arguments, or if you prefer, our 'preconceived opinions'. If you can cure them, then, Sir, we swear by the ever-living God that we will all join in giving you our fullest thanks for freeing us from the thorns which are choking the seed you have sown! May almighty God in his supreme goodness bring this to pass, since we can see that it is to his glory alone that you have so auspiciously devoted all your efforts.

[Descartes to Mersenne, et al.]

AUTHOR'S REPLIES TO THE SIXTH SET OF OBJECTIONS

1. It is true that no one can be certain that he is thinking or that he exists unless he knows what thought is and what existence is. But this does not require reflective knowledge, or the kind of knowledge that is acquired by means of demonstrations; still less does it require knowledge of reflective knowledge, i.e. knowing that we know, and knowing that we know that we know, and so on *ad infinitum*. This kind of knowledge cannot possibly be obtained about anything. It is quite sufficient that we should know it by that internal awareness which always precedes reflective knowledge. This inner awareness of one's thought and existence is so innate in all men that, although we may pretend that we do not have it if we are overwhelmed by preconceived opinions and pay more attention to words than to their meanings, we cannot in fact fail to have it. Thus when anyone notices that he is thinking and that it follows from this that he exists, even though he may never before have asked what thought is or what existence is, he still cannot fail to have sufficient knowledge of them both to satisfy himself in this regard.

2. When someone notices that he is thinking, then, given that he understands what motion is, it is quite impossible that he should believe that he is mistaken and is 'not thinking but merely in motion'. Since the idea or notion which he has of thought is quite different from his idea of corporeal motion, he must necessarily understand the one as different from the other. Because, however, he is accustomed to attribute many different properties to one and the same subject without being aware of any connection between them, he may possibly be inclined to doubt, or may even affirm, that he is one and the same being who thinks and who moves from place to place. Notice that if we have different ideas of two things, there are two ways in which they can be taken to be one and the same thing: either in virtue of the unity or identity of their nature, or else merely in respect of unity of composition. For example, the ideas which we have of shape and of motion are not the same, nor are our ideas of understanding and volition, nor are those of bones and flesh, nor are those of thought and of an extended thing. But nevertheless we clearly perceive that the same substance which is such that it is capable of taking on a shape is also such that it is capable of being moved, and hence that that which has shape and that which is mobile are one and the same in virtue of a unity of nature. Similarly, the thing that understands and the thing that wills are one and the same in virtue of a unity of nature. But our perception is different in the case of the thing that we consider under the form of bone and that which we consider under the form of flesh; and hence we cannot take them as one and the same thing in virtue of a unity of nature but can regard them as the same only in respect of unity of composition—i.e. in so far as it is one and the same animal which has bones and flesh. But now the question is whether we perceive that a thinking thing and an extended thing are one and the same by a unity of nature. That is to say, do we find between thought and extension the same kind of affinity or connection that we find between shape and motion, or understanding and volition? Alternatively, when they are said to be 'one and the same' is this not rather in respect of unity of composition, in so far as they are found in the same man, just as bones and flesh are found in the same animal? The latter view is the one I maintain, since I observe a distinction or difference in every respect between the nature of an extended thing and that of a thinking thing, which is no less than that to be found between bones and flesh.

However, you go on to say that no one has been able to grasp this demonstration of mine. In case this appeal to authority may prejudice the truth, I am compelled to reply that even though not many people have yet examined the demonstration, there are nevertheless several who affirm that they understand it. One witness who has sailed to America and says that he has seen the antipodes deserves more credence than a thousand others who deny their existence merely because they have no knowledge of them. And similarly, those who give due consideration to the true force of an argument will have more respect for the authority of one person who says that he has understood a proof correctly, than they will accord to a thousand others who claim, without providing any argument to back up their case, that it cannot be understood by anyone. For the fact that such people fail to understand the argument themselves does not prevent anyone else's understanding it; indeed, the very fact that they infer its general unintelligibility from their own failure to understand it shows that their reasoning is careless, and that they do not deserve to have their views accepted.

Lastly, my critics ask whether I have used my method of analysis to separate off all the motions of that rarefied matter of mine. Is this (they ask) what makes me certain? And can I therefore show my critics, who are most attentive and (they think) reasonably perceptive men, that it is self-contradictory that our thought should be reduced to corporeal motions? By 'reduced' I take it that they mean that our thought and corporeal motions are one and the same. My reply is that I am very certain of this point, but I cannot guarantee that others can be convinced of it, however attentive they may be, and however keen, in their own judgement, their powers of perception may be. I cannot guarantee that they will be persuaded, at least so long as they focus their attention not on things which are objects of pure understanding but only on things which can be imagined. This mistake has obviously been made by those who have imagined that the dis-

tinction between thought and motion is to be understood by making divisions within some kind of rarefied matter. The only way of understanding the distinction is to realize that the notions of a thinking thing and an extended or mobile thing are completely different, and independent of each other; and it is self-contradictory to suppose that things that we clearly understand as different and independent could not be separated, at least by God. Thus, however often we find them in one and the same subject—e.g. when we find thought and corporeal motion in the same man—we should not therefore think that they are one and the same in virtue of a unity of nature, but should regard them as the same only in respect of unity of composition.

