Themes in the Objections & Replies:
Selected Objections and Replies to Descartes's Meditations
Organized Topically with New Introductory Material

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I. The Illusion and Dream Arguments

From Third Objections (Hobbes, 195-6): **The dream doubt has not been resolved.**

Consider someone who dreams that he is in doubt as to whether he is dreaming or not. My question is whether such a man could not dream that his dream fits in with his ideas of a long series of past events. If this is possible, then what appear to the dreamer to be actions belonging to his past life could be judged to be true occurrences, just as if he were awake.

Moreover, as you yourself assert, the certainty and truth of all knowledge depends solely on our knowledge of the true God. But in that case an atheist cannot infer that he is awake on the basis of memory of his past life.

Descartes's Response:

A dreamer cannot really connect his dreams with the ideas of past events, though he may dream that he does. For everyone admits that a man may be deceived in his sleep. But afterwards, when he wakes up, he will easily recognize his mistake.

An atheist can infer that he is awake on the basis of memory of his past life. But he cannot know that this criterion is sufficient to give him the certainty that he is not mistaken, if he does not know that he was created by a non-deceiving God.

From Fifth Objections (Gassendi, 262): **Our senses are not always deceptive.**

In the Second Meditation, you say that you do not have sense perception. But surely it is you who see colors, 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.

Descartes's Response (354):

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.

From Fifth Objections (Gassendi, 282-3): **Ideas of external things come from external things.**

You call into doubt not only whether any ideas proceed from external things, but even whether there are any external things at all. Your reasoning appears to be as follows. Although you have within you ideas of things which are called external, the ideas do not establish that the things exist, since the ideas do not necessarily arise from the things, but could come from yourself or from some other unknown source. This, I think, is why you said earlier that you had not previously perceived the earth, the sky and

the stars, but only the ideas of the earth, the sky, and the stars, which might give rise to a delusion. Now if you do not yet believe that the earth, sky, stars and so on exist, why, may I ask, do you walk on the earth and move your body to look at the sun? Why do you approach the fire to feel the warmth? Why do you go to the table for a meal to satisfy your hunger? Why do you move your tongue to speak or your hand to write down these meditations for us? Certainly your doubts can be uttered, they can be devised with great subtlety, but they do not further your enterprise. And since you are really in no doubt that the things outside you exist, let us be serious and straightforward and talk of things as they are. If, granting the existence of external objects, you think it cannot be satisfactorily demonstrated that the ideas which we have are derived from them, you will have to dispose not only of the objections raised by your arguments, but of further difficulties that can be raised.

You admit that we accept that our ideas come from external things, since, "Nature has apparently taught us this and we know by experience that they do not depend on us, or on our will." You should also have raised and answered, amongst other things, the question of why a man born blind has no idea of color, or a man born deaf has no idea of sound. Surely this is because external objects have not been able to transmit any images of themselves to the minds of such unfortunates, because the doors have been closed since birth and there have always been barriers in place which have prevented these images from entering.

Descartes's Response (363):

Here, aiming to destroy the arguments which led me to judge that the existence of material things should be doubted, you ask why, in that case, I walk on the earth, etc. This obviously begs the question. For you assume what had to be proved, namely that it is so certain that I walk on the earth that there can be no doubt of it.

In addition to the arguments which I put forward against myself and refuted, you suggest the following: Why is there no idea of color in a man born blind, and no idea of sound in a man born deaf? Here you show plainly that you have no telling arguments to produce. How do you know that there is no idea of color in a man born blind? From time to time we find in our own case that even though we close our eyes, sensations of light and color are nevertheless aroused. And even if we grant what you say, those who deny the existence of material things may just as well attribute the absence of ideas of color in the man born blind to the fact that his mind lacks the faculty for forming them; this is just as reasonable as your claim that he does not have the ideas because he is deprived of sight.

From Fifth Objections (Gassendi, 332-4): **The senses are reliable.**

The senses are quite passive and report only appearances, which must appear in the way they do owing to their causes. The error or falsity is in the judgment or the mind, which is not circumspect enough and does not notice that things at a distance will for one reason or another appear smaller and more blurred than when they are nearby, and so on. Nevertheless, when deception occurs, we must not deny that it exists. The only difficulty is whether it occurs all the time, thus making it impossible for us ever to be sure to the truth of anything which we perceive by the senses.

It seems to be quite uncontroversial that when we look at a tower from nearby, and touch it, we are sure that it is square, even though when we were further off we had occasion to judge it to be round, or at any rate to doubt whether it was square or round or some other shape.

Similarly, the feeling of pain which still appears to occur in the foot or hand after these limbs have been amputated may sometimes give rise to deception, because the spirits responsible for sensation have been accustomed to pass into the limbs and produce a sensation in them. But such deception occurs, of course, in people who have suffered amputation. Those whose bodies are intact are so certain that they feel pain in the foot or hand when they see it is pricked, that they cannot be in doubt.

Although we think that our nature makes us liable to be deceived even in cases where the truth seems utterly certain, we can nonetheless think that we have a natural capacity for arriving at the truth. We are sometimes deceived when we do not detect a sophism or when a stick is partially immersed in water. But, equally, we sometimes have an understanding of the truth, as in the case of a geometrical demonstration or when the stick is taken out of the water, and in neither of these cases can there be any doubt at all about the truth. Even in the other cases where doubt is permissible, at least we may not doubt that things appear to us in such and such a way. It cannot but be wholly true that they appear as they do.

Descartes's Response (385-6)

Here you show quite clearly that you are relying entirely on a preconceived opinion which you have never got rid of. You maintain that we never suspect any falsity in situations where we have never detected it, and hence that when we look at a tower from nearby and touch it, we are sure that it is square, if it appears square. But you have no reason to think that you have previously noticed all the circumstances in which error can occur. Moreover, it is easy to prove that you are from time to time mistaken in matters which you accept as certain.

When you come round to saying that, "At least we may not doubt that things appear as they do," you are back on the right road. I made this very assertion in the Second Meditation. But the point at issue in the present context concerned the truth about the things located outside us, and you have not managed to say anything true about this.

From Fifth Objections (Gassendi, 333-4): **We cannot doubt that we are awake, when we are awake.**

When deception occurs, we must not deny that it exists. The only difficulty is whether it occurs all the time, thus making it impossible for us ever to be sure of the truth of anything which we perceive by the senses.

Since during our lives we are alternately awake or dreaming, a dream may give rise to deception because things may appear to be present when they are not in fact present. But we do not dream all the time, and for as long as we are really awake we cannot doubt whether we are awake or dreaming.

Thus, although we think that our nature makes us liable to be deceived even in cases where the truth seems utterly certain, we can nonetheless think that we have a natural capacity for arriving at the truth.

Descartes's Response (385-6)

Here you show quite clearly that you are relying entirely on a preconceived opinion which you have never got rid of. You maintain that we never suspect any falsity in situations where we have never detected it. You maintain that when we are really awake, we cannot doubt whether we are awake or asleep, and so on. But you have no reason to think that you have previously noticed all the circumstances in which error can occur. Moreover, it is easy to prove that you are from time to time mistaken in matters which you accept as certain.

II. The Cogito

From Second Objections (Mersenne, 124-5): **Knowledge of the cogito depends on knowledge of God.**

In the Second Meditation, you are not yet certain of the existence of God, and you say that you are not certain of anything, and cannot know anything clearly and distinctly until you have achieved clear and certain knowledge of the existence of God. It follows from this that you do not yet clearly and distinctly know that you are a thinking thing, since, on your own admission, that knowledge depends on the clear knowledge of an existing God. This you have not yet proved in the passage where you draw the conclusion that you clearly know what you are.

Descartes's Response (140-1):

When I said that we can know nothing for certain until we are aware that God exists, I expressly declared that I was speaking only of knowledge of those conclusions which can be recalled when we are no longer attending to the arguments by means of which we deduced them. Now awareness of first principles is not normally called 'knowledge' by dialecticians. When we become aware that we are thinking things, this is a primary notion which is not derived by means of any syllogism. When someone says "I am thinking, therefore I am, or I exist," he does not deduce existence from thought by means of a syllogism, but recognizes it as something self-evident by a simple intuition of the mind. This is clear from the fact that if he were deducing it by means of a syllogism, he would have to have had previous knowledge of the major premise "Everything which thinks is, or exists." In fact he learns it from experiencing in his own case that it is impossible that he should think without existing.

From Gassendi's *Counter-Objections* (AT IXA 205): **The cogito assumes a premise.**

When you say, "I am thinking, therefore I exist," you presuppose the major premise that whatever thinks exists. Hence, you have already adopted a preconceived opinion.

Descartes's Response (AT IXA 205-6):

When we examine the proposition in question, 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. 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. 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.

From Fifth Objections (Gassendi, 258-9): **One's existence may be derived from acts other than thinking.**

In the Second Meditation, you persist with your elaborate pretense 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.

Descartes's Response (352):

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. The same applies in other cases.

From Fifth Objections (Gassendi, 291-2): **The mind can have no knowledge of the mind.**

I find it strange that you can claim that there is no problem about the idea you are said to have of yourself (an idea which is so fertile that it enables you to derive so many other ideas from it.) For in fact you either have no idea of yourself at all, or you have one which is very confused and imperfect. The inference which you yourself drew in the Second Meditation was that there was nothing which you could perceive more easily or evidently than yourself. But since you neither have nor are capable of having any idea of yourself, should we not rather say that you can perceive anything at all more easily and more evidently than yourself?

When I think about why it is that sight does not see itself and the intellect does not understand itself, it occurs to me that nothing acts on itself. Thus the hand or the tip of the finger does not strike itself and the foot does not kick itself. Now if we are to become aware of something, it is necessary for the thing to act on the cognitive faculty by transmitting its semblance to the faculty or by informing the faculty with its semblance. Hence it seems clear that the faculty itself, not being outside itself, cannot transmit a semblance of itself to itself, and hence cannot produce any awareness of itself or, in other words, cannot perceive itself. Why do you think that the eye can see itself in a mirror although it cannot see itself in itself? It is because there is a space between the eye and the mirror, and the eye acts on the mirror, transmitting a semblance of itself onto it, so that the mirror in turn acts on the eye by sending its own semblance back to it. Show me a mirror that you yourself can act on in this way, and I promise that, when it reflects your semblance back to you, you will finally manage to perceive yourself, though not by direct but by a reflexive kind of cognition. Since you cannot provide such a mirror, there is no hope of your knowing yourself.

Descartes's Response (367):

It is unusual for you to use arguments, but here you prove your case with the example of the finger which does not strike itself and the eye which does not see itself in itself but in a mirror. It is, however, easy to answer this by saying that it is not the eye which sees the mirror rather than itself, but the mind alone which recognizes the mirror, the eye and itself. Other counter-examples can also be cited from the realm of corporeal things: when a top turns itself round in a circle, is not the turning an action which it performs on itself?

From Sixth Objections (Mersenne, 413): **You can not know that you are thinking unless you know that you know that you are thinking.**

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. 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.

Descartes's Response (422):

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.

III. The Idea of God

From First Objections (Caterus, 96-7): **Can we have clear and distinct knowledge of God?**

Are you clearly and distinctly aware of an infinite being? What is the meaning of that well-worn maxim, 'the infinite qua infinite is unknown'? When I think of a chiliagon, and construct for myself a confused representation of some figure, I do not distinctly imagine the chiliagon itself, since I do not distinctly see the thousand sides. And if this is so, then the question obviously arises as to how the infinite can be thought of in a distinct as opposed to a confused manner, given that the infinite perfections that make it up cannot be seen clearly before the eyes, as it were.

This is perhaps what Aquinas meant when he denied that the proposition 'God exists' is self-evident. He says that the knowledge that God exists is naturally implanted in us only in a general sense, or in a "confused manner," as he puts it, that is, in so far as God is the ultimate felicity of man. But this, he says, is not straightforward knowledge of the existence of God, just as to know that someone is coming is not the same as to know Peter, even though it is Peter who is coming. He is in effect saying that God is known under some general conception, as an ultimate end or as the first and most perfect being, or even under the concept of that which includes all things in a confused and general manner. But he is not known in terms of the precise concept of his own proper essence, for in essence God is infinite and so unknown to us.

Descartes's Response:

First of all, the infinite *qua* infinite can in no way be grasped. But it can still be understood, in so far as we can clearly and distinctly understand that something is such that no limitations can be found in it, and this amounts to understanding clearly that it is infinite.

In the case of the thing itself which is infinite, our understanding is not adequate, that is to say, we do not have a complete grasp of everything in it that is capable of being understood. When we look at the sea, our vision does not encompass its entirety, nor do we measure out its enormous vastness, but we are still said to "see" it. In fact, if we look at a distance so that our vision almost covers the entire sea at one time, we see it only in a confused manner, just as we have a confused picture of a chiliagon when we take in all its sides at once. But if we fix our gaze on some part of the sea at close quarters, then our view can be clear and distinct, just as our picture of a chiliagon can be, if it is confined to one or two of the sides. In the same way, God cannot be taken in by the human mind, and I admit this, along with all theologians. Moreover, God cannot be distinctly known by those who look at a distance as it were, and try to make their minds encompass his entirety all at once. This is the sense in which Aquinas says, in the passage quoted, that the knowledge of God is within us, "in a somewhat confused manner." But those who try to attend to God's individual perfections and try not so much to take hold of them as to surrender to them, using all the strength of their intellect to contemplate them, will certainly find that God provides much more ample and straightforward subject-matter for clear and distinct knowledge than does any created thing.

From Third Objections (Hobbes, 179-180, 183): **We have no idea of God.**

You write, "Some of [our thoughts] are, as it were, the images of things, and it is only in these cases that the term 'idea' is strictly appropriate, for example when I think of a man, or a chimera, or the sky, or an angel, or God."

When I think of a man, I am aware of an idea or image made of a certain shape and color. I can doubt whether this image is the likeness of a man or not. The same applies when I think of the sky. When I think of a chimera, I am aware of an idea or an image. I can be in doubt as to whether it is the likeness of a non-existent animal which is capable of existing, or one which may or may not have existed as some previous time.

But when I think of an angel, what comes to mind is an image, now of a flame, now of a beautiful child with wings. I feel sure that this image has no likeness to an angel, and hence that it is not the idea of an angel. But I believe that there are invisible and immaterial creatures who serve God. We give the name 'angel' to this thing which we believe in, or suppose to exist. But the idea by means of which I imagine an angel is composed of the ideas of visible things.

In the same way we have no idea or image corresponding to the sacred name of God. And this is why we are forbidden to worship God in the form of an image. Otherwise we might think that we were conceiving of him who is incapable of being conceived.

It seems, then, that there is no idea of God in us. A man born blind, who has often approached fire and felt hot, recognizes that there is something which makes him hot. When he hears that this is called 'fire' he concludes that fire exists. But he does not know what shape or color fire has, and has absolutely no idea or image of fire that comes before his mind. The same applies to a man who recognizes that there must be some cause of his images or ideas, and that this cause must have a priori cause, and so on. He is finally led to the supposition of some eternal cause which never began to exist and hence cannot have a cause prior to itself, and he concludes that something eternal must necessarily exist. But he has no idea which he can say is the idea of that eternal being; he merely gives the name or label 'God' to the thing that he believes in, or acknowledges to exist.

You write, "I did not extract [the idea of God] from the senses; it never simply happened to me without my expecting it, as is normally the case with ideas of sensible things, when the things themselves impinge on, or seem to impinge on, our external senses; nor even did I construct it myself, since I am quite unable to take anything away from it, or add anything to it. So the only remaining alternative is that it is innate to me, just as the idea of my own self is also innate to me."

The whole of this inquiry collapses if there is no idea of God. It has not been proved that there is any such idea, and it does not seem that there is one.

Descartes's Response (181, 183):

You want the term 'idea' to be taken to refer simply to the images of material things which are depicted in the corporeal imagination. If this is granted, it is easy for you to prove that there can be no proper idea of an angel or of God. But I make it quite clear in several places throughout the book, and in this passage in particular, that I am taking the word 'idea' to refer to whatever is immediately perceived by the mind. For example, when I want something, or am afraid of something, I simultaneously perceive that I want, or am afraid. This is why I count volition and fear among my ideas. I used the word 'idea' because it was the standard philosophical term used to refer to the forms of perception belonging to the divine mind, even though we recognize that God does not possess any corporeal imagination. I cannot possibly satisfy those who prefer to attribute a different sense to my words than the one I intended.

The whole of this objection collapses if there is an idea of God. It is obvious that there is such an idea.

From Third Objections (Hobbes, 186-7): **An idea of God need not come from God.**

Descartes says that we can get the idea of God from considering his attributes, and that we should see whether the idea includes anything which could not have originated from within ourselves. Unless I am mistaken, I find that the thoughts we attach to the name of God do not indeed originate in ourselves, but that they do not necessarily come from anything other than external objects. By the name 'God', I understand a substance, that is, I understand that God exists (not through the having of an idea, but as the result of reasoning). Infinite - this means that I cannot conceive or imagine limits to him, or outermost parts, such that I cannot also imagine yet more remote ones. From this it follows that the name 'infinite' does not conjure up any idea of divine infinity, but only of my own finitude, or limits.

Independent - this means that I cannot conceive of any cause which could give rise to God. From this it is obvious that the only idea I attach to the name 'independent' is the memory of my ideas coming into being at different times, and therefore being dependent.