3. The view here advanced in connection with the Platonists and their followers has now been rejected by the entire Catholic Church and is commonly dismissed by all philosophers. The Lateran Council did conclude that angels could be depicted, but did not, in so doing, grant that they were corporeal. And even if they really were believed to be corporeal, it would certainly not be intelligible to suppose their minds to be inseparable from their bodies, any more than it is in the case of men. Again, even if the human soul were supposed to be passed on in procreation, it could not be concluded from this that it was corporeal, but only that it was derived from the soul of the parents, just as the body grows from the parents' body. As for dogs and apes, even were I to concede that they have thought, it would not in any way follow from this that the human mind is not distinct from the body; the conclusion would rather be that in other animals, too, the mind is distinct from the body. This was the view taken by those same Platonists whose authority my critics were extolling a moment ago, as is clear from the fact that they followed the Pythagoreans in believing in the transmigration of souls. But in fact the brutes possess no thought whatsoever; I not only stated this, as my critics here imply, but proved it by very strong arguments which no one has refuted up till now. Yet those who assert, as if they were present in the animals' hearts, that 'dogs when awake know that they are running, and in their dreams know that they are barking', are simply saying something without proving it. My critics go on to say that they do not believe that the ways in which the beasts operate can be explained 'by means of mechanics without invoking any sensation, life or soul' (I take this to mean 'without invoking thought'; for I accept that the brutes have what is commonly called 'life', and a corporeal soul and organic sensation); moreover, they are 'ready to wager any amount that this is an impossible and ridiculous claim'. But these remarks should not be taken to constitute an argument, for the same could be said of any other claim, however true it might be. Indeed the use of wagers in debate is generally resorted to only when there is a lack of arguments to prove the case; and since once upon a time distinguished people used to laugh at claims about the antipodes in just such a fashion, I do not think that a claim should be immediately dismissed as false just because some people laugh at it.

My critics add in conclusion: 'There are plenty of people who will say that man himself lacks sensation and intellect, and can do everything by means of mechanical structures, without any mind, given that apes, dogs and elephants can perform all their operations by mechanical means.' This is surely not an argument that proves anything, except perhaps that some people have such a confused conception of everything and cling so tenaciously to their preconceived opinions (which they understand only in a verbal way) that rather than change them they will deny of themselves what they cannot fail to experience within themselves all the time. We cannot fail constantly to experience within ourselves that we are thinking. It may be shown that animate brutes can perform all their operations without any thought, but this does not entitle anyone to infer that he does not himself think. Such an inference would be made only by someone who has previously been convinced that he operates in exactly the same way as the brutes, simply because he has attributed thought to them; he then remains so stubbornly attached to the sentence 'Men and the brutes operate in the same way' that when it is pointed out to him that the brutes do not think, he actually prefers to deny his own thought, of which he cannot fail to be aware, rather than change his opinion that he operates in the same way as the brutes. But I find it hard to accept that there are many people of this sort. It will be found that the great majority, given the premiss that thought is not distinct from corporeal motion, take a much more rational line and maintain that thought is the same in the brutes as it is in us, since they observe all kinds of corporeal motions in them, just as in us. And they will add that 'the difference, which is merely one of degree, does not imply any essential difference'; from this they will be quite justified in concluding that, although there may be a smaller degree of reason in the beasts than there is in us, the beasts possess minds which are of exactly the same type as ours.

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10. My critics' remaining comments are put forward as doubts rather than as objections, and I am not so confident of my powers as to venture to guarantee that I shall be able to give a satisfactory explanation of matters which I see still give rise to doubt in the minds of many learned and highly intelligent men. But nevertheless, so as not to desert the cause, I will do what I can and give a frank account of how it happened that I managed to free myself entirely from these same doubts. In so doing, I shall be delighted if my comments are perhaps of some help to others; and if they are not, I shall at least not feel myself to have made any rash promises.

When, on the basis of the arguments set out in these Meditations, I first drew the conclusion that the human mind is really distinct from the body, better known than the body, and so on, I was compelled to accept these results because everything in the reasoning was coherent and was inferred from quite evident principles in accordance with the rules of logic. But I confess that for all that I was not entirely convinced; I was in the same plight as astronomers who have established by argument that the sun is several times larger than the earth, and yet still cannot prevent themselves judging that it is smaller, when they actually look at it. However, I went on from here, and proceeded to apply the same fundamental principles to the consideration of physical things. First I attended to the ideas or notions of each particular thing which I found within myself, and I carefully distinguished them one from the other so that all my judgements should match them. I observed as a result that nothing whatever belongs to the concept of body except the fact that it is something which has length, breadth and depth and is capable of various shapes and motions; moreover, these shapes and motions are merely modes which no power whatever can cause to exist apart from body. But colours, smells, tastes and so on, are, I observed, merely certain sensations which exist in my thought, and are as different from bodies as pain is different from the shape and motion of the weapon which produces it. And lastly, I observed that heaviness and hardness and the power to heat or to attract, or

to purge, and all the other qualities which we experience in bodies, consist solely in the motion of bodies, or its absence, and the configuration and situation of their parts.

Since these opinions were completely different from those which I had previously held regarding physical things, I next began to consider what had led me to take a different view before. The principal cause, I discovered, was this. From infancy I had made a variety of judgements about physical things in so far as they contributed to preserving the life which I was embarking on; and subsequently I retained the same opinions I had originally formed of these things. But at that age the mind employed the bodily organs less correctly than it now does, and was more firmly attached to them; hence it had no thoughts apart from them and perceived things only in a confused manner. Although it was aware of its own nature and had within itself an idea of thought as well as an idea of extension, it never exercised its intellect on anything without at the same time picturing something in the imagination. It therefore took thought and extension to be one and the same thing, and referred to the body all the notions which it had concerning things related to the intellect. Now I had never freed myself from these preconceived opinions in later life, and hence there was nothing that I knew with sufficient distinctness, and there was nothing I did not suppose to be corporeal; however, in the case of those very things that I supposed to be corporeal, the ideas or concepts which I formed were frequently such as to refer to minds rather than bodies.