This is why describing God as "independent" is simply to say that God is one of those things I cannot imagine coming into being. In the same way, describing God as "infinite" is equivalent to saying that he is one of those things we cannot conceive any limits to. This rules out any idea of God. After all, what sort of idea could lack any coming into being or limits?

I myself can conjure up some sort of image of creation on the basis of things I have seen - e.g. the formation of a human baby in the womb, growing from virtually a point to the shape and size it has at birth. This is the only sort of idea anyone attaches to the name 'creator'. But in order to prove that the world was created, it is not enough that we can have an image of the world after its creation. So, even if it had been proved that there exists something "infinite, independent, supremely powerful," etc., it does not follow that there exists a creator. One would have to think that it followed validly from the fact that there exists a being which we ourselves believe to have created everything else, that this being did in fact create the world at some particular time.

Descartes's Response:

No element of our idea of God can have been derived from an original among external objects, since nothing in God bears any resemblance to any aspects of external, i.e. corporeal things. So it is obvious that anything in our thinking which bears no resemblance to corporeal things cannot come from them, but must come from the cause of this dissimilarity in our thought.

And at this point, I ask: How does the philosopher derive his intellectual understanding of God from external things? I can easily explain the idea I have of him, by saying that by 'idea' I mean everything which is the form of some perception. And surely, whenever anyone understands something, they perceive that they understand it? So they must have a form, or idea, of intellectual understanding. By extending this idea indefinitely, they can form an idea of the divine understanding. The same goes for the other attributes of God.

I used the idea of God which is within us for proving his existence. This idea includes power so great, that we understand that, if God exists, it would be a contradiction for anything apart from God to exist without having been created by him. So it obviously follows from the fact that his existence has been demonstrated, that it has also been demonstrated that the whole universe, or absolutely all things in existence which are distinct from God, were created by him.

From Fifth Objections (Gassendi, 286, 294-5): **The idea of God is acquired.**

How do you know that God is represented by the idea you have of him as, "Supreme, eternal, infinite, omnipotent, and the creator of all things"? Do you not take this from your previously conceived knowledge of God, that is, from having heard these attributes ascribed to him? If you had not previously heard anything of this sort, would you still describe God in this way?

You say that the attributes which you understand to be in God could not have originated from you alone, and you hope to show from this that they must have originated from God. It is absolutely true that they did not originate from you alone, and that you did not acquire your understanding of them from yourself or though your own efforts. But this is because they in fact originated and were derived from things, parents, teachers, professors, and from the human society in which you have moved.

Tell me in good faith whether you do not in fact derive all the language which you use of God from the human society in which you live. And if this is true of the words, is it not also true of the underlying notions which these words express? Hence although these words do not come from you alone, it seems that they do not therefore come from God, but that they come from another source.

Furthermore, in the case of all these ideas, once you have obtained them by encountering things, can you not afterwards get them from yourself? Do you really therefore comprehend something which is beyond our human grasp?

Descartes's Response (364):

You say that we have the idea of God merely as a result of having heard certain attributes being ascribed to him. Would you please explain where the first men who originally told us of these attributes got the self-same idea of God? If they got it from themselves, why cannot we also derive it from ourselves? If they got it by divine revelation, then God exists.

From Fifth Objections (Gassendi, 287-8): **We have no truly representative idea of God.**

Although every supreme perfection is normally attributed to God, it seems that such perfections are all taken from things which we commonly admire in ourselves, such as longevity, power, knowledge, goodness, blessedness and so on. By amplifying these things as much as we can, we assert that God is eternal, omnipotent, omniscient, supremely good, supremely blessed and so on. Hence the idea representing all these things does not contain more objective reality than the finite things taken together; the idea in question is compounded and augmented from the ideas of these finite things in the manner just described. For if someone calls something eternal, he does not thereby embrace in his mind the entire extend of its duration, the duration which had no beginning and will never have an end. Similarly, someone who uses the term 'omnipotent' does not embrace the whole multitude of possible effects; and so on in the case of the remaining attributes.

Can anyone claim that he has a genuine idea of God, an idea which represents God as he is? What an insignificant thing God would be if he were nothing more, and had no other attributes, than what is contained in our puny idea! Surely we must believe that there is less of a comparison between the perfections of God and man than there is between those of an elephant and a tick on its skin. If anyone, after observing the perfections of the tick, formed within himself an idea which he called the idea of an elephant, and said that it was an authentic idea, would he not be regarded as utterly foolish? So can we really congratulate ourselves if, after seeing the perfections of a man, we form an idea which we maintain is the idea of God and is genuinely representative of him? How, may I ask, are we to detect in God the presence of those puny perfections which we find in ourselves? And when we do recognize them, what sort of divine essence will that allow us to imaging? God is infinitely beyond anything we can grasp, and when our mind addresses itself to contemplate him, it is not only in darkness, but is reduced to nothing. Hence we have no basis for claiming that we have any authentic idea which represents God; and it is more than enough if, on the analogy of our human attributes, we can derive and construct an idea of some sort for our own use, an idea which does not transcend our human grasp and which contains no reality except what we perceive in other things or as a result of encountering other things.

Descartes's Response (365):

It is false that the idea representing all the perfections which we attribute to God does not contain more objective reality than do the finite things. You yourself admit that these perfections must be amplified by our intellect if they are to be attributed to God. So do you think that the perfections which are amplified in this way are not, as a result, greater than they would be if they were not amplified? And how could we have a faculty for amplifying all created perfections (i.e. conceiving of something greater or more ample than they are) were it not for the fact that there is in us an idea of something greater, namely God? Finally, it is again false that God would be a puny thing if he were no greater than our understanding of him. For we understand God to be infinite, and there can be nothing greater than the infinite. You are confusing understanding with imagination, and are supposing that we imagine God to

be like some enormous man, just as if someone who had never seen an elephant were to imagine it was like some enormous tick, which, I agree, would be extremely foolish.

From Fifth Objections (Gassendi, 297-300): **The idea of a perfect God need not come from a perfect God.**

You argue, "How could I understand that I doubted or desired, that is lacked something, and that I was not wholly perfect, unless there were in me some idea of a more perfect being which enabled me to recognize my own defects by comparison?" But it is hardly surprising that you should be in doubt about something, or desire something or recognize that you lack something, given that you do not know everything, are not everything, and do not possess everything. Is this what makes you recognize that you are not wholly perfect? That is indeed perfectly true and can be said without any malice. But do you therefore understand that there is something more perfect than you? Surely when you desire something it is not always in some sense more perfect than you. When you desire some bread, the bread is not in any sense more perfect than you or your body; it is merely more perfect than the emptiness of your stomach.

How, then, do you infer that there is something more perfect than you? Surely it is because you see the totality, which includes you and the bread and everything else; since individual parts of the whole have some perfection, and some subserve others, and can come to their aid, it is easy to understand that there is more perfection in the whole than in the part; and since you are merely a part, you have to acknowledge that there is something more perfect than you. This, then, is how you may come to have the idea of a being more perfect than you, and to recognize your defects by comparing yourself with it.

I pass over the fact that various individual parts of the whole may also be more perfect than you, and that you may desire what they have and thus recognize your defects by comparing yourself with them. Thus, you might have known a man who was healthier, stronger, better looking, more learned, more restrained, and hence more perfect than you; if so, it would not have been difficult for you to conceive an idea of this man and, by comparing yourself with it, to come to understand that you did not have the same degree of health, strength, and the other perfections that were to be found in him.

A little later, you raise a possible objection to your argument: "But perhaps I am something greater than I myself understand, and all the perfections which I attribute to God are potentially in me, even though not yet actualized, as could happen if my knowledge were gradually increased to infinity." But you reply: "Though it is true that there is a gradual increase in my knowledge, and that I can have many potentialities which are not yet actual, this is all quite irrelevant to the idea of God, which contains nothing that is potential; indeed, this gradual increase in the knowledge is itself the surest sign of imperfection."

But although the features which you perceive in the idea actually exist in the idea, it does not follow that they actually exist in the real thing corresponding to the idea. An architect makes up an idea of a house in his mind, and this idea actually consists of the specified walls, floors, roof, windows, and so on; but the house itself and its components do not yet exist in actuality but only in potentiality. Similarly, the aforementioned idea of the ancient philosophers actually contains an infinity of worlds, but you will not therefore say that this infinity of worlds actually exists.

Thus whether something is potentially in you or not, it is enough that your idea or knowledge can be gradually increased or amplified; but we must not infer from this that what is known or represented by the idea actually exists. The point you next recognize, that your knowledge will never become infinite, I readily accept; but you should also recognize that you will never have a true and genuine idea of God, since there always remains much more, infinitely more, to be discovered about him, infinitely more than remains to be discovered about a man when all you have seen is the tip of one of his hairs. Indeed, even if you have not seen the whole man, you have nevertheless seen other men, and this will enable you, by comparison, to make some conjecture about him. But we have never had an opportunity to know

anything which resembles God and his immensity.

You say that you, "Take God to be actually infinite, so that nothing can be added to his perfection." But you are here making a judgment about something of which you are ignorant. Your judgment is based simply on a presumption, like that of the philosophers who supposed there to be infinite worlds, infinite principles and an infinite universe so immense that nothing could be added to it. Your further comment, that the objective being of an idea cannot come from potential being but only from actual being, can hardly be true, given what we have said about the ideas belonging to the architect and the ancient philosophers, especially when you remember that ideas of this sort are constructed from other ideas, which the intellect originally derived from actually existing causes.

Descartes's Response (368-9):

Even though we do not know everything which is in God, nonetheless all the attributes that we do recognize to be in him are truly there.

You say that if someone desires some bread, the bread is not more perfect than him; and that although a feature which I perceive in an idea actually exists in the idea, it does not follow that it actually exists in the thing corresponding to the idea; and finally that I am making a judgment about something of which I am ignorant.

But these and similar comments simply show that you, O Flesh, are anxious to rush in and attack many statements whose meaning you do not follow. The fact that someone desires some bread does not imply that the bread is more perfect than he is, but merely that someone who needs bread is in a more imperfect state than when he does not need it.

Again, from the fact that something exists in an idea I do not infer that it exists in reality, except when we can produce no other cause for the idea but the actual existence of the thing which it represents. And this is true, as I demonstrated, only in the case of God, and not in the case of a plurality of worlds or anything else.

Again, I am not making a judgment about something of which I am ignorant, for I produced reasons to back up my judgment, reasons which are so solid that you have not been able to mount the slightest attack against any of them.

From Fifth Objections (Gassendi, 303-5): **We can amplify our ideas to arrive at an idea of perfection.**

Whether you had one cause or several, it is not necessary that it was these causes which implanted in you the ideas of their perfections, which you have managed to unite. In any case, you allow us to raise the question of why, given that you do not have several causes, it should not have been possible for several things to have existed such that you first admired their perfections and then went on to derive the notion of that blessed thing in whom they are all supposed to exist together.

You know how the poets describe Pandora. Surely you might have admired various people's outstanding knowledge, wisdom, justice, steadfastness, power, health, beauty, felicity, longevity, and so on, and then put all these things together and considered how admirable it would be if one person had all these perfections at once. Why should you not then have augmented all these perfections in various degrees, until it seemed that this person would be all the more admirable if his knowledge, power, duration and so on were unlimited, so that we was omniscient, omnipotent, eternal, and so on? And when you saw that such perfections could not belong to human nature, why should you not have supposed that if they were all combined in one nature, that would be a blessed nature indeed? And why should you not then think it worth investigating whether or not such a being existed? Why should not certain arguments then be produced to make it seem more reasonable that he should exist rather than not exist? And why should you not accordingly remove all bodily attributes and other limitations which imply some perfection? Very many people certainly seem to have proceeded in this way; but since there

are various modes and degrees of reasoning, some have allowed God to remain corporeal, some have said he has human limbs, some have said he is not one but many, and others have produced other all too common accounts.

As for the perfection of unity which you speak of, there is certainly no contradiction in conceiving of all the perfections which we attribute to God as being intimately connected and inseparable. But for all that, the idea which you have of these perfections was not placed in you by God, but was derived by you from the things you have seen, and was then amplified in the way already explained. Thus Pandora is depicted as a goddess endowed with all gifts and perfections; and this is not the only example, since people have also conceived of the perfect republic, the perfect orator, and so on.

When you say that you cannot add anything to the idea of God or take anything away, remember that when you first acquired it, it was not as perfect as it is now. Consider that there may be men or angels or other natures more learned than you from which you may in the future receive some information about God which you have not hitherto known. Consider also that god, at any rate, could give you such information and instruct you so clearly either in this life or the next that you would have to consider your previous knowledge of him as worthless. Whatever sort of knowledge you may finally arrive at, consider that we can ascend from the perfection of created things to knowledge of the perfections of God in such a way that we can uncover more and more perfections every day; and hence we cannot at any one moment possess a perfect idea of God, but only one that becomes more and more perfect each day.

Descartes's Response (370-1):

Your point about Pandora does not undermine my argument. You agree that I can gradually augment, in varying degrees, all the perfections that I observe in people, until I see that they have become the kind of perfections that cannot possibly belong to human nature. This is quite sufficient to enable me to demonstrate the existence of God. For it is this very power of amplifying all human powers up to the point where they are recognized as more than human which, I maintain and insist, would not have been in us unless we had been created by God.

An idea represents the essence of a thing, and if anything is added to or taken away from the essence, then the idea automatically becomes the idea of something else. this is how the ideas of Pandora and of all false Gods are formed by those who do not have a correct conception of the true God. But once the idea of the true God has been conceived, although we may detect additional perfections in him which we had not yet noticed, this does not mean that we have augmented the idea of God. We have simply made it more distinct and explicit, since, so long as we suppose that our original idea was a true one, it must have contained all these perfections.

Similarly, the idea of a triangle is not augmented when we notice various properties in the triangle of which we were previously ignorant. You must also realize that the idea of God is not gradually formed all at once and in its entirety as soon as our mind reaches an infinite being which is incapable of any amplification.

From Fifth Objections (Gassendi, 306): **There is no idea of God imprinted on our minds.**

If the idea of God is in you like the mark of a craftsman stamped on his work, how is this stamping carried out? What is the form of this mark you talk of? How do you recognize it? If it is not distinct from the work or the thing itself, are you yourself, then, an idea? Are you nothing else but a mode of thought? Are you both the mark which is stamped and the subject on which it is stamped?

Descartes's Response (372):

Suppose that there is a painting in which I observe so much skill that I judge that it could only

have been painted by Apelles, and I say that the inimitable technique is like a kind of mark which Apelles stamped on all his pictures to distinguish them from others. The question you raise is just like asking, in this case, "What is the form of this mark, and how is the stamping carried out?" It certainly seems that if you asked such a question, you would deserve to be laughed at, rather than answered.

You go on as follows: "If the mark is not distinct from the work, are you yourself, then, an idea? Are you nothing else but a mode of thought? Are you yourself both the mark which is stamped and the subject on which it is stamped?" Here again you do not deserve an answer. Suppose I had said that the technique by which we can distinguish the paintings of Apelles from others is not anything distinct from the pictures themselves. The point you make seems just as silly as if you were to reply here that in that case the pictures are nothing but the technique, and do not consist of any material, and hence are simply a mode of painting.

From Fifth Objections (Gassendi, 307): **We do not all have the same idea of God.**

It is surprising that everyone else, or every other mind, should not share your understanding of God, especially since there is no reason why God should not be thought to have imprinted the idea of himself on them as well as on you. This one fact surely shows that there is no idea imprinted on us by God; for if there were, if one and the same idea were always imprinted on everyone, then everyone would conceive of God in terms of a similar form and image, and would give him the same attributes and have exactly the same view of him, whereas, notoriously, the opposite is true.

Descartes's Response (374):

Finally, you say that it is surprising that everyone else should not share my understanding of God, since he imprinted the idea of himself on them just as he did on me. This is just like your being surprised at the fact that although everyone is aware of the idea of a triangle, not everyone notices equally many properties in it, and some people may draw false conclusions about it.

IV. The Causal Argument for God's Existence

From First Objections (Caterus, 94): **There is a shorter version of the causal argument.**

Can I not take a much shorter and more direct line of argument for the existence of God? I am thinking, therefore I exist. Indeed, I am thought itself, I am a mind. But this mind and thought derives its existence either from itself, or from another. If the latter, then we continue to repeat the question: where does this other being derive its existence from? And if the former, if it derives its existence from itself, it is God. For what derives existence from itself will without difficulty have endowed itself with all things.

Descartes's Response (106-107):

I did not base my argument on the fact that I observed there to be an order or succession of efficient causes among the objects perceived by the senses. For one thing, I regarded the existence of God as much more evident than the existence of anything that can be perceived by the senses. For another thing, I did not think that such a succession of causes could lead me anywhere except to a recognition of the imperfection of my intellect, since an infinite chain of such successive causes from eternity without any first cause is beyond my grasp. And my inability to grasp it certainly does not entail that there must be a first cause, any more than my inability to grasp the infinite number of divisions in a finite quantity entails that there is an ultimate division beyond which any further division is impossible. All that follows is that my intellect, which is finite, does not encompass the infinite. Hence I preferred to use my own existence as the basis of my argument, since it does not depend on any chain of causes and is better known to me than anything else could possibly be. And the question I asked concerning myself was not what was the cause that originally produced me, but what is the cause that preserves me at present. In this way I aimed to escape the whole issue of the succession of causes.

Next, in inquiring about what caused me, I was asking about myself, not in so far as I consist of mind and body, but only and precisely in so far as I am a thinking thing. This point is, I think, of considerable relevance. For such a procedure made it much easier for me to free myself from my preconceived opinions, to attend to the light of nature, to ask myself questions, and to affirm with certainty that there can be nothing within me of which I am not in some way aware. This is plainly quite a different approach from observing that my father begot me, inferring that my grandfather begot my father, and in view of the impossibility of going on ad infinitum in the search for parents of parents, bringing the inquiry to a close by deciding that there is a first cause.

From First Objections (Caterus, 91-2): **Ideas are empty labels, non-entities.**

Descartes writes, "In virtue of thinking, I possess within me ideas of things, and in particular an idea of a supremely perfect and infinite being." True. "However I am not the cause of this idea, since I do not measure up to its objective reality; hence something more perfect than myself is its cause, and accordingly there exists something besides myself, something more perfect than I am. This is someone who is not a being in any ordinary sense but who simply and without qualification embraces the whole of being within himself, and is as it were the ultimate original cause."

My questions is this: what sort of cause does an idea need? Indeed, what *is* an idea? It is the thing that is thought of, in so far as it has objective being in the intellect. But what is 'objective being in the intellect'? This is simply the determination of an act of the intellect by means of an object. And this is merely an extraneous label which adds nothing to the thing itself. Just as 'being seen' is nothing other than an act of vision attributable to myself, so 'being thought of', or having objective being in the intellect, is simply a thought of the mind which stops and terminates in the mind. And this can occur without any movement or change in the thing itself, and indeed without the thing in question existing at all. So why should I look for a cause of something which is not actual, which is simply an empty label, a non-entity?

Descartes's Response (102-3):

My opponent says, "Objective being in the intellect is simply the determination of an act of the intellect by means of an object. And this is merely an extraneous label which adds nothing to the thing itself." Notice here that he is referring to the thing itself as if it were located outside the intellect, and in this sense 'objective being in the intellect' is certainly an extraneous label. But I was speaking of the idea, which is never outside the intellect, and in this sense 'objective being' simply means being in the intellect in the way in which objects are normally there. For example, if anyone asks what happens to the sun through its being objectively in my intellect, the best answer is that nothing happens to it beyond the application of an extraneous label which does indeed, "Determine an act of the intellect by means of an object." But if the question is about what the *idea* of the sun is, and we answer that it is the thing which is thought of, in so far as it has objective being in the intellect, no one will take this to be the sun itself with this extraneous label applied to it. 'Objective being in the intellect' will not here mean 'the determination of an act of the intellect by means of an object', but will signify the object's being in the intellect in the way in which its objects are normally there. By this I mean that the idea of the sun is the sun itself existing in the intellect, not of course formally existing, as it does in the heavens, but objectively existing, i.e. in the way in which objects normally are in the intellect. Now this mode of being is of course much less perfect than that possessed by things which exist outside the intellect. But, as I did explain, it is not therefore simply nothing.

An idea does not require a cause enabling it to exist outside the intellect. This I accept, but it surely needs a cause enabling it to be conceived, which is the sole point at issue.

From First Objections (Caterus, 95): **There is an ambiguity in 'from itself'.**

You say that if I derive my existence from some other, then if I trace the series back, I will eventually come to a being which derives its existence from itself. The phrase 'from itself' has two senses. In the first, positive, sense, it means 'from itself as from a cause'. What derives existence from itself in this sense bestows its own existence on itself. So if by an act of premeditated choice it were to give itself what it desired, it would undoubtedly give itself all things, and so would be God. But in the second, negative sense, 'from itself' simply means 'not from another'; and this, as far as I remember, is the way in which everyone takes the phrase.

But now, if something derives its existence from itself in the sense of 'not from another', how can we prove that this being embraces all things and is infinite? This time I shall not listen if you say, "If it derives its existence from itself it could easily have given itself all things." For it does not derive existence from itself as a cause, nor did it exist prior to itself so that it could choose in advance what it should subsequently be.

Descartes's Response (109-10):

There are some who attend only to the literal and strict meaning of the phrase 'efficient cause' and thus think it is impossible for anything to be the cause of itself. They do not see that there is any place for another kind of cause analogous to an efficient cause, and hence when they say that something derives its existence from itself they normally mean simply that it has no cause. But if they would look at the facts rather than the words, they would readily observe that the negative sense of the phrase 'from itself' comes merely from the imperfection of the human intellect and has no basis in reality. But there is a positive sense of the phrase which is derived from the true nature of things, and it is this sense alone which is employed in my argument.

If we think that a given body derives its existence from itself, we may simply mean that it has no cause. But our claim here is not based on any positive reason, but merely arises in a negative way from our ignorance of any cause. Yet this is a kind of imperfection in us, as we will easily see if we consider

the following. The separate divisions of time do not depend on each other. Hence the fact that the body in question is supposed to have existed up till now from itself, that is without a cause, is not sufficient to make it continue to exist in the future, unless there is some power in it that as it were recreates it continuously. But when we see that no such power is to be found in the idea of a body, and immediately conclude that the body does not derive its existence from itself, we shall then be taking the phrase 'from itself' in the positive sense.

Similarly, when we say that God derives his existence from himself, we can understand the phrase in the negative sense, in which case the meaning will simply be that he has no cause. But if we have previously inquired into the cause of God's existing or continuing to exist, and we attend to the immense and incomprehensible power that is contained within the idea of God, then we will have recognized that this power is so exceedingly great that it is plainly the cause of his continuing existence, and nothing but this can be the cause. And if we say as a result that God derives his existence from himself, we will not be using the phrase in its negative sense but in an absolutely positive sense. There is no need to say that God is the efficient cause of himself, for this might give rise to a verbal dispute. But the fact that God derives his existence from himself, or has no cause apart from himself, depends not on nothing but on the real immensity of his power. Hence when we perceive this, we are quite entitled to think that in a sense he stands in the same relation to himself as an efficient cause does to its effect, and hence that he derives his existence from himself in the positive sense.

Each one of us may ask himself whether he derives his existence from himself in this same sense. Since he will find no power within himself which suffices to preserve him even for one moment of time, he will be right to conclude that he derives his existence from another being, and indeed that this other being derives its existence from itself. The cause we arrive at cannot merely be a secondary cause; for a cause which possesses such great power that it can preserve something situated outside itself must, *a fortiori*, preserve itself by its own power, and hence derive its existence from itself.

From Fourth Objections (Arnauld, 208-13): **God does not stand in the same relation to himself as an efficient cause does to its effect.**

I agree that I could only derive my existence from myself if I did so in the positive sense, but I do not agree that the same should be said of God. On the contrary, I think it is a manifest contradiction that anything should derive its existence positively and as it were causally from itself. In order to derive my existence from myself, I should have to derive my existence from myself positively, and, as it were, causally. Therefore it is impossible that I derive my existence from myself. Since every effect depends on a cause and receives its existence from a cause, surely it is clear that one and the same thing cannot depend on itself or receive its existence from itself. Every cause is the cause of an effect, and every effect is the effect of a cause. Hence there is a mutual relation between cause and effect. But a relation must involve two terms.

What is more, it is absurd to conceive of a thing's receiving existence yet at the same time possessing that existence prior to the time when we conceive that it received it. Yet this is just what would happen if we were to apply the notion of cause and effect to the same thing in respect of itself. For what is the notion of a cause? The bestowing of existence. And what is the notion of an effect? Receiving existence. The notion of a cause is essentially prior to the notion of an effect.

Now we cannot conceive of something under the concept of a cause as bestowing existence unless we conceive of it as possessing existence; for no one can give what he does not have. Hence we should be conceiving of a thing as having existence before conceive it as having received existence; yet in the case of any receiver, the receiving precedes the possessing. No one can give what he does not have.

The author asserts that it is evident by the natural light that the distinction between creation and

preservation is only a conceptual one. But it is evident by the same natural light that nothing can create itself. Therefore nothing can preserve itself.

But if we come down from the general thesis to the particular case of God, it will now in my view be even clearer that God cannot derive his existence from himself in the positive sense, but can do so only in the negative sense of not deriving it from anything else. Contained within the idea of an infinite being is the fact that the duration of this being is infinite, i.e. not restricted by any limits; and it follows from this that it is indivisible, permanent, and existing all at once, so that the concepts of before and after cannot be applied, except through an error and imperfection of our intellect. The question of why God should continue in existence cannot be asked without absurdity, since the question manifestly involves the notions of before and after, past and future, which should be excluded from the concept of an infinite being.

Moreover, God cannot be though of as deriving his existence from himself in the positive sense, as if he had created himself in the beginning. For then he would have existed before he existed. God is thought of as deriving existence from himself only because he does in reality keep himself in existence. but self-preservation does not apply to an infinite being any more than an original self-creation. For what, may I ask, is preservation if not a continual re-creation of something?

If someone asks for an efficient cause of God, we should reply that he does not need an efficient cause. And if the questioner goes on to ask why he does not need an efficient cause, we should answer that this is because he is an infinite being, whose existence is his essence. For the only things that require an efficient cause are those in which actual existence may be distinguished from essence.

Descartes's Response (235-7, 241)

I denied the suggestion that God is the efficient cause of himself. For in saying that God in a sense stands in the same relation as an efficient cause, I made it clear that I did not suppose he was the same as an efficient cause; and in using the phrase 'we are quite entitled to think' I meant that I was explaining the matter in these terms merely on account of the imperfection of the human intellect. Indeed, throughout the rest of the passage I confirmed this. Right at the beginning, having said, "If anything exists, we may always inquire into its efficient cause," I immediately went on, "Or , if it does not have one, we may demand why it does not need one." These words make it quite clear that I dd believe in the existence of something that does not need an efficient cause. And what could that be, but God? A little later on I said, "There is in God such great and inexhaustible power that he never required the assistance of anything in order to exist, and does not now require any assistance for his preservation, so that he is in a sense his own cause." Here the phrase 'his own cause' cannot possibly be taken to mean an efficient cause; it simply means that the inexhaustible power of God is the cause or reason for his not needing a cause. And since that inexhaustible power or immensity of the divine essence is as positive as can be, I said that the reason or cause why God needs no cause is a positive reason or cause. Now this cannot be said of any finite thing, even though it is quite perfect of its kind. If a finite thing is said to derive its existence from itself, this can only be understood in a negative sense, meaning that no reason can be derived from its positive nature which could enable us to understand that it does not require an efficient cause.

In every passage where I made the comparison between the formal cause (or reason derived from God's essence, in virtue of which he needs no cause in order to exist or to be preserved) and the efficient cause (without which finite things cannot exist) I always took care to make it explicitly clear that the two kinds of cause are different. And I never said that God preserves himself by some positive force, in the way in which created things are preserved by him; I simply said that the immensity of his power or essence, in virtue of which he does not need a preserver, is a positive thing.

I am not open to criticism in this context for using the analogy of an efficient cause to explain features which in fact belong to a formal cause, that is, to the very essence of God.

From Fifth Objections (Gassendi, 288-9): **'There is nothing in the effect which is not in the cause' should be taken to refer to material rather than efficient causes.**

You assume that it is, "Manifest by the natural light that there must be at least as much in the efficient and total cause as there is in the effect." This enables you to infer that there must be at least as much formal reality in the cause of an idea as there is objective reality in the idea. But this is a very big step to take.

First, it seems that the common maxim, 'There is nothing in the effect which is not in the cause,' should be taken to refer to material rather than efficient causes. An efficient cause is something external to the effect and often of a quite different nature. Although an effect is said to get its reality from its efficient cause, it does not follow that the efficient cause necessarily has this reality in itself it may have borrowed it from elsewhere. This is transparently clear if we consider effects produced by some skill. Although a house gets all its reality from the builder, the builder does not have this reality in himself, he simply takes it from some other source and passes it on to the house. The sun does the same when it transforms inferior matter in various ways so as to produce various animals. Even a parent, who admittedly passes some sort of matter on to his offspring, derives it not from an efficient but from a material principle. Your objection that the effect must be contained in the cause either formally or eminently proves nothing more than that an effect sometimes has a form which resembles the form of its cause, while sometimes it has a dissimilar and imperfect form, so that the form of its cause is eminently superior. But it does not follow that even an eminent cause bestows on the effect some of its essence (that is, that which it contains formally) for that it shares its form with the effect. This may seem to happen in the case of the begetting of living creatures from the seed, but I hardly thing you will say that a father, in begetting his son, chops off a part of his rational soul and gives it to him. In a word, an efficient cause does not contain its effect except in the sense that it may shape it and produce it out of a given material.

Descartes's Response (366):

You say that the axiom, 'There is nothing in the effect which did not previously exist in the cause' should be taken to refer to material rather than efficient causes; but it is unintelligible that perfection of form should ever pre-exist in a material cause; it can do so only in an efficient cause.

From Fifth Objections (Gassendi, 300-2): **Some causes need not remain active for their effects to continue.**

You provide a reason why you have not always existed, but this is redundant, except in so far as you want at the same time to infer that you have a cause which not only creates but preserves you. Thus, from the fact that your lifetime has many parts, you infer that since each part is independent of the others, you must be created anew in each individual part. But you should see that there is another way this problem can be understood. There are admittedly some effects that need the efficient cause which first produced them to be continuously present if they are to keep going and not give out at any given moment. The light of the sun is such an effect (though in cases of this kind it is not so much one and the same effect that continues as an equivalent effect, as they ay in the case of the flow of water in a river).

But there are other effects which we see continuing not only when the acknowledged cause is no longer active, but even, if you like, when it is destroyed and reduced to nothing. Such effects include those produced by procreation and manufacture, which are so numerous that it would be tedious to list them; it suffices for my point that you are one of them, whatever your cause may eventually turn out to be.

You say that the parts of your lifetime are independent of each other. Here I am tempted to ask if we can think of anything whose parts are more inseparable from one another than your duration. Can we

think of anything whose parts are more inviolably linked and connected? Is there anything whose later parts are more inevitable, or more closely tied to the earlier parts, or more dependent on them? But not to pres the point, what difference does this dependence or independence of the parts of your duration make to your creation or preservation? Surely these parts are merely external, they follow on without playing any active role. They make no more difference to your creation and preservation than the flow or passage of the particles of water in a river makes to the creation and preservation of some rock past which it flows. You say that from the fact that you existed a little while ago it does not follow that you must exist now. I agree; but this is not because a cause is needed to create you anew, but because there is no guarantee that there is not some cause present which might destroy you, or that you may not have some weakness within you which may now finally bring about your demise.

You say, "It is therefore evident by the natural light that the distinction between creation and preservation is only a conceptual one." But how is this evident, if not in the case of light itself and similar effects? You add that you have no power to bring it about that you will continue to exist a short time from now, since you are not conscious of such a power, and yet you are a thinking thing. But you do have a power in virtue of which you can suppose that you will exist a short time from now, although not necessarily or indubitably, since this power or natural constitution of yours, whatever it is, does not go so far as to guard against every external or internal cause that may destroy you. So you will indeed continue to exist, not because you have some power which creates you anew, but because you have a power sufficient to ensure that you will continue unless some destructive cause intervenes. Your conclusion, that you depend on some being distinct from yourself, is in fact correct, not in the sense that you are created anew by this being, but rather in the sense that you were once created by it.

You go on to say that this being is not your parents or any other such cause. But why should it not be your parents, since it seems so evident that it was they who produced you, along with your body? this is not to mention the sun and other concurrent causes. "But," you say, "I am a thinking thing, and I have the idea of God in me." But were not your parents and their minds also thinking things possessing the idea of God? Hence you should not here insist on the dictum you mentioned earlier, viz. there must be at least as much in the cause as in the effect.

Descartes's Response (369-70):

When you deny that in order to be kept in existence we need the continual action of the original cause, you are disputing something which all metaphysicians affirm as a manifest truth, although the uneducated often fail to think of it because they pay attention only to the causes of coming into being, and not the causes of being itself. Thus, an architect is the cause of a house and a father of his child only in the sense of being the causes of their coming into being; and hence, once the work is completed it can remain in existence quite apart from the cause, in this sense. But the sun is the cause of the light which it emits, and God is the cause of created things, not just in the sense that they are causes of the coming into being of these things, but also in the sense that they are causes of their being; and hence they must always continue to act on the effect in the same way in order to keep it in existence.

This can be plainly demonstrated from my explanation of the independence of the divisions of time. You try in vain to evade my argument by talking of the necessary connection which exists between the divisions of time considered in the abstract. But this is not the issue. We are considering the time or duration of the ting which endures, and here you would not deny that the individual moments can be separated from those immediately preceding and succeeding them, which implies that the thing which endures may cease to be at any given moment.

You say that we have a power which is sufficient to ensure that we shall continue to exist unless some destructive cause intervenes. But here you do not realize that you are attributing to a created thing the perfection of a creator, if the created thing is able to continue in existence independently of anything else. Similarly, you are attributing to the creator the imperfection of a created thing, since you imply that

the creator would have to tend towards non-being by performing a positive action whenever he wished to bring our existence to an end.

From Fifth Objections (Gassendi, 302-3): **An infinite regress, instead of a first cause, is possible.**

You should not insist on the dictum that there must be at least as much in the cause as in the effect. You say that if the cause of your existence is something other than God, we may ask whether it derives its existence from itself or from some other cause. If from itself, it will be God. If from some other cause, we may repeat the question until we reach a cause which derives its existence from itself, and is God, since an infinite regress is not permissible.