For example, I conceived of gravity as if it were some sort of real quality, which inhered in solid bodies; and although I called it a 'quality', thereby referring it to the bodies in which it inhered, by adding that it was 'real' I was in fact thinking that it was a substance. In the same way clothing, regarded in itself, is a substance, even though when referred to the man who wears it, it is a quality. Or again, the mind, even though it is in fact a substance, can nonetheless be said to be a quality of the body to which it is joined. And although I imagined gravity to be scattered throughout the whole body that is heavy, I still did not attribute to it the extension which constitutes the nature of a body. For the true extension of a body is such as to exclude any interpenetration of the parts, whereas I thought that there was the same amount of gravity in a ten foot piece of wood as in one foot lump of gold or other metal—indeed I thought that the whole of the gravity could be contracted to a mathematical point. Moreover, I saw that the gravity, while remaining coextensive with the heavy body, could exercise all its force in any one part of the body; for if the body were hung from a rope attached to any part of it, it would still pull the rope down with all its force, just as if all the gravity existed in the part actually touching the rope instead of being scattered through the remaining parts. This is exactly the way in which I now understand the mind to be coextensive with the body—the whole mind in the whole body and the whole mind in any one of its parts. But what makes it especially clear that my idea of gravity was taken largely from the idea I had of the mind is the fact that I thought that gravity carried bodies towards the centre of the earth as if it had some knowledge of the centre within itself. For this surely could not happen without knowledge, and there can be no knowledge except in a mind. Nevertheless I continued to apply to gravity various other attributes which cannot be understood to apply to a mind in this way—for example its being divisible, measurable and so on.

But later on I made the observations which led me to make a careful distinction between the idea of the mind and the ideas of body and corporeal motion; and I found that all those other ideas of 'real qualities' or 'substantial forms' which I had previously held were ones which I had put together or constructed from those basic ideas. And thus I very easily freed myself from all the doubts that my critics here put forward. First of all, I did not doubt that I 'had a clear idea of my mind', since I had a close inner awareness of it. Nor did I doubt that 'this idea was quite different from the ideas of other things', and that 'it contained nothing of a corporeal nature'. For I had also looked for true ideas of all these 'other things', and I appeared to have some general acquaintance with all of them; yet everything I found in them was completely different from my idea of the mind. Moreover, I found that the distinction between things such as mind and body, which appeared distinct even though I attentively thought about both of them, is much greater than the distinction between things which are such that when we think of both of them we do not see how one can exist apart from the other (even though we may be able to understand one without thinking of the other). For example, we can understand the immeasurable greatness of God even though we do not attend to his justice; but if we attend to both, it is quite self-contradictory to suppose that he is immeasurably great and yet not just. Again, it is possible to have true knowledge of the existence of God even though we lack knowledge of the Persons of the Holy Trinity, since the latter can be perceived only by a mind which faith has illuminated; yet when we do perceive them, I deny that it is intelligible to suppose that there is a real distinction between them, at least as far as the divine essence is concerned, although such a distinction may be admitted as far as their mutual relationship is concerned.

Finally, I was not afraid of being so preoccupied with my method of analysis that I might have made the mistake suggested by my critics: seeing that there are 'certain bodies which do not think' (or, rather, clearly understanding that certain bodies can exist without thought), I preferred, they claim, to assert that thought does not belong to the nature of the body rather than to notice that there are certain bodies, namely human ones, which do think, and to infer that thought is a mode of the body. In fact I have never seen or perceived that human bodies think; all I have seen is that there are human beings, who possess both thought and a body. This happens as a result of a thinking thing's being combined with a corporeal thing: I perceived this from the fact that when I examined a thinking thing on its own, I discovered nothing in it which belonged to body, and similarly when I considered corporeal nature on its own I discovered no thought in it. On the contrary, when I examined all the modes of body and mind, I did not observe a single mode the concept of which did not depend on the concept of the thing of which it was a mode. Also, the fact that we often see two things joined together does not license the inference that they are one and the same; but the fact that we sometimes observe one of them apart from the other entirely justifies the inference that they are different. Nor should the power of God deter us from making this inference. For it is a conceptual contradiction to suppose that two things which we clearly perceive as different should become one and the same (that is intrinsically one and the same, as opposed to by combination); this is no less a contradiction than to suppose that two things which are in no way distinct should be separated. Hence, if God has implanted the power of thought in certain bodies (as he in fact has done in the case of human bodies), then he can

remove this power from them, and hence it still remains really distinct from them.

It is true that, before freeing myself from the preconceived opinions acquired from the senses, I did perceive correctly that two and three make five, and that if equals are taken from equals the remainders are equal, and many things of this kind; and yet I did not think that the soul of man is distinct from his body. But I do not find this surprising. For I can easily see why it happened that, when still an infant, I never made any false judgements about propositions of this sort, which everyone accepts; the reason was that I had no occasion to employ these propositions, since children do not learn to count two and three until they are capable of judging whether they make five. But, by contrast, I had from my earliest years conceived of my mind and body as a unity of some sort (for I had a confused awareness that I was composed of mind and body). It happens in almost every case of imperfect knowledge that many things are apprehended together as a unity, though they will later have to be distinguished by a more careful examination.