If your parents were the cause of your existence, then that cause may have derived its existence not from itself, but from another cause. The same may be true of that prior cause. And so an, ad infinitum. You can not prove that such an infinite regress is absurd unless you also prove that the world began at some time, and hence that there must have been a first parent who had no parent.

An infinite regress seems to be absurd only in the case of causes which are so linked and subordinated to each other that a cause which is lower in the chain can not act without the motive power of one which is higher. This occurs when something is pushed by a stone, the stone by a stick, and the stick by a hand; or when the first link of a chain lifts a weight, and that link is pulled by the previous link; and so on. In such cases we must eventually reach one link in the chain which is the first to move. But an infinite series does not seem to be absurd when we have causes which are arranged in such a way that if the earlier cause is destroyed, the subsequent cause depending on it survives and can still act.

Hence, when you say, "It is clear enough that an infinite regress is impossible here," you must ask whether this was equally evident to Aristotle, who was strongly convinced that there was never any first parent.

Descartes's Response (370-1):

Your contention that it is not absurd that there should be an infinite regress is undermined by what you yourself say later on. For you admit that an infinite regress is absurd in the case of causes which are so linked that a cause which is lower in the chain cannot act without one which is higher. But it is causes of this sort, and only of this sort, that are at issue here, since we are dealing with causes of being, not causes of coming into being, such as parents. Hence you can not set the authority of Aristotle against me here.

From Fifth Objections (Gassendi, 308-10): **A design argument would be better than the causal argument.**

Your rejection of the employment of final causes in physics might have been correct in a different context, but since you are dealing with God, there is obviously a danger that you may be abandoning the principal argument for establishing by the natural light the wisdom, providence, and power of God, and indeed his existence. Leaving aside the entire world, the heavens and its other main parts, how or where will you be able to get any better evidence for the existence of such a god than from the function of the various parts in plants, animals, man, and yourself (or your body), seeing that you bear the likeness of God? We know that certain great thinkers have been led by a study of anatomy not just to achieve a knowledge of God, but also to sing thankful hymns to him for having organized all the parts and harmonized their functions in such a way as to deserve the highest praise for his care and providence.

You will say that it is the physical causes of this organization and arrangement which we should investigate, and that it is foolish to have recourse to purposes rather than to active causes or materials. But no moral can possibly understand or explain the active principles that produces the observed form

and arrangement of the valves which serve as the openings to the vessels in the chambers of the heart. Nor can we understand the source from which this active principle acquires the material from which the valves are fashioned, or how it makes them operate, or what organic structure it employs, or how it makes use of the consistency, fit, flexibility, size, shape, and position. Since, I say, no physicist is able to discern and explain these and similar structures, why should he not at least admire their superb functioning and the ineffable Providence which has so appositely designed the valves for this function? Why should the physicist not be praised if he then sees that we must necessarily acknowledge some first cause which arranged these and all other things with such supreme wisdom and in such precise conformity with his purposes?

You say that it is rash to investigate the purposes of God. But while this may be true if you are thinking of the purposes which God himself wished to remain hidden or ordered us not to investigate, it surely does not apply to the purposes which he left on public display, as it were, and which can be discovered without much effort, purposes which are in any case of such a kind as to lead us to bestow great praise on God as their author.

You may say that the idea of God which is in each of us suffices to give us true and authentic knowledge of God and his purposes, without any reference to the purposes of things or anything else. But not everyone is in your happy position of having such a perfect idea from birth and seeing it before him with such clarity. And since there are some to whom God has not granted such clear vision, you should not begrudge their being able to come to know and glorify the craftsman by an inspection of his works. I need hardly stress that this does not prevent our being allowed to make use of the idea of God, since this too appears to be entirely derived from our knowledge of things in the world. Indeed were you to admit the truth, you would say that you owed a considerable amount, if not everything, to this kind of knowledge. For I ask you, what progress do you think you would have made if, since being implanted in the body, you had remained within it with your eyes closed and your ears stopped, and, in short, with no external senses to enable you to perceive this universe of objects or anything outside you? Would you not have been absorbed in private meditation, eternally turning thoughts over and over? Answer in all honesty and tell me what idea of God and yourself you think you would have acquired under such circumstances.

Descartes's Response (374-5);

The points you make to defend the notion of a final cause should be applied to efficient causation. The function of the various parts of plants and animals, etc., makes it appropriate to admire God as their efficient cause, to recognize and glorify the craftsman through examining his works. But we can not guess from this what purpose God had in creating any given thing. In ethics, then, where we may often legitimately employ conjectures, it may admittedly be pious on occasion to try to guess what purpose God may have had in mind in his direction of the universe. But in physics, where everything must be backed up by the strongest arguments, such conjectures are futile. We cannot pretend that some of God's purposes are more out in the open than others. All are equally hidden in the inscrutable abyss of his wisdom.

Nor should you pretend that none of us mortals is incapable of understanding other kinds of cause. They are all much easier to discover than God's purposes, and the kinds of cause which you put forward as typical of the difficulties involved are in fact ones that many people consider they do know about.

Finally, you ask me what sort of idea my mind would have had of God and of itself if, ever since being implanted in the body, it had remained within it, with the eyes closed and with none of the senses functioning. Since your question is asked in such an open and frank manner, I shall give you a straightforward and honest reply. I do not doubt that the mind, provided we suppose that in thinking it received not just no assistance from the body but also that it received no interference from it, would have

had exactly the same ideas of God and itself that it now has, with the sole difference that they would have been much purer and clearer. The senses often impede the mind in many of its operations, and in no case do they help in the perception of ideas. The only thing that prevents all of us noticing equally well that we have these ideas is that we are too occupied with perceiving the images of corporeal things.

V. The Ontological Argument

From First Objections (Caterus, 99-100): **The ontological argument only establishes conceptual existence**.

Even if it is granted that a supremely perfect being carries the implication of existence in virtue of its very title, it still does not follow that the existence in question is anything actual in the real world. All that follows is that the concept of existence is inseparably linked to the concept of a supreme being. So you cannot infer that the existence of God is anything actual unless you suppose that the supreme being actually exists. Then it will actually contain all perfections, including the perfection of real existence.

Pardon me, gentlemen: I am now rather tired and propose to have a little fun. The complex 'existing lion' includes both 'lion' and 'existence', and it includes them essentially, for if you take away either element it will not be the same complex. But now, has not God had clear and distinct knowledge of this composite from all eternity? And does not the idea of this composite, as a composite, involve both elements essentially? In other words, does not existence belong to the essence of the composite 'existing lion'? Nevertheless the distinct knowledge of God, the distinct knowledge he has from eternity, does not compel either element in the composite to exist, unless we assume that the composite itself exists (in which case it will contain all its essential perfections including actual existence). Similarly even if I have distinct knowledge of a supreme being, and even if the supremely perfect being includes existence as an essential part of the concept, it still does not follow that the existence in question is anything actual, unless we suppose that the supreme being exists (for in that case it will include actual existence along with all its other perfections). Accordingly we must look elsewhere for a proof that the supremely perfect being exists.

Descartes's Response (116-120):

In the first place we are so accustomed to distinguishing existence from essence in the case of all other things that we fail to notice how closely existence belongs to essence in the case of God as compared with that of other things. Next, we do not distinguish what belongs to the true and immutable essence of a thing from what is attributed to it merely by a fiction of the intellect. So, even if we observe clearly enough that existence belongs to the essence of God, we do not draw the conclusion that God exists, because we do not know whether his essence is immutable and true, or merely invented by us.

To remove the first part of the difficulty we must distinguish between possible and necessary existence. It must be noted that possible existence is contained in the concept or idea of everything that we clearly and distinctly understand. But in no case is necessary existence so contained, except in the case of the idea of God. Those who carefully attend to this difference between the idea of God and every other idea will undoubtedly perceive that even though our understanding of other things always involves understanding them as if they were existing things, it does not follow that they do exist, but merely that they are capable of existing. For our understanding does not show us that it is necessary for actual existence to be conjoined with their other properties. But, from the fact that we understand that actual existence is necessarily and always conjoined with the other attributes of God, it certainly does follow that God exists.

To remove the second part of the difficulty, we must notice a point about ideas which do not contain true and immutable natures but merely ones which are invented and put together by the intellect. Such ideas can always be split up by the same intellect, not simply by an abstraction but by a clear and distinct intellectual operation. Any ideas which the intellect cannot split up in this way are clearly not put together by the intellect. When, for example, I think of a winged horse or an actually existing lion, or a triangle inscribed in a square, I readily understand that I am also able to think of a horse without wings, or a lion which does not exist, or a triangle apart from a square, and so on. Hence these things do not

have true and immutable natures. But if I think of a triangle or a square, then whatever I apprehend as being contained in the idea of a triangle, for example that its three angles are equal to two right angles, I can with truth assert of the triangle. And the same applies to the square with respect to whatever I apprehend as being contained in the idea of a square. For even if I can understand what a triangle is if I abstract the fact that its three angles are equal to two right angles, I cannot deny that this property applies to the triangle by a clear and distinct intellectual operation, that is, while at the same time understanding what I mean by my denial. Moreover, if I consider a triangle inscribed in a square, with a view not to attributing to the square properties that belong only to the triangle, or attributing to the triangle properties that belong to the square, but with a view to examining only the properties which arise out of the conjunction of the two, then the nature of this composite will be just as true and immutable as the nature of the triangle alone or the square alone. Hence it will be quite in order to maintain that the square is not less than double the area of the triangle inscribed within it, and to affirm other similar properties that belong to the nature of this composite figure.

Let us now take a thing, whatever this thing turns out to be, which possesses all the perfections which can exist together. If we ask whether existence should be included among these perfections, we will admittedly be in some doubt at first. For our mind, which is finite, normally thinks of these perfections only separately, and hence may not immediately notice the necessity of their being joined together. Yet if we attentively examine whether existence belongs to a supremely powerful being, and what sort of existence it is, we shall be able to perceive clearly and distinctly the following facts. First, possible existence, at the very least, belongs to such a being, just as it belongs to all the other things of which we have a distinct idea, even to those which are put together through a fiction of the intellect. Next, when we attend to the immense power of this being, we shall be unable to think of its existence as possible without also recognizing that it can exist by its own power. We shall infer from this that this being does really exist and has existed from eternity, since it is quite evident by the natural light that what can exist by its own power always exists. So we shall come to understand that necessary existence is contained in the idea of a supremely powerful being, not by any fiction of the intellect, but because it belongs to the true and immutable nature of such a being that it exists. And we shall also easily perceive that this supremely powerful being cannot but possess within it all the other perfections that are contained in the idea of God. Hence these perfections exist in God and are joined together not by any fiction of the intellect but by their very nature.

From Second Objections (Mersenne, 127): **The possibility of God's existence remains to be proven.**

You argue that the nature or essence of God cannot be conceived apart from existence. Hence, granted the essence, God really exists. It does not follow from this that God in fact exists, but merely that he would have to exist if his nature is possible, or non-contradictory. This comes down to an argument which others have stated as follows: "If there is no contradiction in God's existing, it is certain that he exists; but there is no contradiction in his existing." The difficulty here is with the minor premise, "But there is no contradiction in his existing." Those who attack the argument either claim to doubt the truth of this premise, or deny it outright. You yourself admit that you apprehend an infinite being only in an inadequate way. And clearly the same must be said of every single attribute of God. Whatever is in God is utterly infinite; so who can for a moment apprehend any aspect of God except in what may be called an utterly inadequate manner? How then can you have made a sufficiently clear and distinct investigation of what God is?

Descartes's Response (150-151, 152):

If by "possible," you mean what everyone commonly means, namely, whatever does not conflict with our human concepts, then it is manifest that the nature of God, as I have described it, is possible in

this sense. I supposed it to contain only what, according to our clear and distinct perceptions, must belong to it. Hence it cannot conflict with our concepts.

Alternatively, you may well be imagining some other kind of possibility which relates to the object itself. Unless this matches the first sort of possibility it can never be known by the human intellect, and so it does not so much support a denial of God's nature and existence as serve to undermine every other item of human knowledge. For as far as our concepts are concerned there is no impossibility in the nature of God. On the contrary, all the attributes which we include in the concept of the divine nature are so interconnected that it seems to us to be self-contradictory that any one of them should not belong to God. Hence, if we deny that the nature of God is possible, we may just as well deny that the angles of a triangle are equal to two right angles, or that he who is actually thinking exists. If we do this it will be even more appropriate to deny that anything we acquire by means of the senses is true. The upshot will be that all human knowledge will be destroyed, though for no good reason.

Self-contradiction in our concepts arises merely from their obscurity and confusion. There can be none in the case of clear and distinct concepts. In the case of the few attributes of God which we do perceive, it is enough that we understand them clearly and distinctly, even though our understanding is in no way adequate. And the fact that, amongst other things, we notice that necessary existence is contained in our concept of God (however inadequate that concept may be) is enough to enable us to assert both that we have examined his nature with sufficient clarity, and that his nature is not self-contradictory.

From Fifth Objections (Gassendi, 322-5): **Existence is not a property.**

It is quite all right for you to compare essence with essence, but instead of going on to compare existence with existence or a property with a property, you compare existence with a property. You should have said that omnipotence can no more be separated from the essence of God than the fact that its angles equal two right angles can be separated from the essence of a triangle. Or, at any rate, you should have said that the existence of God can no more be separated from his essence than the existence of a triangle can be separated from its essence. If you had done this, both your comparisons would have been satisfactory, and I would have granted you not only the first one, but the second one as well. But you would not for all that have established that God necessarily exists, since a triangle does not necessarily exist either, even though its essence and existence can not in actual fact be separated. Real separation is impossible no matter how much the mind may separate them or think of them apart from each other, as indeed it can even in the case of God's essence and existence.

You place existence among the divine perfections, but do not place it among the perfections of a triangle or mountain, though it could be said that in its own way it is just as much a perfection of each of these things. In fact, however, existence is not a perfection either in God or in anything else. It is that without which no perfections can be present.

For surely, what does not exist has no perfections or imperfection, and what does exist and has several perfections does not have existence as one of its individual perfections. Rather, its existence is that in virtue of which both the thing itself and its perfections are existent, and that without which we cannot say that the thing possesses the perfections or that the perfections are possessed by it. Hence we do not say that existence exists in a thing in the way perfections do. If a thing lacks existence, we do not say that it is imperfect, or deprived of a perfection, but say instead that it is nothing at all.

Thus, just as when you listed the perfections of the triangle you did not include existence or conclude that the triangle existed, so when you listed the perfections of God, you should not have included existence among them so as to reach the conclusion that God exists, unless you wanted to beg the question.

You say that existence is distinct from essence in the case of all other things, but not in the case

of God. But how, may I ask, are we to distinguish the essence of Plato from his existence, except merely in our thought? Suppose that Plato no longer exists. Where now is his essence? Surely in the case of God the distinction between essence and existence is of just this kind. The distinction occurs in our thought.

You assert that it is a manifest contradiction that an existing God should not exist, while omitting to point out that the same applies in the case of a man or a horse. If you had taken the mountain and the valley, or the horse and its wings as comparable to God and his knowledge (or his power or other attributes) then the objection would still have stood, and you would have had to try to explain how it is possible for us to think of a sloping mountain or a winged horse without thinking of them as existing, yet impossible to think of a wise and powerful God without thinking of him as existing. You are free to think of a horse not having wings without thinking of the existence which would, according to you, be a perfection in the horse if it were present. In the same way, you are free to think of God as having knowledge and power and other perfections without thinking of him as having the existence which would complete his perfection.

Descartes's Response (382-3):

I do not see what sort of thing you want existence to be, nor why it cannot be said to be a property just like omnipotence, provided, of course, that we take the word 'property' to stand for any attribute, or for whatever can be predicated of a thing. This is exactly how it should be taken in this context. Moreover, in the case of God, necessary existence is in fact a property in the strictest sense of the term, since it applies to him alone and forms a part of his essence as it does of no other thing. Hence the existence of a triangle should not be compared with the existence of God, since the relation between existence and essence is manifestly quite different in the case of God from what it is in the case of the triangle.

To list existence among the properties which belong to the nature of God is no more begging the question than listing among the properties of a triangle the fact that its angles are equal to two right angles.

From Fifth Objections (Gassendi, 322-5): **The argument is incomplete; the analogies are flawed.**

Just as the horse which is thought of as having the perfection of wings is not therefore deemed to have the existence which is, according to you, a principal perfection, so the fact that God is thought of as having knowledge and other perfections does not therefore imply that he has existence. This remains to be proved. And although you say that both existence and all the other perfections are included in the idea of a supremely perfect being, here you simply assert what should be proved, and assume the conclusion as a premise. Otherwise I could say that the idea of a perfect Pegasus contains not just the perfection of his having wings, but also the perfection of existence. for just as God is thought of as perfect in every kind of perfection, so Pegasus is thought of as perfect in his own kind. It seems that there is no point that you can raise in this connection which, if we preserve the analogy, will not apply to Pegasus if it applies to God, and vice versa.

You say that in thinking of a triangle it is not necessary to think that it has three angles equal to two right angles, though this is nonetheless true, as appears afterward when you give the matter your attention. Similarly, although it is possible to think of the other perfections of God without thinking of his existence, it is nonetheless true that he exists, as becomes clear when you attend to the fact that existence is a perfection. You surely see the point that can be made here: just as we afterwards recognize that the triangle has this property because it is proved by a demonstration, so, if we are to recognize that existence belongs to God, this must be proved by a demonstration. Otherwise, I shall easily be able to establish that anything has any property at all.