What does greatly surprise me is that learned men who have 'practised metaphysical studies for thirty years' and have read my *Meditations* 'seven times' consider that if I re-read them in the spirit of analytical scrutiny which I would adopt if they had been put forward by an opponent, I would not believe that the arguments contained there had the kind of 'weight or strength' that ought to lead everyone to assent to them. It is surprising that my critics should say this even though they themselves cannot point to any flaw whatsoever in these arguments of mine. They certainly give me more credit than they should, or than should be given to anyone, if they think that the kind of 'analysis' I employ is one which enables true demonstrations to be overthrown and false ones to be so disguised and tricked out that no one is capable of refuting them. On the contrary, I declare that the only method I have sought is one which will enable the certainty of true arguments to be known and the flaws in false ones to be detected. Hence I am struck not so much by the fact that there are learned men who do not yet accept my conclusions as by the fact that, after a careful and repeated rereading of my arguments they can point to no false assumptions or invalid inferences in what I have written. As to their reluctance to accept the conclusions, that can easily be attributed to the inveterate habit of making different judgements on these matters; they are just like the astronomers who, as noted earlier, do not find it easy to picture the sun as being bigger than the earth although they can demonstrate this by most reliable arguments. But the only possible reason that I can see why neither these critics, nor, as far as I know, any others, have so far been able to fault my arguments is that they possess complete truth and certainty; in particular, they are deduced step by step, not from principles which are obscure and unknown, but, in the first place, from total doubt about all things, and, in the second place, from principles which appear to be utterly evident and certain to the mind, once it has been set free from preconceived opinions. It follows from this that there cannot be any mistakes in my arguments which would not be noticed without difficulty by anyone of even moderate intelligence. Hence I think I can justly conclude that if these learned gentlemen cannot yet accept my conclusions after several close readings, their authority does not so much weaken what I have written as strengthen it, since after such a careful and repeated examination, they have failed to note any errors or fallacies in my demonstrations.

Correspondence between Elisabeth and Descartes (1643)

Elisabeth to Descartes, 6 May 1643

M. Descartes,

I learned, with much joy and regret, of the plan you had to see me a few days ago; I was touched equally by your charity in willing to share yourself with an ignorant and intractable person and by the bad luck that robbed me of such a profitable conversation. M. Palotti greatly augmented this latter passion in going over with me the solutions you gave him to the obscurities contained in the physics of M. Regius. I would have been better instructed on these from your mouth, as I would have been on a question I proposed to that professor while he was in this town, and regarding which he redirected me to you so that I might receive a satisfactory answer. The shame of showing you so disordered a style prevented me, up until now, from asking you for this favor by letter.

But today M. Palotti has given me such assurance of your goodwill toward everyone, and in particular toward me, that I chased from my mind all considerations other than that of availing myself of it. So I ask you please to tell me how the soul of a human being (it being only a thinking substance) can determine the bodily spirits, in order to bring about voluntary actions. For it seems that all determination of movement happens through the impulsion of the thing moved, by the manner in which it is pushed by that which moves it, or else by the particular qualities and shape of the surface of the latter. Physical contact is required for the first two conditions, extension for the third. You entirely exclude the one [extension] from the notion you have of the soul, and the other [physical contact] appears to me incompatible with an immaterial thing. This is why I ask you for a more precise definition of the soul than the one you give in your Metaphysics, that is to say, of its substance separate from its action, that is, from thought. For even if we were to suppose them inseparable (which is however difficult to prove in the mother's womb and in great fainting spells) as are the attributes of God, we could, in considering them apart, acquire a more perfect idea of them.

Knowing that you are the best doctor for my soul, I expose to you quite freely the weaknesses of its speculations, and hope that in observing the Hippocratic oath, you will supply me with remedies without making them public; such I beg of you to do, as well as to suffer the badgerings of

Your affectionate friend at your service,

Elisabeth.

Descartes to Elisabeth, 21 May 1643

Madame,

The favor with which your Highness has honored me, in allowing me to receive her orders in writing, is greater than I would ever have dared to hope; and it is more consoling to my failings than what I had hoped for with passion, which was to receive them by mouth, had I been able to be admit-ted the honor of paying you reverence, and of offering you my very humble services when I was last in The Hague. For in that case I would have had too many marvels to admire at the same time, and seeing superhuman discourse emerging from a body so similar to those painters give to angels, I would have been delighted in the same manner as it seems to me must be those who, coming from the earth, enter newly into heaven. This would have made me less capable of responding to your Highness, who without doubt has already noticed in me this failing, when I had the honor of speaking with her before; and your clemency wanted to assuage it, in leaving me the traces of your thoughts on a paper, where, in rereading them several times and accustoming myself to consider them, I would be truly less dazzled, but I instead feel more wonder, in noticing that these thoughts not only seem ingenious at the outset, but also even more judicious and solid the more one examines them.

I can say with truth that the question your Highness proposes seems to me that which, in view of my published writings, one can most rightly ask me. For there are two things about the human soul on which all the knowledge we can have of its nature depends: one of which is that it thinks, and the other is that, being united to the body, it can act on and be acted upon by it. I have said almost nothing about the latter, and have concentrated solely on making the first better understood, as my principal aim was to prove the distinction between the soul and the body. Only the first was able to serve this aim, and the other would have been harmful to it. But, as your Highness sees so clearly that one cannot conceal anything from her, I will try here to explain the manner in which I conceive of the union of the soul with the body and how the soul has the power [*force*] to move it.

First, I consider that there are in us certain primitive notions that are like originals on the pattern of which we form all our other knowledge. There are only very few of these notions; for, after the most general—those of being, number, and duration, etc.—which apply to all that we can conceive, we have, for the body in particular, only the notion of extension, from which follow the notions of shape and movement; and for the soul alone, we have only that of thought, in which are included the perceptions of the understanding and the inclinations of the will; and finally, for the soul and the body together, we have only that of their union, on which depends that of the power the soul has to move the body and the body to act on the soul, in causing its sensations and passions.

I consider also that all human knowledge [*science*] consists only in distinguishing well these notions, and in attributing each of them only to those things to which it pertains. For, when we want to explain some difficulty by means of a notion which does not pertain to it, we cannot fail to be mistaken; just as we are mistaken when we want to explain one of these notions by another; for being primitive, each of them can be understood only through itself. Although the use of the senses has given us notions of extension, of shapes, and of movements that are much more familiar than the others, the principal cause of our errors lies in our ordinarily wanting to use these notions to explain those things to which they do not pertain. For instance, when we want to use the imagination to conceive the nature of the soul, or better, when one wants to conceive the way in which the soul moves the body, by appealing to the way one body is moved by another body.

That is why, since, in the *Meditations* which your Highness deigned to read, I was trying to make conceivable the notions which pertain to the soul alone, distinguishing them from those which pertain to the body alone, the first thing that I ought to explain subsequently is the manner of conceiving those which pertain to the union of the soul with the body, without those which pertain to the body alone, or to the soul alone. To which it seems to me that what I wrote at the end of my response to the sixth objections can be useful; for we cannot look for these simple notions elsewhere than in our soul, which has them all in itself by its nature, but which does not always distinguish one from the others well enough, or even attribute them to the objects to which it ought to attribute them.

Thus, I believe that we have heretofore confused the notion of the power with which the soul acts on the body with the power with which one body acts on another; and that we have attributed the one and the other not to the soul, for we did not yet know it, but to diverse qualities of bodies, such as heaviness, heat, and others, which we have imagined to be real, that is to say, to have an existence distinct from that of body, and by consequence, to be substances, even though we have named them qualities. In order to understand them, sometimes we have used those notions that are in us for knowing body, and sometimes those which are there for knowing the soul, depending on whether what we were attributing to them was material or immaterial. For example, in supposing that heaviness is a real quality, of which we have no other knowledge but that it has the power to move a body in which it is toward the center of the earth, we have no difficulty in conceiving how it moves the body, nor how it is joined to it; and we do not think that this happens through a real contact of one surface against another, for we experience in ourselves that we have a specific notion for conceiving that; and I think that we use this notion badly, in applying it to heaviness, which, as I hope to demonstrate in my Physics, is nothing really distinct from body. But I do think that it was given to us for conceiving the way in which the soul moves the body.

If I were to employ more words to explain myself, I would show that I did not sufficiently recognize the incomparable mind of your Highness, and I would be too presumptuous if I dared to think that my response should be entirely satisfactory to her; but I will try to avoid both the one and the other in adding here nothing more, except that if I am capable of writing or saying something that could be agreeable to her, I would always take it as a great honor to take up a pen or to go to The Hague for this end, and that there is nothing in the world which is so dear to me as the power to obey her commandments. But I cannot find a reason to observe the Hippocratic oath that she enjoined me to, since she communicated nothing to me that does not merit being seen and admired by all men. I can only say, on this matter, that esteeming infinitely your letter to me, I will treat it as the misers do their treasures: the more they value them the more they hide them away, and begrudging the rest of the world a view of them, they make it their sovereign good to look at them. Thus, it will be easy for me alone

to enjoy the good of seeing it, and my greatest ambition is to be able to say and to be truly, Madame,

Your Highness's very humble and obedient servant,

Descartes.

Elisabeth to Descartes, 10 June 1643

M. Descartes,

Your goodwill appears not only in your showing me the faults in my reasoning and correcting them, as I expected, but also in your attempt to console me about them in order to make the knowledge of them less annoying for me. But, in detriment to your judgment, you attempt to console me about those faults with false praise. Such false praise would have been necessary to encourage me to work to remedy them had my upbringing, in a place where the ordinary way of conversing has accustomed me to understand that people are incapable of giving one true praise, not made me presume that I could not err in believing the contrary of what people speak, and had it not rendered the consideration of my imperfections so familiar that they no longer upset me more than is necessary to promote the desire to rid myself of them.

This makes me confess, without shame, that I have found in myself all the causes of error which you noticed in your letter, and that as yet I have not been able to banish them entirely, for the life which I am constrained to lead does not leave enough time at my disposal to acquire a habit of meditation in accordance with your rules. Now the interests of my house, which I must not neglect, now some conversations and social obligations which I cannot avoid, beat down so heavily on this weak mind with annoyance or boredom, that it is rendered useless for anything else at all for a long time afterward: this will serve, I hope, as an excuse for my stupidity in being unable to comprehend, by appeal to the idea you once had of heaviness, the idea through which we must judge how the soul (nonextended and immaterial) can move the body; nor why this power [*puissance*] to carry the body toward the center of the earth, which you earlier falsely attributed to a body as a quality, should sooner persuade us that a body can be pushed by some immaterial thing, than the demonstration of a contrary truth (which you promise in your physics) should confirm us in the opinion of its impossibility. In particular, since this idea (unable to pretend to the same perfection and objective reality as that of God) can be feigned due to the ignorance of that which truly moves these bodies toward the center, and since no material cause presents itself to the senses, one would then attribute this power to its contrary, an immaterial cause. But I nevertheless have never been able to conceive of such an immaterial thing as anything other than a negation of matter which cannot have any communication with it.