You say that your attributing all perfections to God is not like your thinking that all quadrilateral figures can be inscribed in a circle. The latter assumption is mistaken, since you afterwards find that a rhombus cannot be inscribed in a circle. But the former supposition is not mistaken, since you afterwards find that existence belongs to God. Your two suppositions, however, seem exactly alike. If not, you must show that whereas it is a contradiction for a rhombus to be inscribed in a circle, it is not a contradiction for God to exist.

Descartes's Response (383-4):

In the case of God, necessary existence is in fact a property in the strictest sense of the term, since it applies to him alone and forms a part of his essence as it does of no other thing. Hence the existence of a triangle should not be compared with the existence of God, since the relation between existence and essence is manifestly quite different in the case of God from what it is in the case of the triangle.

To list existence among the properties which belong to the nature of God is no more begging the question than listing among the properties of a triangle the fact that its angles are equal to two right angles.

It is not true to say that in the case of God, just as in the case of a triangle, existence and essence can be thought of apart from one another. For God is his own existence, but this is not true of the triangle. I do not, however, deny that possible existence is a perfection in the idea of a triangle, just as necessary existence is a perfection in the idea of God. For this fact makes the idea of a triangle superior to the ideas of chimeras, which cannot possibly supposed to have existence. thus at no point have you weakened the force of my argument in the slightest, and you remain trapped by the sophism which you say I could have exposed so easily.

You are quite mistaken when you say that the demonstration of God's existence is not like the demonstration that the three angles of a triangle are equal to two right angles. The reasoning is the same in both cases, except that the demonstration which established God's existence is much simpler and clearer than the corresponding demonstration about the triangle.

VI. The Nature of Knowledge and the Criteria for Certainty

Objection VI.1. From Second Objections (Mersenne, 126): **The criteria for certainty must themselves be ensured.**

It is not necessary to suppose that God is a deceiver in order to explain your being deceived about matters which you think you clearly and distinctly know. The cause of this deception could lie in you, though you are wholly unaware of it. Why should it not be in your nature to be subject to constant, or at least very frequent, deception? How can you establish with certainty that you are not deceived, or capable of being deceived, in matters which you think you know clearly and distinctly? Have we not often seen people turn out to have been deceived in matters where they thought their knowledge was as clear as the sunlight? Your principle of clear and distinct knowledge thus requires a clear and distinct explanation, in such a way as to rule out the possibility that anyone of sound mind may be deceived on matters which he thinks he knows clearly and distinctly. Failing this, we do not see that any degree of certainty can possibly be within your reach or that of mankind in general.

Descartes's Response (144-146):

As soon as we think that we correctly perceive something, we are spontaneously convinced that it is true. Now if this conviction is so firm that it is impossible for us ever to have any reason for doubting what we are convinced of, then there are no further questions for us to ask. We have everything that we could reasonably want. But it may be doubted whether any such certainty, or firm and immutable conviction, is in fact to be had.

It is clear that we do not have this kind of certainty in cases where our perception is even the slightest bit obscure or confused. Such obscurity, whatever its degree, is quite sufficient to make us have doubts in such cases. Again, we do not have the required kind of certainty with regard to matters which we perceive solely by means of the senses, however clear such perception may be. For we have often noted that error can be detected in the senses, as when someone with dropsy feels thirsty or when someone with jaundice sees snow as yellow. When he sees it as yellow he sees it just as clearly and distinctly as we do when we see it as white. Accordingly, if there is any certainty to be had, the only remaining alternative is that it occurs in the clear perceptions of the intellect and nowhere else.

Now some of these perceptions are so transparently clear and at the same time so simple that we cannot ever think of them without believing them to be true. The fact that I exist so long as I am thinking, or that what is done cannot be undone, are examples of truths in respect of which we manifestly possess this kind of certainty. We cannot doubt them unless we think of them. But we cannot think of them without at the same time believing they are true.

It is no objection to this to say that we have often seen people, "Turn out to have been deceived in matters where they thought their knowledge was as clear as the sunlight." For we have never seen, indeed no one could possibly see, this happening to those who have relied solely on the intellect in their quest for clarity in their perceptions. We have seen it happen only to those who tried to derive such clarity from the senses or from some false preconceived opinion.

There are other truths which are perceived very clearly by our intellect so long as we attend to the arguments on which our knowledge of them depends. We are therefore incapable of doubting them during this time. But we may forget the arguments in question and later remember simply the conclusions which were deduced from them. The question will now arise as to whether we possess the same firm and immutable conviction concerning these conclusions, when we simply recollect that they were previously deduced from quite evident principles. My reply is that the required certainty is indeed possessed by those whose knowledge of God enables them to understand that the intellectual faculty which he gave them cannot but tend towards the truth. The required certainty is not possessed by others.

Objection VI.2. From Second Objections (Mersenne, 126-7): **The criteria are too strict.**

If this rule of yours that the will never goes astray or falls into sin so long as it is guided by the mind's clear and distinct knowledge is true, then there is almost nothing that the will is going to be allowed to embrace, since there is almost nothing that we know with the clarity and distinctness which you require for that kind of certainty which is beyond any doubt. So, you see how, in your desire to champion the truth, you may end up proving too much, and thus overturn the truth rather than build it up.

Descartes's Response (149):

I should like you to remember that, in matters which may be embraced by the will, I made a very careful distinction between the conduct of life and the contemplation of the truth. As far as the conduct of life is concerned, I am very far from thinking that we should assent only to what is clearly perceived. On the contrary, I do not think that we should always wait even for probable truths. From time to time we will have to choose one of many alternatives about which we have no knowledge. Once we have made our choice, so long as no reasons against it can be produced, we must stick to it as firmly as if it had been chosen for transparently clear reasons. When we are dealing solely with the contemplation of the truth, surely no one has ever denied that we should refrain from giving assent in matters which we do not perceive with sufficient distinctness. In my *Meditations*, I was dealing solely with the contemplation of the truth. The whole enterprise shows this to be the case, as well as my express declaration at the end of the First Meditation where I said that I could not possibly go too far in my distrustful attitude, since the task in hand involved not action but merely the acquisition of knowledge.

Objection VI.3. From Third Objections (Hobbes, 191-2): **A "light in the intellect" is not explanatory.**

You write, "During these past few days I have been asking whether anything in the world exists, and I have realized that from the very fact of my raising this question it follows quite evidently that I exist. I could not but judge that something which I understood so clearly was true; but this was not because I was compelled so to judge by any external force, but because a great light in the intellect was followed by a great inclination in the will, and thus the spontaneity and freedom of my belief was all the greater in proportion to my lack of indifference."

The phrase "a great light in the intellect" is metaphorical, and so has no force in the argument. Moreover, anyone who is free from doubt claims he has such "great light" and has no less strong a propensity of the will to affirm what he has no doubt about than someone who possesses real knowledge. Hence this "light" can explain why someone obstinately defends or holds on to a given opinion, but it cannot explain his knowledge of its truth.

Further, it is not only knowing something to be true that is independent of the will, but also believing it or giving assent to it. If something is proved by valid arguments, or is reported as credible, we believe it whether we want to or not. It is true that affirmation and denial, defending and refuting propositions, are acts of will. But it does not follow that our inner assent depends on the will.

Descartes's Response (192):

It is quite irrelevant whether the phrase "a great light" has force in the argument or not. What matters is whether it helps to explain matters, and it does. As everyone knows, a "light in the intellect" means transparent clarity of cognition. While perhaps not everyone who thinks he possesses this does in fact possess it, this does not prevent its being quite different from a stubborn opinion which is formed in the absence of any evident perception.

As for the claim that we assent to things which we clearly perceive, whether we want to or not, this is like saying that we seek a clearly known good whether we want to or not. The qualification 'or not' is inappropriate in such contexts, since it implies that we both will and do not will the same thing.

Objection VI.4. From Fifth Objections (Gassendi, 277-9): **We need to know how to apply the criteria.**

When we see that many great thinkers, who ought surely to have perceived very many things clearly and distinctly, have judged that the truth of things is hidden either in God or in a deep well, is it not reasonable to suspect that this rule may lead us astray? Moreover, given the arguments of the skeptics, of which you are aware, it seems that the only thing that we can consider as clearly and distinctly perceived and therefore infer to be true is that if something appears to anyone to be the case then it appears to be the case. I clearly and distinctly perceive the pleasant taste of a melon, and hence it is true that the taste of a melon appears to me to be of this kind. But how can I convince myself that it is therefore true that a flavor of this kind really exists in the melon? When I was a boy and in good health, I took a different view and clearly and distinctly perceived quite a different taste in the melon. And I see that many people also take a different view, as do many animals that have a strong sense of taste and are in the best of health. Is one truth then inconsistent with another? Or is it not rather as follows: if something is clearly and distinctly perceived this does not mean that it is true in itself; all that is true is that it is clearly and distinctly perceived to be such and such?

The same sort of account must be given of matters concerning the mind. At one time, I could have sworn that for a given quantity, we cannot go from a smaller quantity to a larger quantity without passing through a quantity equal to the original; again I could have sworn that it is impossible that two lines should not eventually meet if they are produced to infinity. I thought I perceived these things so clearly and distinctly that I counted them among the truest and most indubitable axioms. Nevertheless, afterwards I came across arguments which convinced me that the opposite was the case and that I perceived it even more clearly and distinctly. Yet now, when I consider the nature of mathematical propositions, I am in doubt again. So it may be said to be true that I recognize that such and such propositions concerning quantities, lines, and so on, are indeed just as I conceive or suppose them to be; but it cannot safely be asserted that they are therefore true in themselves.

But whatever may be the case regarding mathematical matters, when it comes to the other questions which we are now dealing with, why, may I ask, do people have so many different opinions about them? Everyone thinks that he clearly and distinctly perceives the truth which he champions. In case you should say that the majority are either hesitant or insincere in their beliefs, consider that there are those who face even death for their opinions, even though they see others suffering the same fate for the opposite cause. You can hardly think that their dying words are not utterly sincere.

Admittedly you yourself mention the difficulty that you previously accepted as wholly certain many things which you afterwards realized were doubtful. But in this passage you neither resolve the difficulty nor confirm your rule. You merely take the opportunity to discuss the ideas which may deceive you into thinking that they represent things external to yourself, when in fact they may never have existed outside you.

You also talk once again of the deceiving God who can mislead you about the propositions ‘two and three are five’ and ‘a square has no more than four sides’; and the implication here is that we must not expect confirmation of your rule until you have shown that there is a God who cannot be a deceiver. But if I may make a suggestion, what you ought to be working on is not so much establishing this rule, which makes it so easy for us to accept falsehoods as true, but putting forward a method to guide us and show us when we are mistaken and when not, on those occasions when we think we clearly and distinctly perceive something.

Descartes’s Response (361-2):

You say that great thinkers, who ought surely to have perceived many things clearly and distinctly, have nevertheless judged that the truth of things is hidden in God or in a deep well. Your

argument from authority is, I admit, sound enough. But, O Flesh,[1] you certainly should not have presented it to a mind so withdrawn from corporeal things that it does not even know whether any people existed before it, and hence is not influenced by their authority.

Your next point, taken from the skeptics, is a standard move, and not a bad one, but it proves nothing. Nor is anything proved by the fact that some people face death to defend opinions that are in fact false; for it can never be proved that they clearly and distinctly perceive what they so stubbornly affirm. You say at the end of this section that what we should be working on is not so much a rule to establish the truth as a method for determining whether or not we are deceived when we think we perceive something clearly. This I do not dispute; but I maintain that I carefully provided such a method in the appropriate place, where I first eliminated all preconceived opinions and afterwards listed all my principal ideas, distinguishing those which were clear from those which were obscure or confused.

[1] Descartes calls Gassendi Flesh in response to Gassendi calling Descartes Soul. See Objection XII.3.

VII. The Nature of Reason and the Classification Our Ideas

From Third Objections (Hobbes, 177-8, 193-4): **Reasoning is just the linking of names.**

You write, "I must therefore admit that the nature of this piece of wax is in no way revealed by my imagination, but is conceived by the mind alone."

There is a great difference between imagining, having an idea, and conceiving in the mind, using a process of reasoning to infer that something is, or exists. But you have 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. It merely tell us about the labels applied to them. 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.

A triangle in the mind arises from a triangle we have seen, or else it is constructed out of things we have seen. But once we use the label 'triangle' to apply to the thing which we think gave rise to the idea of a triangle, then the name remains even if the triangle itself is destroyed. Similarly, once we have conceived in our thought that all the angles of a triangle add up to two right angles, and we bestow on the triangle this second label 'having its angles equal to two right angles' then the label would remain even if no angles existed in the world. And thus eternal truth will belong to the proposition 'a triangle is that which has its three angles equal to two right angles'. But the nature of a triangle will not be eternal, for it might be that every single triangle ceased to exist. Similarly, the proposition 'man is an animal' will be eternally true because the names are eternal. But when the human race ceases to be, there will be no human nature any more.

It is clear from this that essence, in so far as it is distinct from existence, is nothing more than a linking of terms by means of the verb 'is'. And hence essence without existence is a mental fiction. It seems that essence is to existence as the mental image of a man is to a man. The essence of Socrates is to the existence of Socrates as the proposition 'Socrates is a man' is to the proposition 'Socrates is, or exists'. Now when Socrates does not exist, the proposition 'Socrates is a man' signifies merely a linking of terms; and 'is' or 'to be' carries the image of the unity of a thing to which two terms are applied.

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. So, the mind will be nothing more than motion occurring in various parts of an organic body.

Descartes's Response:

I did explain the difference between imagination and a purely mental conception in the 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? Surely you refute your own position when you talk of the arbitrary conventions that we have laid down concerning the meaning of words. For if you admit that the words signify something, why will you not allow that our reasoning deals with this something which is signified, rather than merely with the words? And surely on your account, when you conclude that the mind is a motion you might just as well conclude that the earth is the sky, or anything else you like.

From Fourth Objections (Arnauld, 206): **Descartes confuses ideas and judgments.**

The author first asserts that falsity in the strict sense can occur only in judgments; but a little later he admits that ideas can be false - not formally false, but materially false, and this seems inconsistent with the author's own principles. An example will clarify the issue. The author says that if cold is merely the absence of heat, the idea of cold which represents it to me as a positive thing will be materially false. But if cold is merely an absence, then there cannot be an idea of cold which represent sit to me as a positive thing, and so our author is here confusing a judgment with an idea.

What is the idea of cold? It is coldness itself in so far as it exists objectively in the intellect. But if cold is an absence, it cannot exist objectively in the intellect by means of an idea whose objective existence is a positive entity. Therefore, if cold is merely an absence, there cannot ever be a positive idea of it, and hence there cannot be an idea which is materially false.

This is confirmed by the very argument that the author uses to prove that the idea of an infinite being cannot but be a true idea, since, though I can pretend that such a being does not exist, I cannot pretend that the idea of such a being does not represent anything real to me.

The same can plainly be said of any positive idea. for although it can be imagined that cold, which I suppose to be represented by a positive idea, is not something positive, it cannot be imagined that the positive idea does not represent anything real and positive to me. For an idea is called positive not in virtue of the existence it has as a mode of thinking (for in that sense all ideas would be positive) but in virtue of the objective existence which it contains and which it represents to our mind. Hence the idea in question may perhaps not be the idea of cold, but it cannot be a false idea.

But, you may reply, it is false precisely because it is not the idea of cold. No: it is your judgment that is false, if you judge that it is the idea of cold. The idea itself, within you, is completely true. In the same way, the idea of God should never be called false - not even materially false, even though someone may transfer it to something which is not God, as idolaters have done.

Lastly, what does the idea of cold, which you say is materially false, represent to your mind? An absence? But in that case It is true. A positive entity? But in that case it is not the idea of cold. Again, what is the cause of the positive objective being which according to you is responsible for the idea's being materially false? "The cause is myself," you may answer, "In so far as I come from nothing." But in that case, the positive objective being of an idea can come from nothing, which violates the author's more important principles.

Descartes's Response:

When Arnauld says, "If cold is merely an absence, there cannot be an idea of cold which represents it as a positive thing," it is clear that he is dealing solely with an idea taken in the formal sense. Since ideas are forms of a kind, and are not composed of any matter, when we think of them as representing something we are taking them not materially, but formally. If, however, we were considering them not as representing this or that but simply as operations of the intellect, then it could be said that we were taking them materially, but in that case they would have no reference to the truth or falsity of their objects. So I think that the only sense in which an idea can be said to be materially false is the one which I explained. Thus, whether cold is a positive thing or an absence does not affect the idea I have of it, which remains the same as it always was. It is this idea which, I claim, can provide subject-matter for error if it is in fac true that cold is an absence and does not have as much reality as heat; for if I consider the ideas of cold and heat just as I received them from my senses, I am unable to tell that one idea represents more reality to me than the other.

I certainly did not confuse a judgment with an idea. For I said that the falsity to be found in an idea is material falsity, while the falsity involved in a judgment can only be formal.

When my critic says that the idea of cold is coldness itself in so far as it exists objectively in the intellect, I think we need to make a distinction. For it often happens in the case of obscure and confused

ideas, and the ideas of heat and cold fall into this category, that an idea is referred to something other than that of which it is in fact the idea. Thus if cold is simply an absence, the idea of cold is not coldness itself as it exists objectively in the intellect, but something else, which I erroneously mistake for this absence, namely a sensation which in fact has no existence outside the intellect.