I admit that it would be easier for me to concede matter and extension to the soul than to concede the capacity to move a body and to be moved by it to an immaterial thing. For, if the first is achieved through *information*, it would be necessary that the spirits, which cause the movements, were intelligent, a capacity you accord to nothing corporeal. And even though, in your *Metaphysical Meditations*, you show the possibility of the second, it is altogether very difficult to understand that a soul, as you have described it, after having had the faculty and the custom of reasoning well, can lose all of this by some vapors, and that, being able to subsist without the body, and having nothing in common with it, the soul is still so governed by it.

But after all, since you have undertaken to instruct me, I entertain these sentiments only as friends which I do not intend to keep, assuring myself that you will explicate the nature of an immaterial substance and the manner of its actions and passions in the body, just as well as you have all the other things that you have wanted to teach. I beg of you also to believe that you could not perform this charity to anyone who felt more the obligation she has to you as?

Your very affectionate friend,

Elisabeth.

Descartes to Elisabeth, 28 June 1643

Madame,

I have a very great obligation to your Highness in that she, after having borne my explaining myself badly in my previous letter, concerning the question which it pleased her to propose to me, deigns again to have the patience to listen to me on the same matter, and to give me occasion to note the things which I omitted. Of which the principal ones seem to me to be that, after having distinguished three sorts of ideas or primitive notions which are each known in a particular way and not by a comparison of the one with the other—that is, the notion that we have of the soul, that of the body, and the union which is between the soul and the body—I ought to have explained the difference between these three sorts of notions and between the operations of the soul through which we have them, and to have stated how we render each of them familiar and easy to us. Then, after that, having said why I availed myself of the comparison with heaviness, I ought to have made clear that, even though one might want to conceive of the soul as material (which, strictly speaking, is what it is to conceive its union with the body), one would not cease to know, after that, that the soul is separable from it. That is, I think, all of what your Highness has prescribed me to do here.

First, then, I notice a great difference between these three sorts of notions. The soul is conceived only by the pure understanding [*l'entendement*]; the body, that is to say, extension, shapes, and motions, can also be known by the understanding alone, but is much better known by the understanding aided by the imagination; and finally, those things which pertain to the union of the soul and the body are known only obscurely by the understanding alone, or even by the understanding aided by the imagination; but they are known very clearly by the senses. From which it follows that those who never philosophize and who use only their senses do not doubt in the least that the soul moves the body and that the body acts on the soul. But they consider the one and the other as one single thing, that is to say, they conceive of their union. For to conceive of the union between two things is to conceive of them as one single thing.

Metaphysical thoughts which exercise the pure understanding serve to render the notion of the soul familiar. The study of mathematics, which exercises principally the imagination in its consideration of shapes and movements, accustoms us to form very distinct notions of body. And lastly, it is in using only life and ordinary conversations and in abstaining from meditating and studying those things which exercise the imagination that we learn to conceive the union of the soul and the body.

I almost fear that your Highness will think that I do not speak seriously here. But this would be contrary to the respect I owe her and that I would never neglect to pay her. And I can say with truth that the principal rule I have always observed in my studies, and that which I believe has served me the most in acquiring some bit of knowledge, is that I never spend more than a few hours each day in thoughts which occupy the imagination, and very few hours a year in those which occupy the understanding alone, and that I give all the rest of my time to relaxing the senses and resting the mind; I even count, among the exercises of the imagination, all serious conversations and everything for which it is necessary to devote attention. It is this that has made me retire to the country. For even though in the most populated city in the world I could have as many hours to myself as I now employ in study, I would nevertheless not be able to use them so usefully, since my mind would be distracted by the attention the bothers of life require. I take the liberty to write of this here to your Highness in order to show that I truly admire that, amid the affairs and the cares which persons who are of a great mind and of great birth never lack, she has been able to attend to the meditations which are required in order to know well the distinction between the soul and the body.

But I judged that it was these meditations, rather than these other thoughts which require less attention, that have made her find obscurity in the notion we have of their union; as it does not seem to me that the human mind is capable of conceiving very distinctly, and at the same time, the distinction between the soul and the body and their union, since to do so it is necessary to conceive them as one single thing and at the same time to conceive them as two, which is contradictory. On this matter (supposing your Highness still had the reasons which prove the distinction of the soul and body at the forefront of her mind and not wanting to ask her to remove them from there in order to represent to herself the notion of the union that each always experiences within himself without philosophizing, in knowing that he is a single person who has together a body and a thought, which are of such a nature that this thought can move the body and sense what happens to it), I availed myself in my previous letter of a comparison between heaviness and those other qualities which we commonly imagine to be united to some bodies just as thought is united to our own, and I was not worried that this comparison hangs on qualities that are not real, even though we imagine them so, since I believed that your Highness was already entirely persuaded that the soul is a substance distinct from body.

But since your Highness notices that it is easier to attribute matter and extension to the soul than to attribute to it the capacity to move a body and to be moved by one without having matter, I beg her to feel free to attribute this matter and this extension to the soul, for to do so is to do nothing but conceive it as united with the body. After having well conceived this and having experienced it within herself, it will be easy for her to consider that the matter that she has attributed to this thought is not the thought itself, and that the extension of this matter is of another nature than the extension of this thought, in that the first is determined to a certain place, from which it excludes all other extended bodies, and this is not the case with the second. In this way your Highness will not neglect to return easily to the knowledge of the distinction between the soul and the body, even though she has conceived their union.

Finally, though I believe it is very necessary to have understood well once in one's life the principles of metaphysics, since it is these that give us knowledge of God and of our soul, I also believe that it would be very harmful to occupy one's understanding often in meditating on them. For in doing so, it could not attend so well to the functions of the imagination and the senses. The best is to content oneself in retaining in one's memory and in one's belief the conclusions that one has at one time drawn from such meditation, and then to employ the rest of the time one has for study in those thoughts where the understanding acts with imagination or the senses.

The extreme devotion which I have to serve your Highness makes me hope that my frankness will not be disagreeable to her. She would have here received a longer discourse in which I would have tried to clarify all at once the difficulties of the question asked, but for a new annoyance which I have just learned about from Utrecht, that the magistrate summons me in order to verify what I wrote about one of their ministers—no matter that this is a man who has slandered me very indignantly and that what I wrote about him in my just defense was only too well known to the world—and so I am constrained to finish here, in order that I may go find the means to extricate myself as soon as I can from this chicanery. I am, &c.

Elisabeth to Descartes, 1 July 1643

M. Descartes,

I see that you have not received as much inconvenience from my esteem for your instruction and the desire to avail myself of it, as from the ingratitude of those who deprive themselves of it and would like to deprive the human species of it. I would not have sent you new evidence of my ignorance until I knew you were done with those of that mindset, if Sieur Van Bergen had not obliged me to it earlier, through his kindness in agreeing to stay in town, just until I gave him a response to your letter of 28 June. What you write there makes me see clearly the three sorts of notions that we have, their objects, and how we ought to make use of them.

I also find that the senses show me that the soul moves the body, but they teach me nothing (no more than do the understanding and the imagination) of the way in which it does so. For this reason, I think that there are some properties of the soul, which are unknown to us, which could perhaps overturn what your *Metaphysical Meditations* persuaded me of by such good reasoning: the nonextendedness of the soul. This doubt seems to be founded on the rule that you give there, in speaking of the true and the false, that all error comes to us in forming judgments about that which we do not perceive well enough. Though extension is not necessary to thought, neither is it at all repugnant to it, and so it

could be suited to some other function of the soul which is no less essential to it. At the very least, it makes one abandon the contradiction of the Scholastics, that it [the soul] is both as a whole in the whole body and as a whole in each of its parts. I do not excuse myself at all for confusing the notion of the soul with that of the body for the same reason as the vulgar; but this doesn't rid me of the first doubt, and I will lose hope of finding certitude in anything in the world if you, who alone have kept me from being a skeptic, do not answer that to which my first reasoning carried me.

Even though I owe you this confession and thanks, I would think it strongly imprudent if I did not already know your kindness and generosity, equal to the rest of your merits, as much by the experience that I have already had as by reputation. You could not have attested to it in a manner more obliging than by the clarifications and counsel you have imparted to me, which I hold above all as one of the greatest treasures that could be possessed by

Your very affectionate friend at your service,

Elisabeth

The Passions of the Soul (1649)

17. *The functions of the soul*

Having thus considered all the functions belonging solely to the body, it is easy to recognize that there is nothing in us which we must attribute to our soul except our thoughts. These are of two principal kinds, some being actions of the soul and others its passions. Those I call its actions are all our volitions, for we experience them as proceeding directly from our soul and as seeming to depend on it alone. On the other hand, the various perceptions or modes of knowledge present in us may be called its passions, in a general sense, for it is often not our soul which makes them such as they are, and the soul always receives them from the things that are represented by them.

18. *The will*

Our volitions, in turn, are of two sorts. One consists of the actions of the soul which terminate in the soul itself, as when we will to love God or, generally speaking, to apply our mind to some object which is not material. The other consists of actions which terminate in our body, as when our merely willing to walk has the consequence that our legs move and we walk.

19. *Perception*

Our perceptions are likewise of two sorts: some have the soul as their cause, others the body. Those having the soul as their cause are the perceptions of our volitions and of all the imaginings or other thoughts which depend on them. For it is certain that we cannot will anything without thereby perceiving that we are willing it. And although willing something is an action with respect to our soul, the perception of such willing may be said to be a passion in the soul. But because this perception is really one and the same thing as the volition, and names are always determined by whatever is most noble, we do not normally call it a 'passion', but solely an 'action'.

[…]

30. *The soul is united to all the parts of the body conjointly*

But in order to understand all these things more perfectly, we need to recognize that the soul is really joined to the whole body, and that we cannot properly say that it exists in any one part of the body to the exclusion of the others. For the body is a unity which is in a sense indivisible because of the arrangement of its organs, these being so related to one another that the removal of any one of them renders the whole body defective. And the soul is of such a nature that it has no relation to extension, or to the dimensions or other properties of the matter of which the body is composed: it is related solely to the whole assemblage of the body's organs. This is obvious from our inability to conceive of a half or a third of a soul, or of the extension which a soul occupies. Nor does the soul become any smaller if we cut off some part of the body, but it becomes completely separate from the body when we break up the assemblage of the body's organs.