The same point does not apply to the idea of God, or at least to the idea of God which is clear and distinct, since it cannot be said to refer to something with which it does not correspond. But as for the confused ideas of gods which are concocted by idolaters, I see no reason why they too cannot be called materially false, in so far as they provide the idolaters with subject-matter for false judgments. Yet ideas which give the judgment little or no scope for error do not seem as much entitled to be called materially false as those which give great scope for error. It is easy to show by means of examples that some ideas provide much grater scope for error than others. Confused ideas which are made up at will by the mind, such as the ideas of false gods, do not provide as much scope for error as the confused ideas arriving from the senses, such as the ideas of color and cold (if it is true, as I have said, that these ideas do not represent anything real). The greatest scope for error is provided by the ideas which arise from the sensation of appetite. Thus the idea of thirst which the patient with dropsy has does indeed give him subject-matter for error, since it can lead him to judge that a drink will do him good, when in fact it will do him harm.

My only reason for calling the idea materially false is that, owing to the fact that it is obscure and confused, I am unable to judge whether or not what it represents to me is something positive which exists outside of my sensation. And hence I may be led to judge that it is something positive though in fact it may merely be an absence.

Hence in asking what is the cause of the positive objective being which, in my view, is responsible for the idea being materially false, my critic has raised an improper question. For I do not claim that an idea's material falsity results from some positive entity; it arises solely from the obscurity of the idea - although this does have something positive as its underlying subject, namely the actual sensation involved. Now this positive entity exists in me, in so far as I am something real. But the obscurity of the idea is the only thing that leads me to judge that the idea of the sensation of cold represents some object called cold which is located outside me; and this obscurity in the idea does not have a real cause but arises simply from the fact that my nature is not perfect in all respects.

From Fifth Objections (Gassendi, 279-280): **Made-up ideas are really adventitious.**

You distinguish ideas into three classes: innate, adventitious, and made-up. In the first class you put, "Your understanding of what a thing is, what truth is, and what thought is." In the second class you put, "Your hearing a noise, seeing the sun, and feeling a fire." And in the third class you put, "Your invented idea of sirens and hippogriffs." You add that all your ideas may perhaps be adventitious or they may all be innate or all made up, since you have not as yet clearly perceived their origin. But in case some fallacy should creep in before you have managed to perceive the origin of your ideas, I should like to go further and note that all ideas seem to be adventitious, to proceed from things which exist outside the mind and come under one of our senses. The mind has the faculty (or rather is itself the faculty) of perceiving adventitious ideas, those which it receives through the senses and which are transmitted by things. These ideas, I say, are quite unadorned and distinct, and are received just exactly as they are. In addition to this, the mind has the faculty of putting these ideas together and separating them in various ways, of enlarging them and diminishing them, of comparing them, and so on.

Hence the third class of ideas, at any rate, is not distinct from the second. For the idea of a chimera is simply the idea of the head of a lion, the body of a goat, and the tail of a serpent, out of which the mind puts together one idea, although the individual elements are adventitious. Similarly the idea of a giant, or a man supposed to be as big as a mountain or the whole world, is merely adventitious. It is the

idea of a man of ordinary size which the mind enlarges at will, although the more the idea is enlarged the more confused the conception becomes. Again the idea of a pyramid, or of a town, or of something else which we have not so far seen, is simply the adventitious idea of a pyramid or town or something else which we have seen, with the form somewhat modified so that the idea is repeated and rearranged in a fairly confused way.

Descartes's Response (362):

I am amazed at the line of argument by which you try to prove that all our ideas are adventitious and that none of them are constructed by us. You say that the mind has the faculty not just of perceiving adventitious ideas but also, "Of putting them together and separating them in various ways, of enlarging them and diminishing them, of comparing them, and so on." Hence you conclude that the ideas of chimeras, which the mind makes up by the process of putting together and separating, etc., are not constructed by the mind, but are adventitious. By this argument, you could prove that Praxiteles never made any statues on the grounds that he did not get from within himself the marble from which he sculpted them. Or you could prove that you did not produce these objections on the grounds that you composed them out of words which you acquired from others rather than inventing them yourself. But in fact the form of a chimera does not consist in the individual words you have used. They both consist simply in the fact that the elements are put together in a certain way.

From Fifth Objections (Gassendi, 279-281): **Innate ideas are really adventitious.**

You distinguish ideas into three classes: innate, adventitious, and made up. In the first class you put, "Your understanding of what a thing is, what truth is, and what thought is." In the second class you put, "Your hearing a noise, seeing the sun, and feeling a fire." And in the third class you put, "Your invented idea of sirens and hippogriffs." You add that all your ideas may perhaps be adventitious or they may all be innate or all made up, since you have not as yet clearly perceived their origin. But in case some fallacy should creep in before you have managed to perceive the origin of your ideas, I should like to go further and note that all ideas seem to be adventitious, to proceed from things which exist outside the mind and come under one of our senses.

As for the forms which you say are innate, there do not seem to be any. Whatever ideas are said to belong to this category also appear to have an external origin. You say, "I derive from my own nature my understanding of what a thing is." I do not think you here mean the actual power of understanding, which we undoubtedly have and which is not in question. You are talking about the idea of a thing. Moreover, you are not talking of the idea of some particular thing, for the sun, this stone, and all individual items are things, and yet you do not say that our ideas of them are innate. So you must be talking of the idea of a thing considered in general, which is virtually synonymous with 'entity', and has a similarly wide extension. But how, I ask you, can this idea be in the mind unless all the individual things exist, together with all the kinds of things from which the mind abstracts so as to form the concept which is not peculiar to any individual item but nonetheless fits them all? For surely if the idea of a thing is innate, the idea of an animal, or a plant, or a stone, or of any universal will also be innate. We shall not need to bother separating out all the particulars which lead us, after setting aside the various distinguishing characteristics, to arrive at the one element which seems common to all.

Descartes's Response (362):

It is surprising that you maintain that the idea of a thing cannot be in the mind unless the ideas of an animal, a plant, a stone, and all the universals are there. This is like saying that if I am to recognize myself to be a thinking thing, I must also recognize animals and plants, since I must recognize a thing or the nature of a thing.

VIII. Innate Ideas and Necessary Truths

From Third Objections (Hobbes, 187-8): **Can ideas be innate in sleeping persons?**

When Descartes says that the ideas of God and of our souls are innate in us, I should like to know whether the souls of people in a deep and dreamless sleep are thinking. If not, they have no ideas at all during that period. It follows that no idea is innate, since anything which is innate must always be there.

Descartes's Response:

When I say that a given idea is innate in us, I do not mean that we are always aware of it. If that was what I meant, then of course no idea would be innate. All I mean is that we have within ourselves the capacity of summoning it up.

From Fifth Objections (Gassendi, 286-8): **We can not conceive of infinity.**

You claim that there is in the idea of an infinite God more objective reality than in the idea of a finite thing. But first of all, the human intellect is not capable of conceiving of infinity, and hence it neither has nor can contemplate any idea representing an infinite thing. Hence if someone calls something infinite, he attributes to a thing which he does not grasp a label which he does not understand. For just as the thing extends beyond any grasp of it he can have, so the negation of a limit which he attributes to its extension is not understood by him, since his intelligence is always confined within some limit.

Descartes's Response (364-5):

Here, you fail to distinguish between, on the one hand, an understanding which is suited to the scale of our intellect (and each of us knows by his own experience quite well that he has this sort of understanding of the infinite) and, on the other hand, a fully adequate conception off things (and no one has this sort of conception either of the infinite or of anything else, however small it may be). Moreover, it is false that the infinite is understood through the negation of a boundary or limit; on the contrary, all limitation implies a negation of the infinite.

From Fifth Objections (Gassendi, 294-7): **We have no idea of an infinite substance.**

In the case of all the ideas of the attributes of God, do you really comprehend something which is beyond our human grasp? Granted, if you understood the nature of God, there would be reason to think that you had learned this from God. But all the characteristics you attribute to God are nothing other than various perfections which you have noticed in people and other things, and which the human mind has the power to understand, put together and amplify.

You say that the idea of a substance may come from yourself, since you are a substance, but that the idea of an infinite substance could not come from you, because you are not infinite. But you do not possess the idea of an infinite substance except verbally, and in the sense in which people are said to grasp the infinite, which is not really grasping it at all. Hence it is not necessary that this idea should originate from an infinite substance: it can be constructed by the process of composition and amplification which has already been explained. The early philosophers, by taking in this visible space and this single world and a few principles of this kind, got their ideas of these things; and they then took these ideas and amplified them to form ideas of an infinite universe, an infinite number of worlds and infinite principles. Do you then propose to say that they did not form such ideas by their own mental powers, but that it was an infinite universe, infinite worlds, and infinite principles that made these ideas

come into their minds? You insist that your perception of the infinite is arrived at by means of "A true idea." But if it were a true idea, it would represent the infinite as it is, and you would hence perceive its principal feature, the one we are dealing with here, namely its infinity. But in fact your thought always stops at something finite, and you call it infinite only because you do not perceive what is beyond the reach of your perception; hence it is quite right to say that you perceive the infinite by a negation of the finite. It will not do to say that you, "perceive more reality in an infinite substance than in a finite one." To do this you would have to perceive an infinite reality, which you do not in fact do. Indeed, you do not really perceive more at all: all you do is to amplify the finite and then imagine that what is enlarged has more reality than it does when it remains small. Or do you want to say that those early philosophers perceived more reality, a reality that really existed, when they conceived of several worlds than when they simply thought of one world? This leads me, incidentally, to point out that the reason why our mind is so much more confused when it amplifies a semblance or image is probably that it pulls this semblance away from its proper setting, destroys the distinctness of its parts, and thus so weakens the whole idea that it finally vanishes altogether. I should mention, however, that the mind is sometimes confused for precisely the opposite reason, namely when it reduces an idea too much.

You say that it does not matter that you do not grasp the infinite or everything that is in it, but that it is enough that you should understand a few of its attributes for it to be said that you have a true and completely distinct idea of it. But if you do not grasp the infinite, but merely the finite, you do not have a true idea of the infinite, but only of the finite. You can at most be said to know part of the infinite; but this does not mean you know the infinite itself. A man who has never left an underground cave may be said to know part of the world, but that does not mean that he knows the world itself; he would turn out to be a fool if he thought that his idea of this tiny portion of the world was a true and authentic idea of the entire world.

You say, however, that it is in the nature of the infinite not to be grasped by a finite creature like yourself. I accept this; but it is not in the nature of a true idea of an infinite thing to represent such a tiny part of it, or rather what is no part at all, since it is no fraction of the whole. You say that it is enough that you understand the few attributes which you do perceive clearly. Does this mean that if you want to have an authentic idea of a man it is enough to see the tip of one of his hairs? Would it not be a fine likeness of me if a painter merely painted one of my hairs, or only its tip? But the gap between the tip of one of my hairs and the whole of me is not just much smaller or very much smaller, but infinitely smaller than the gap between everything we know of the infinite, or God, and God himself in his entirety. In a word, the attributes that we do know prove nothing about God which they do not also prove of the infinite set of worlds mentioned in the above example. Indeed, these infinite worlds can be understood from our clear perception of this one world very much more clearly than God, or an infinite being, can be understood from your perception of your substance, whose nature you have not yet established.

Descartes's Response (367-8):

The infinite, you say, cannot be a true idea unless I grasp the infinite; you say that I can be said, at most, to know part of the infinite, and a very small part at that, which does not correspond to the infinite any better than a picture of one tiny hair represents the whole person to whom it belongs.

My point is that, on the contrary, if I can grasp something, it would be a total contradiction for that which I grasp to be infinite. For the idea of the infinite, if it is to be a true idea, cannot be grasped at all, since the impossibility of being grasped is contained in the formal definition of the infinite. Nonetheless, it is evident that the idea which we have of the infinite does not merely represent one part of it, but really does represent the infinite in its entirety. The manner of representation, however, is the manner appropriate to a human idea; and undoubtedly God, or some other intelligent nature more perfect than a human mind, could have a much more perfect, i.e. more accurate and distinct, idea. Similarly, we do not doubt that a novice at geometry has an idea of a whole triangle when he understands that it is a

figure bounded by three lines, even though geometers are capable of knowing and recognizing in this idea many more properties belonging to the same triangle, of which the novice is ignorant. Just as it suffices for the possession of an idea of the whole triangle to understand that it is a figure contained within three lines, so it suffices for the possession of a true and complete idea of the infinite in its entirety if we understand that it is a thing which is bounded by no limits.

From Fifth Objections (Gassendi, 318-22): **There are no necessary truths, besides God's existence.**

In the Fifth Meditation, you say first of all that you distinctly imagine quantity (that is extension in length, breadth, and depth) and also number, shape, position, motion, and duration. From among all these ideas, you select a triangle, which you discuss as follows:

> Even if no such figure exists, or has ever existed, anywhere outside my thought, there is still a determinate nature which is not invented by me or dependent on my mind. This is clear from the fact that various properties can be demonstrated of the triangle, for example that its three angles equal two right angles and that its greatest side subtends its greatest angle, and so on. And since these properties are ones which I now clearly recognize, whether I want to or not, even if I never thought of them at all when I first imagined the triangle, it follows that they cannot have been invented by me.

I suggest that it seems very hard to propose that there is any immutable and eternal nature apart from almighty God.

You will say that all that you are proposing is the scholastic point that the natures or essences of things are eternal, and that eternally true propositions can be asserted of them. But this is just as hard to accept, and in any case it is impossible to grasp how there can be a human nature if no human being exists, or how we can say a rose is a flower when not even one rose exists.

The schoolmen say that talking of the essence of things is one thing and talking of their existence is another, and that although things do not exist from eternity, their essences are eternal. But, in that case, since the most important element in things is their essence, does God do anything very impressive when he produces their existence? Is he doing any more than a tailor does when he tries a suit of clothes on someone? How can people defend the thesis that the essence of man, which is in Plato, say, is eternal and independent of God? Is this supposed to be because it is universal? But everything to be found in Plato is particular. It is true that after seeing the nature of Plato and Socrates, and similar natures of other men, the intellect habitually abstracts from them some common concept in respect of which they all agree, and which can then be regarded as the universal nature or essence of man. But it is surely inexplicable that there should have been a universal nature before Plato and the others existed, and before the intellect performed the abstraction.

You will say that the proposition 'man is an animal' is true even if no man exists, and hence that it is eternally true. But it seems not to be true except in the sense that whenever a man exists he will be an animal. Admittedly there does seem to be a distinction between the two propositions 'man is' and 'man is an animal', in that existence is more expressly signified by the former and essence by the latter. But nevertheless the former does not rule out essence, nor does the latter rule out existence. On the contrary, when we say 'man is' we mean *man the animal*. And when we say 'man is an animal' we mean *man while he exists*.

Besides, since the proposition 'man is an animal' has no greater necessity than the proposition 'Plato is a man', it follows that even the latter proposition will have eternal truth, and the individual essence of Plato will be just as independent of God as the universal essence of man. The same follows in similar cases which it would be tiresome to pursue.

I must add, however, that although man is said to be of such a nature that he cannot exist without being an animal, we should not therefore imagine that such a nature is something which exists anywhere outside the intellect. All that is meant is that if anything is a man, it must resemble other things to which we apply the same label, 'man', in virtue of their mutual similarity. This similarity, I maintain, belongs to the individual natures, and it is from this that the intellect takes its cue in forming the concept, or idea, or form of a common nature to which everything that will count as a man must conform.

Thus, I maintain that the same thing applies to your triangle and its nature. The triangle is a kind of mental rule which you use to find out whether something deserves to be called a triangle. But we should not therefore say that such a triangle is something real, or that it is a true nature distinct from the intellect. For it is the intellect alone which, after seeing material triangles, has formed this nature and made it a common nature, as we have explained in the case of the nature of man.

It follows that we should not suppose that the properties demonstrated of material triangles belong to them because they derive them from the ideal triangle. Rather, they themselves possess these properties in their own right, and it is the ideal triangle which does not possess them except in so far as the intellect, after inspecting the material triangles, has attributed such properties to it, only to give them back to the material triangles again in the course of the demonstration. In the same way, the properties of human nature are not in Plato and Socrates in the sense that Plato and Socrates have received them from the universal nature. Rather, the universal nature has the properties only because the intellect gave them to it after observing them in Plato, Socrates, and others. And it will give them back to those individuals again when it is called on to produce the appropriate arguments.

We know that the intellect, after seeing Plato and Socrates and others, all of whom are rational, constructed the universal proposition 'every man is rational'. And subsequently, when it wishes to prove that Plato is rational, it uses the universal proposition as a premise in a syllogism. And yet, you claim that you have the idea of a triangle and would have had it even if you had never seen bodies with a triangular shape, just as you have the idea of many other figures which have never impinged on your senses.

If you had until now been deprived of all your sensory functions, so that you had never either seen or touched the various surfaces or extremities of bodies, do you think you would have been able to acquire or form within yourself the idea of a triangle or other figure? You say that you have many ideas in you which never came into your mind via the senses. But of course it is easy for you to have these ideas, since you fashioned them from ideas which did come to you via the senses, and you formed them into various other ideas.