31. *There is a little gland* in the brain where the soul exercises its functions more particularly than in the other parts of the body*

We need to recognize also that although the soul is joined to the whole 352 body, nevertheless there is a certain part of the body where it exercises its functions more particularly than in all the others. It is commonly held that this part is the brain, or perhaps the heart—the brain because the sense organs are related to it, and the heart because we feel the passions as if they were in it. But on carefully examining the matter I think I have clearly established that the part of the body in which the soul directly exercises its functions is not the heart at all, or the whole of the brain. It is rather the innermost part of the brain, which is a certain very small gland situated in the middle of the brain's substance and suspended above the passage through which the spirits in the brain's anterior cavities communicate with those in its posterior cavities. The slightest movements on the part of this gland may alter very greatly the course of these spirits, and conversely any change, however slight, taking place in the course of the spirits may do much to change the movements of the gland.

32. *How we know that this gland is the principal seat of the soul*

Apart from this gland, there cannot be any other place in the whole body where the soul directly exercises its functions. I am convinced of this by the observation that all the other parts of our brain are double, as also are all the organs of our external senses—eyes, hands, ears and so on. But in so far as we have only one simple thought about a given object at any one time, there must necessarily be some place where the two images coming through the two eyes, or the two impressions coming from a single object through the double organs of any other sense, can come together in a single image or impression before reaching the

* The pineal gland.

soul, so that they do not present to it two objects instead of one. We can easily understand that these images or other impressions are unified in this gland by means of the spirits which fill the cavities of the brain. But they cannot exist united in this way in any other place in the body except as a result of their being united in this gland.

33. *The seat of the passions is not in the heart*

As for the opinion of those who think that the soul receives its passions in the heart, this is not worth serious consideration, since it is based solely on the fact that the passions make us feel some change in the heart. It is easy to see that the only reason why this change is felt as occurring in the heart is that there is a small nerve which descends to it from the brain—just as pain is felt as in the foot by means of the nerves in the foot, and the stars are perceived as in the sky by means of their light and the optic nerves. Thus it is no more necessary that our soul should exercise its 354 functions directly in the heart in order to feel its passions there, than that it should be in the sky in order to see the stars there.

34. *How the soul and the body act on each other*

Let us therefore take it that the soul has its principal seat in the small gland located in the middle of the brain. From there it radiates through the rest of the body by means of the animal spirits, the nerves, and even the blood, which can take on the impressions of the spirits and carry them through the arteries to all the limbs. Let us recall what we said previously about the mechanism of our body. The nerve-fibres are so distributed in all the parts of the body that when the objects of the senses produce various different movements in these parts, the fibres are occasioned to open the pores of the brain in various different ways. This, in turn, causes the animal spirits contained in these cavities to enter the muscles in various different ways. In this manner the spirits can move the limbs in all the different ways they are capable of being moved. And all the other causes that can move the spirits in different ways are sufficient to direct them into different muscles. To this we may now add that the small gland which is the principal seat of the soul is suspended within the cavities containing these spirits, so that it can be moved by them in as many different ways as there are perceptible differences in the objects. But it can also be moved in various different ways by the soul, whose nature is such that it receives as many different impressions—that is, it has as many different perceptions as there occur different movements in this gland. And conversely, the mechanism of our body is so constructed that simply by this gland's being moved in any way by the soul or by any other cause, it drives the surrounding spirits towards the pores of the brain, which direct them through the nerves to the muscles; and in this way the gland makes the spirits move the limbs.

35. *Example of the way in which the impressions of objects are united in the gland in the middle of the brain*

Thus, for example, if we see some animal approaching us, the light reflected from its body forms two images, one in each of our eyes; and these images form two others, by means of the optic nerves, on the internal surface of the brain facing its cavities. Then, by means of the spirits that fill these cavities, the images radiate towards the little gland which the spirits surround: the movement forming each point of one of the images tends towards the same point on the gland as the movement forming the corresponding point of the other image, which represents the same part of the animal. In this way, the two images in the brain form only one image on the gland, which acts directly upon the soul and makes it see the shape of the animal.

36. *Example of the way in which the passions are aroused in the soul*

If, in addition, this shape is very strange and terrifying—that is, if it has a close relation to things which have previously been harmful to the body this arouses the passion of anxiety in the soul, and then that of courage or perhaps fear and terror, depending upon the particular temperament of the body or the strength of the soul, and upon whether we have protected ourselves previously by defence or by flight against the harmful things to which the present impression is related. Thus in certain persons these factors dispose their brain in such a way that some of the spirits reflected from the image formed on the gland proceed from there to the nerves which serve to turn the back and move the legs in order to flee. The rest of the spirits go to nerves which expand or constrict the orifices of the heart, or else to nerves which agitate other parts of the body from which blood is sent to the heart, so that the blood is rarefied in a different manner from usual and spirits are sent to the brain which are adapted for maintaining and strengthening the passion of fear—that is, for holding open or re—opening the pores of the brain which direct the spirits into these same nerves. For merely by entering into these pores they produce in the gland a particular movement which is ordained by nature to make the soul feel this passion. And since these pores are related mainly to the little nerves which serve to contract or expand the orifices of the heart, this makes the soul feel the passion chiefly as if it were in the heart.