Descartes's Response (380-2):

You would be right to think this if I was talking about existing things, or if I was proposing something as immutable in the sense that its immutability was independent of God. But just as the poets suppose that the Fates were originally established by Jupiter, but that after they were established he bound himself to abide by them, so I do not think that the essences of things, and the mathematical truths which we can know concerning them, are independent of God. Nevertheless I do think that they are immutable and eternal, since the will and decree of God willed and decreed that they should be so. Whether you think this is hard or easy to accept, it is enough for me that it is true.

The points you go on to make against the universals of the schoolmen do not touch me, since my understanding is not the same as theirs. But as for the essences we know clearly and distinctly, such as the essence of a triangle or of any other geometrical figure, I can easily make you admit that the ideas of them which we have are not taken from particular instances. For you say here that they are false, presumably because they do not accord with your previously held view of the nature of things.

You cannot deny that many truths can be demonstrated of the essences of geometric figures. Since they are always the same, it is right to call them immutable and eternal. The fact that they may not

accord with your suppositions about the nature of things, or with the atomic conception of reality invented by Democritus and Epicurus, is merely an extraneous feature which changes nothing. In spite of this, they undoubtedly conform to the true nature of things established by God. Not that there are in the world substances which have length but no breadth, or breadth but no depth. It is rather that the geometrical figures are considered not as substances but as boundaries within which a substance is contained.

I do not concede that the ideas of these figures ever came into the mind via the senses, as everyone commonly believes. For although the world could undoubtedly contain figures such as those the geometers study, I nonetheless maintain that there are no such figures in our environment expect perhaps ones so small that they cannot in any way impinge on our senses. Geometrical figures are composed for the most part of straight lines. Yet no part of a line that was really straight could ever affect our senses, since when we examine through a magnifying glass those lines which appear most straight, we find they are quite irregular and always form wavy curves.

When in our childhood we first happened to see a triangular figure drawn on paper, it cannot have been this figure that showed us how we should conceive of the true triangle studied by geometers, since the true triangle is contained in the figure only in the way in which a statue of Mercury is contained in a rough block of wood. But since the idea of the true triangle was already in us, and could be conceived by our mind more easily than the more composite figure of the triangle drawn on paper, when we saw the composite figure we did not apprehend the figure we saw, but rather the true triangle.

It is just the same as when we look at a piece of paper on which some lines have been drawn in ink to represent a man's face. The idea that this produces in us is not so much the idea of these lines as the idea of a man. Yet this would certainly not happen unless the human face were already known to us from some other source, and we were more accustomed to think of the face than the lines drawn in ink. Indeed, we are often unable to distinguish the lines from one another when they are moved a short distance away from us. Thus, we could not recognize the geometrical triangle from the diagram on paper unless our mind already possessed the idea of it from some other source.

From Fifth Objections (Gassendi, 327-8): **Geometrical proofs do not depend on God.**

Geometrical proofs seem to be so evident and certain that they compel our assent all by themselves, and once they have been perceived they do not allow the intellect to remain in further doubt. So, indeed, when faced with these proofs, the mind may very well tell the evil demon to go hang himself, just as you yourself emphatically asserted that you could not possibly be deceived about the proposition or inference 'I am thinking, hence I exist', even though you had not yet arrived at knowledge of God.

Of course, it is quite true, as true as anything can be, that God exists, is the author of all things, and is not a deceiver. But these truths seem less evident than the geometrical proofs, as is shown by the fact that many people dispute the existence of God, the creation of the world, and so on, whereas no one impugns the demonstrations of geometry.

In view of this, is there anyone whom you will convince that the geometrical proofs depend for the evidence and certainty on the proofs concerning God? Surely no one imagines that such atheists as Diagoras or Theodorus can not be made completely certain of these geometrical proofs. And how often do you find a believer who, if he is asked why he is certain that the square on the hypotenuse of a right-angled triangle is equal to the squares on the other sides, will answer, "Because I know that God exists and cannot deceive, and that he is the source of this geometrical truth and of all other things"? Will he not answer instead, "Because I know it and am convinced of it by an indubitable demonstration"? And how much more likely is it that Pythagoras, Plato, Archimedes, and Euclid, and other mathematicians will answer this way? For none of them seems to have thought about God in order to make himself completely certain of his demonstrations!

Descartes's Response (384):

To set against the point you make here about Diagoras, Theodorus, Pythagoras, and others, I cite the case of the skeptics who did have doubts about these very geometrical demonstrations. And I insist that they could not have done so had they known the true nature of God. Moreover, one thing is not proved to be better known than another just because a greater number of people think it is true. What shows it to be better known is simply that those who know the true nature of both things see that it is prior in the order of knowledge and more evident and more certain.

From Sixth Objections (Mersenne, 414-5): **The atheist is certain of the necessary truths.**

When the atheist asserts, 'If equals are taken from equals the remainders will be equal," or, "The three angles of a rectilinear triangle are equal to two right angles," and numerous similar propositions, he maintains his knowledge is very certain and indeed, on your own criterion, utterly evident. For he cannot think of these propositions without believing them to be wholly certain. He maintains that this is so true that even if God does not exist and is not even possible, as he believes, he is just as certain of these truths as if God really existed. Moreover, he maintains that no reason for doubt can be presented to him which could shake him in the slightest or make him at all uncertain. What reason can you produce? That God, if he exists, may deceive him? The atheist will reply that he cannot be deceived about these truths even by a God who exercises all his omnipotence to this end.

Descartes's Response (428):

It is easy to demonstrate that the knowledge possessed by the atheist is not immutable and certain. As I have stated previously, the less power the atheist attributes to the author of his being, the more reason he will have to suspect that his nature may be so imperfect as to allow him to be deceived even in matters which seem utterly evident to him. And he will never be able to be free of this doubt until he recognizes that he has been created by a true God who cannot be a deceiver.

From Sixth Objections (Mersenne, 417-8): **How can the necessary truths depend on God?**

How can the truths of geometry or metaphysics, such as those you refer to, be immutable and eternal and yet not be independent of God? What sort of causal dependence on God do they have? Could he have brought it about that there has never been any such thing as the nature of a triangle? And how could he have made it untrue from eternity that twice four makes eight, or that a triangle has three angles? Either these truths depend solely on the intellect that is thinking of them, or on existing things, or else they are independent, since it seems that God could not have brought it about that any of these essences or truths were not as they were from all eternity

Descartes's Response (435-6):

If anyone attends to the immeasurable greatness of God he will find it manifestly clear that there can be nothing whatsoever which does not depend on him. This applies not just to everything that subsists, but to all order, every law, and every reason for anything's being true or good. If this were not so, then, as noted a little earlier, God would not have been completely indifferent with respect to the creation of what he did in fact create. If some reason for something's being good had existed prior to his preordination, this would have determined God to prefer those things which it was best to do. But on the contrary, just because he resolved to prefer those things which are now to be done, for this very reason, in the words of Genesis, "they are very good." In other words, the reason for their goodness depends on the fact that he exercised his will to make them so. There is no need to ask how God could have brought it about from eternity that it was not true that twice four make eight, and so on. I admit this is

unintelligible to us.

On the other hand I do understand, quite correctly, that there cannot be any class of entity that does not depend on God. I also understand that it would have been easy for God to ordain certain things such that we men cannot understand the possibility of their being otherwise than they are. Therefore it would be irrational for us to doubt what we do understand correctly just because there is something which we do not understand and which, so far as we can see, there is no reason why we should understand. Hence we should not suppose that eternal truths "depend on the human intellect or on other existing things." They depend on God alone, who, as the supreme legislator, has ordained them from eternity.

IX. The Account of Error and Free Will

From Third Objections (Hobbes, 190): **We need a positive faculty in order to err.**

You write, "I understand, then, that error as such is not something real but is merely a defect. Hence my going wrong does not require me to have a faculty specially bestowed on me by God."

It is certain that ignorance is merely a defect, so we do not need any positive faculty in order to be ignorant. But the point is not so obvious in the case of error. It seems that stones and inanimate objects are incapable of making mistakes simply because they lack the power of reasoning and imagining. So the obvious inference is that in order to go wrong one needs the power of reasoning, or at least the power of imagining, and these are both positive faculties which have been given to all those, and only to those, who go wrong.

Descartes's Response (190-1):

It is true that in order to go wrong we need the faculty of reasoning, or rather of judging (that is, affirming or denying) since error is a defect in this faculty. But it does not follow that this defect is something real, any more than blindness is something real, although the mere fact that stones are incapable of vision does not make us call them blind.

From Third Objections (Hobbes, 190): **Free will is assumed without proof.**

Descartes says, "I notice that my errors depend on two concurrent causes, namely on the faculty of knowledge which is in my, and on the faculty of choice or freedom of the will." This seems to contradict his claim that error does not require a special faculty bestowed on me by God. And it should also be noted that the freedom of the will is assumed without proof, and in opposition to the view of the Calvinists.

Descartes's Response (191):

I made no assumptions beyond what we all experience within ourselves. Our freedom is very evident by the natural light. Nor do I understand why this passage is said to contradict the earlier one. There may indeed be people who, when they consider the fact that God pre-ordains all things, cannot grasp how this is consistent with our freedom. But if we simply consider ourselves, we will all realize in light of our own experience that voluntariness and freedom are one and the same thing. This is no place for examining the opinion of other people on this subject.

From Third Objections (Hobbes, 191-2): **Our will to believe is not free**

You write, "During these past few days I have been asking whether anything in the world exists, and I have realized that from the very fact of my raising this question it follows quite evidently that I exist. I could not but judge that something which I understood so clearly was true; but this was not because I was compelled so to judge by any external force, but because a great light in the intellect was followed by a great inclination in the will, and thus the spontaneity and freedom of my belief was all the greater in proportion to my lack of indifference."

It is not only knowing something to be true that is independent of the will, but also believing it or giving assent to it. If something is proved by valid arguments, or is reported as credible, we believe it whether we want to or not. It is true that affirmation and denial, defending and refuting propositions, are acts of will. But it does not follow that our inner assent depends on the will.

Descartes's Response (192):

As for the claim that we assent to things which we clearly perceive, whether we want to or not, this is like saying that we seek a clearly known good whether we want to or not. The qualification 'or not' is inappropriate in such contexts, since it implies that we both will and do not will the same thing.

From Fifth Objections (Gassendi, 308): **God could have made us without the ability to err.**

You reason that it is impossible that God should deceive you. In order to make excuses for the deceptive and error-prone faculty which God gave you, you suggest that the fault lies in nothingness, which you say you have some idea of, and which you say you participate in, since you take yourself to be something intermediate between nothingness and God. This is a splendid argument! I will pass over the impossibility of explaining how we have an idea of nothingness, and so on. I will simply point out that this distinction does not obviate the fact that God could have given man a faculty of judgment that was immune from error. Without giving him a faculty of infinite scope, he could have given him the kind of faculty which would never lead him to assent to falsehood, so that he would clearly perceive anything he did know, and would avoid making any definite assertion on one side or the other in cases where he was ignorant.

When you discuss this objection, you state that it is no cause for surprise if you do not understand the reason for some of God's actions. This is correct, but it is still surprising that you should have a true idea which represents God as omniscient, omnipotent, and wholly good, and yet that you should nonetheless observe that some of his works are not wholly perfect. For given that he could have made things more perfect but did not do so, this seems to show that he must have lacked either the knowledge or the power or the will to do so. He was certainly imperfect if, despite having the knowledge and the power, he lacked the will and preferred imperfection to perfection.

Descartes's Response (374):

I did explain quite adequately what sort of idea of nothingness we have, and how we participate in non-being. The idea of nothingness I called a negative idea, and I said that participating in non-being simply means that we are not the supreme being and that we lack very many things. But you are always looking for flaws where none exist.

When you say that I observe that some of God's works are not wholly perfect, you are plainly inventing something I neither wrote nor thought. I simply said that if certain things are considered not from the point of view of the part they play in the world but as separate wholes, then they can appear to be imperfect.

From Fifth Objections (Gassendi, 310-4): **The universe would be better if all of its parts were perfect.**

The solution to the problem of error which you offer is that a created thing which appears imperfect should be considered not as a whole, but as a part of the universe, and from this point of view it will be perfect. This is an admirable distinction. But here we are dealing with the imperfection of a part not as a part, or in comparison with the complete whole, but as something complete in itself which performs its special function. And even if you relate this to the universe, we are still faced with the problem of whether the universe would not really have been more perfect if all its parts had been perfect than it is now when many of its parts are imperfect. Thus a republic whose citizens are all good will be more perfect than one in which most or some of the citizens are bad.

So when you go on to say that the universe will be in some sense more perfect if some of its parts are subject to error than it would be if they were all alike, this is like saying that a republic has, in a sense, more perfection if some of its citizens are bad than it would have if they were all good. Hence, just as it seems that a good ruler ought to prefer it if all his citizens are good, so it seems that the author of the universe ought to have ordained that all the parts of the universe should be created such as to be immune from error. You could say that the perfection of the parts which are immune from error appears greater by contrast with those which are liable to error. But they are not intrinsically more perfect. In the same way, the virtue of good men does in a sense shine out more by contrast with those who are vicious, but it is not for that reason intrinsically more shining. Hence, just as we should not want some of the citizens to be bad merely so as to make the good citizens stand out more brightly, so it seems that it should never have been allowed that some parts of the universe should be subject to error just so that those which were immune from error should shine more brightly.

You say that you have no right to complain that the role God wished you to undertake in the world is not the principal one or the most perfect of all. But this does not eliminate the question of why God was not satisfied with giving you a role to play which was the least perfect of a set of perfect roles, without actually giving you an imperfect role. A ruler cannot be blamed for not appointing all the citizens to the highest offices, but keeping some in lower, and others in the lowest, positions. But he would be criticized if he not only assigned some to the lowest offices but also assigned some to positively base roles.

You say that you cannot produce any reason to prove that God ought to have given you a greater faculty of knowledge than he did; and no matter how skilled you understand a craftsman to be, this does not make you think that he ought to have put into every one of his works all the perfections which he is able to put into some of them. But the objection which I have just raised still stands. The difficulty, you see, is not so much why God did not give you a greater faculty of knowledge, but why he gave you a faculty subject to error. The question is not why the supreme craftsman did not want to bestow all the perfections on all his works, but why he wished to bestow imperfections on some of them.

You say that although you have no power to avoid error through having a clear perception of things, you can still avoid it by firmly resolving to adhere to the rule of not assenting to anything which you do not clearly perceive. But although you can always keep this rule carefully in mind, is it not still an imperfection not to perceive clearly matter which you need to decide upon, and hence to be perpetually liable to the risk of error?

You say that the error resides in the mental operation itself in so far as it proceeds from you and is a kind of privation, but not in the faculty God gave you, nor in its operation in so far as it depends on him. But although the error does not immediately reside in the faculty God gave you, it does indirectly attach to it, since it was created with the kind of imperfection which makes error possible. Admittedly, as you say, you have no cause for complaint against god who, despite owing you nothing, bestowed on you the good gifts which you should thank him for. But there is still cause to wonder why he did not bestow more perfect gifts on you, given that he had the knowledge and the power and was not malevolent.

You go on to say that you have no cause to complain that god's concurrence is involved in your acts when you go wrong. For in so far as these acts depend on God, they are all true and good; and your ability to perform them means that there is, in a sense, more perfection in you than would be the case if you lacked this ability. You continue, "As for the privation involved, which is all that the essential definition of falsity and wrong consists in, this does not in any way require the concurrence of God, since it is not a thing and should not be referred to him."

Although this is a subtle distinction, it is not quite enough to resolve the problem. For even if God does not concur in the privation in which the falsity and error of the act consists, he nonetheless concurs in the act itself. If he did not concur in it, it would not be a privation. In any case, he is the author of that power in you which is subject to deception and error. Hence he is the author of a power in you which is subject to deception and error. And hence he is the author of a power which is, so to speak, ineffective. Thus the defect in the act should not, it seems, be referred so much to the power which is ineffective as to the author who made it ineffective and did not choose to make it effective, or more effective, though he was able to do so.

It is certainly no fault in a workman if he does not trouble to make an enormous key to open a tiny box. But it is a fault if, in making the key small, he gives it a shape which makes it difficult or impossible to open the box. Similarly, God is admittedly to be blamed for giving puny man a faculty of judging that is too small to cope with everything, or even with most things or the most important things; but this still leaves room to wonder why he gave man a faculty which is uncertain, confused and inadequate even for the few matters which he did want us to decide upon.

Descartes's Response (376):

You assume incorrectly that our being liable to error is a positive imperfection, when in fact it is simply (especially with respect to God) the negation of greater perfection among created things. Moreover, your comparison between the citizens of a republic and the parts of the universe is not quite accurate. The bad character of the citizens is, in relation to the republic, something positive. But this does not apply to man's liability to error, or his lack of all perfections, when this is taken in relation to the good of the universe. A better comparison to make might be the comparison between someone who wanted the whole of the human body to be covered with eyes so as to look more beautiful (there being no part of the body more beautiful than the eye), and someone who things that there ought not to have been any creatures in the world who were liable to error (i.e. not wholly perfect).

Your supposition that God has assigned us base roles and has given us imperfections, and so on, is plainly false. It is also quite false that God gave man a faculty which is uncertain, confused, and inadequate even for the few matters which he did want us to decide upon.

From Fifth Objections (Gassendi, 314-5): **The intellect is not more limited than the will.**

I do not question your basis for saying the intellect is simply the faculty of being aware of ideas, or of apprehending things simply and without any affirmation or negation. Nor do I dispute your calling the will or freedom of choice a faculty whose function is to affirm or deny, to give or withhold assent. My only question concerns why, on your account, our will or freedom of choice is not restricted by any limits, whereas the intellect is restricted. In fact is seems that these two faculties have an equally broad scope. Certainly the scope of the intellect is at the very least no narrower than that of the will, since the will never aims at anything which the intellect has not already perceived.

I said that the scope of the intellect was at the very least no narrower. In fact its scope seems to be even wider than that of the will. For the will or choice or judgment, and hence our selection or pursuit or avoidance of something, never occurs unless we have previously apprehended that thing, and unless the idea of that thing has been previously perceived and set before us by the intellect. What is more, there are many things which we understand only obscurely, so that no judgment or pursuit or avoidance occurs in respect of them. Also, the faculty of judgment is often undecided, and if there are reasons of equal weight on either side, or no reasons at all, no judgment follows. But the intellect still continues to apprehend the matters on which no judgment has been passed.

You say that you can always understand the possibility of your faculties being increased more and more, including the intellectual faculty itself, of which you can form an infinite idea. But this itself shows that the intellect is not any more limited than the will, since it can extend itself even to an infinite object. You say that you recognize your will to be equal to that of God, not indeed, in respect of its extent, but essentially. but surely the same could be said of the intellect too, since you have defined the essential notion of the intellect in just the same way as you have defined that of the will. In short, will you please tell us if the will can extend to anything that escapes the intellect? It seems, then, that error does not arise, as you allege, from the fact that the scope of the will is wider than that of the intellect and the will extends itself to judge of matters which the intellect does not perceive. The scope of both faculties is equal, and error arises instead from the fact that the perception of the intellect is faulty and the judgment of the will is faulty.

Descartes's Response (376-7):

You ask me to say briefly whether the will can extend to anything that escapes the intellect. The answer is that this occurs whenever we happen to go wrong. Thus when you judge that the mind is a kind of rarefied body, you can understand that the mind is itself, i.e. a thinking thing, and that a rarefied body is an extended thing. But the proposition that it is one and the same thing that thinks and is extended is one which you certainly do not understand. You simply want to believe it, because you have believed it before and do not want to change your view. It is the same when you judge that an apple, which may in fact be poisoned, is nutritious. You understand that its smell, color, and so on, are pleasant, but this does not mean that you understand that this particular apple will be beneficial to eat. You judge that it will because you want to believe it.

So, while I do admit that when we direct our will towards something, we always have some sort of understanding of some aspect of it, I deny that our understanding and our will are of equal scope. In the case of an y given object, there may be many things about it that we desire but very few things of which we have knowledge. And when we make a bad judgment, it is not that we exercise our will in a bad fashion, but that the object of our will is bad. Again, we never understand anything in a bad fashion. When we are said to understand in a bad fashion, all that happens is that we judge that our understanding is more extensive that it in fact is.

From Fifth Objections (Gassendi, 316-7): **Errors arise from disparities between our judgments and their objects, not from the freedom of the will.**

When you talk about the argument you constructed concerning the existence of things, and compare the case of your own existence, you proceed correctly as far as the judgment of your own existence is concerned, but your assumption appears to be incorrect in so far as it concerns other things. For what you claim, or rather pretend, is not something you are really in doubt about. You emphatically judge that something apart from you and distinct from you exists, for you already have a prior understanding of something apart from you and distinct from you. When you suppose that you have not yet come upon any persuasive reason in favor of one alternative rather than the other, this is indeed a possible supposition. But you ought simultaneously to suppose that in that case no judgment will follow, and that your will always be indifferent and will not decide to make a definite judgment until the intellect comes upon some plausible argument which favors one side more than the other.

You say that this indifference extends to cases where you do not have sufficiently clear knowledge. For although probable conjectures may pull you in one direction, the mere knowledge that they are conjectures may push your assent the other way. But this seems quite untrue. For if your conjectures are pulling you in one direction, the knowledge that they are merely conjectures may indeed make your judgment come down on that side, albeit with some reluctance and hesitation. But it can never make your judgment come down on the other side unless other conjectures occur subsequently to you which are not just equally probably but more probable.

You add that your point is confirmed by your experience of the last few days, when you supposed that opinions you believed to be absolutely true were false. But remember that I have not allowed you to make this supposition. You cannot really have held or been convinced that you had never seen the sun or the earth or men and so on, or that you had never heard sounds or walked or eaten or written or spoken or performed similar activities involving the use of your body and its organs.

Finally, the essence of error does not seem to consist in the incorrect use of free will, as you allege, so much as in the disparity between our judgment and the thing which is the object of our judgment. And it seems that error arises when our intellectual apprehension of the thing does not correspond with the way the thing really is. Hence the blame does not seem to lie with the will for not judging correctly, so much as with the intellect for not displaying the object correctly. The dependence of the will on the intellect seems to be as follows. If the intellect perceives something clearly, or seems to do so, the will in that case will make a judgment that is approved and settled, irrespective of whether it is in fact true, or merely thought to be true. But when the intellect's perception is obscure, then the will in this case will make a judgment that is doubtful and tentative, but which will, nonetheless, be regarded for the time being as truer than its opposite, irrespective of whether it really accords with the truth of the matter or not. This means that we do not have the power so much to guard against error as to guard against persisting in error. If we want to use our judgment correctly, we should not so much restrain our will as apply our intellect to develop clearer awareness, which the judgment will always then follow.

Descartes's Response (377-8):

These are the sorts of things that each of us ought to know by experience in his own case, rather than having to be convinced of them by rational argument. You, O Flesh, do not seem to attend to the actions the mind performs within itself. You may be unfree, if you wish, but I am certainly very pleased with my freedom since I experience it within myself. What is more, you have produced no arguments to attack it but merely bald denials. I affirm what I have experienced and what anyone else can experience for himself, whereas your denial seems merely to be based on your own apparent failure to have the appropriate experience. So my own view is probably entitled to receive more widespread acceptance.

Your own words, however, establish that you have in fact had the experience of freedom. You deny that we can guard against making mistakes because you refuse to allow that the will can be directed

to anything which is not determined by the intellect; but you admit at the same time that we can guard against persisting in error. Now, this would be quite impossible unless the will had the freedom to direct itself, without the determination of the intellect, towards one side or the other, and this you have just denied. If the intellect has already determined the will to put forward some false judgment, then what is it, may I ask, that determined the will when fist it begins to guard against persisting in error? If it is determined by itself, then it can after all be directed towards an object which the intellect does not impel it towards, which you denied, and which is the sole point in dispute. If on the other hand it is determined by the intellect, then it is not the will that is guarding against error. All that occurs is that, just as it was previously directed towards a falsehood set before it by the intellect, now it happens, purely by chance, to turn towards the truth, because the intellect presents the truth to it.

I would also like to know what is your conception of the nature of falsity, and how you think it can be an object of the intellect. My own view is this: since I understand falsity to be merely a privation of the truth, I am convinced that there would be a total contradiction involved in the intellect's apprehending falsity under the guise of truth. But this would have to be the case if the intellect were ever to determine the will to embrace what is false.

From Sixth Objections (Mersenne, 416-7): **Clear perception does not remove free will.**

A difficulty arises in connection with the indifference (freedom) that belongs to our judgement, or liberty. This indifference, you claim, does not belong to the perfection of the will but has to do merely with its imperfection; thus, according to you, indifference is removed whenever the mind clearly perceives what it should believe or do or refrain from doing. But do you not see that by adopting this position you are destroying God's freedom, since you are removing from his will the indifference as to whether he shall create this world rather than another world or no world at all? Yet it is an article of faith that God was from eternity indifferent as to whether he should create one world, or innumerable worlds, or none at all. But who doubts that God has always perceived with the clearest vision what he should do or refrain from doing? Thus, a very clear vision and perception of things does not remove indifference of choice.

Descartes's Response (431-3):

As for the freedom of the will, the way in which it exists in God is quite different from the way in which it exists in us. It is self-contradictory to suppose that the will of God was not indifferent from eternity with respect to everything which has happened or will ever happen. For, it is impossible to imagine that anything is thought of in the divine intellect as good or true, or worthy of belief or action or omission, prior to the decision of the divine will to make it so. I am not speaking here of temporal priority. I mean that there is not even any priority of order, or nature, or of "rationally determined reason" as they call it, such that God's idea of the good impelled him to choose one thing rather than another.

For example, God did not will the creation of the world in time because he saw that it would be better this way than if he had created it from eternity. Nor did he will that the three angles of a triangle should be equal to two right angles because he recognized that it could not be otherwise, and so on. On the contrary, it is because he willed to create the world in time that it is better this way than if he had created it from eternity. It is because he willed that the three angles of a triangle should necessarily equal two right angles that this is true and cannot be otherwise. And so on in other cases.

There is no problem in the fact that the merit of the saints may be said to be the cause of their obtaining eternal life. It is not the cause of this reward in the sense that it determines God to will anything, but is merely the cause of an effect of which God willed from eternity that it should be the cause. Thus the supreme indifference to be found in God is the supreme indication of his omnipotence.

As for man, since he finds that the nature of all goodness and truth is already determined by God, and his will cannot tend towards anything else, it is evident that he will embrace what is good and true all the more willingly, and hence more freely, in proportion as he sees it more clearly. He is never indifferent except when he does not know which of the two alternatives is the better or truer, or at least when he does not see this clearly enough to rule out any possibility of doubt. Hence the indifference which belongs to human freedom is very different from that which belongs to divine freedom. Not only are we free when ignorance of what is right makes us indifferent, but we are also free, indeed at our freest, when a clear perception impels us to pursue some object.

From Sixth Objections (Mersenne, 418): **The senses, not the intellect, correct errors.**

Our most worrying difficulty is your assertion that we ought to mistrust the operations of the senses and that the reliability of the intellect is much greater than that of the senses. But how can the intellect enjoy any certainty unless it has previously derived it from the senses when they are working as they should? How can it correct a mistake made by one of the senses unless some other sense first corrects the mistake? Owing to refraction, a stick which is in fact straight appears bent in water. What corrects the error? The intellect? Not at all. It is the sense of touch. And the same sort of thing must be taken to occur in other cases. Hence if you have recourse to all your senses when they are in good working order, and they all give the same report, you will achieve the greatest certainty of which man is naturally capable. But you will often fail to achieve it if you trust the operations of the mind. The mind often goes astray in just those areas where it had previously supposed doubt to be impossible.

Descartes's Response (436-9):

If we are to get a clear view of what sort of certainty attaches to the senses, we must distinguish three grades of sensory response. The first is limited to the immediate stimulation of the bodily organs by external objects. This can consist in nothing but the motion of the particles of the organs, and any change of shape and position resulting from this motion. The second grade comprises all the immediate effects produced in the mind as a result of its being united with a bodily organ which is affected in this way. Such effects include the perceptions of pain, pleasure, thirst, hunger, colors, sound, taste, smell, heat, cold and the like, which arise from the union and as it were the intermingling of mind and body, as explained in the Sixth Meditation. The third grade includes all the judgements about things outside us which we have been accustomed to make from our earliest years, judgements which are occasioned by the movements of these bodily organs.

For example, when I see a stick, it should not be supposed that certain intentional forms fly off the stick towards the eye, but simply that rays of light are reflected off the stick and set up certain movements in the optic nerve and, via the optic nerve, in the brain, as I have explained at some length in the *Optics*. This movement in the brain, which is common to us and the brutes, is the first grade of sensory response.

The second grade extends to the mere perception of the color and light reflected from the stick. It arises from the fact that the mind is so intimately conjoined with the body that it is affected by the movements which occur in it. Nothing more than this should be referred to the sensory faculty, if we wish to distinguish it carefully from the intellect.

But suppose that, as a result of being affected by this sensation of color, I judge that a stick, located outside me, is colored. Suppose that on the basis of the extension of the color and its boundaries together with its position in relation to the parts of the brain, I make a rational calculation about the size, shape and distance of the stick. Although such reasoning is commonly assigned to the senses (which is why I have here referred it to the third grade of sensory response), it is clear that it depends solely on the intellect.

I demonstrated in the *Optics* how size, distance and shape can be perceived by reasoning alone, which works out any one feature from the other features. The only difference is that when we now make a judgement for the first time because of some new observation, then we attribute it to the intellect. When from our earliest years we have made judgements, or even rational inferences, about the things which affect our senses, then, even though these judgements were made in exactly the same way as those we make now, we refer them to the senses. The reason for this is that we make the calculation and judgement at great speed because of habit, or rather we remember the judgements we have long made about similar objects. So, we do not distinguish these operations from simple sense perception.

It is clear from this that when we say "The reliability of the intellect is much greater than that of the senses," this means merely that when we are grown up the judgements which we make as a result of various new observations are more reliable than those which we formed without any reflection in our early childhood. This is undoubtedly true. It is clear that we are not here dealing with the first and second grades of sensory response, because no falsity can occur in them. Hence when people say that a stick in water "appears bent because of refraction," this is the same as saying that it appears to us in a way which would lead a child to judge that it was bent, and which may even lead us to make the same judgement, following the preconceived opinions which we have become accustomed to accept from our earliest years. But I cannot grant my critic's further comment that this error is corrected "not by the intellect but by the sense of touch." As a result of touching it, we may judge that the stick is straight. The kind of judgement involved may be the kind we have been accustomed to make since childhood, and which is therefore referred to as the "sense" of touch. But the sense alone does not suffice to correct the visual error. In addition we need to have some degree of reason which tells us that in this case we should believe the judgement based on touch rather than that elicited by vision. And since we did not have this power of reasoning in our infancy, it must be attributed not to the senses but to the intellect. Thus even in the very example my critics produce, it is the intellect alone which corrects the error of the senses. It is not possible to produce any case in which error results from our trusting the operation of the mind more than the senses.

X. The Nature of the External World

From Fourth Objections (Arnauld, 217-8): **The denial of sensible qualities contradicts Church teaching about transubstantiation.**

According to the author's doctrines, it seems that the Church's teaching concerning the sacred mysteries of the Eucharist cannot remain completely in tact. We believe on faith that the substance of the bread is taken away from the bread of the Eucharist and only the accidents remain. These are extension, shape, color, smell, taste, and other qualities perceived by the senses.

But the author thinks that there are no sensible qualities, but merely various motions in the bodies that surround us which enable us to perceive the various impressions which we subsequently call color, taste, and smell. Hence only shape, extension, and mobility remain. Yet the author denies that these powers are intelligible apart from some substance for them to inhere in, and hence he holds that the cannot exist without such a substance.

Further, he recognizes no distinction between the states of a substance and the substance itself except for a formal one. Yet, this kind of distinction seems insufficient to allow for the states to be separated from the substance even by God.

Descartes's Response (248-51):

I think I can easily get round this objection if I say that I have never denied that there are real accidents. Although I was supposing that I did not yet have any knowledge of them, I did not thereby suppose that none existed. The analytic style of writing that I adopted there allows us from time to time to make certain assumptions that have not yet been thoroughly examined. This comes out in the First Meditation, where I made many assumptions which I proceeded to refute in the subsequent Meditations. Further, it was certainly not my intention at that point to establish any definite results concerning the nature of accidents. I simply set down what appeared to be true of them on a preliminary survey. Lastly, my saying that modes are not intelligible apart from some substance for them to inhere in should not be taken to imply any denial that they can be separated from a substance by the power of God. For I firmly insist and believe that many things can be brought about by God which we are incapable of understanding.

But, if I may express myself rather more freely, I will not hide the fact that I am convinced that what affects our senses is simply and solely the surface that constitutes the limit of the dimensions of the body which is perceived by the senses. Contact with an object takes place only at the surface, and nothing can have an effect on any of our senses except through contact, as not just I but all philosophers, including even Aristotle, maintain. So bread or wine, for example, are perceived by the senses only in so far as the surface of the bread or wine is in contact with our sense organs, either immediately, or via the air or other bodies.

But we must note that our conception of the surface should not be based merely on the external shape of a body that is felt by our fingers. We should also consider all the tiny gaps that are found in between the particles of flour that make up the bread, and the tiny gaps between the particles of alcohol, water, vinegar, and lees or tartar that are mixed together to form wine. The same applies to the particles of other bodies. For, since these particles have various shapes and motions, they can never be joined together, however tightly, without many spaces being left between them, spaces which are not empty but full of air or other matter. Thus in the case of bread, we can see with the naked eye relatively large gaps which can be filled not just with air but with water or wine or other liquids. And since bread does not lose its identity despite the fact that the air or other matter contained in its pores is replaced, it is clear that this matter does not belong to the substance of the bread. Hence the surface of the bread is not the area most closely marked out by the outline of an entire piece of bread, but is the surface immediately surrounding its individual particles.

We must also note that not only does this surface move in its entirety when a whole piece of bread is moved from one place to another, but there is also partial movement when some particles of the bread are agitated by air or other bodies which enter its pores. Hence if there are any bodies whose nature is such that some or all of their parts are in continual motion (which I think is true of most of the particles of bread and all those of wine) then the surfaces of these bodies must be understood to be in some sort of continual motion.

Finally we must note that the surface of the bread or wine or any other body should not in this context be taken to be a part of the substance of the quantity of the body in question, nor should it be taken to be a part of the surrounding bodies. It should be taken to be simply the boundary that is conceived to be common to the individual particles and the bodies that surround them. And this boundary has absolutely no reality except a modal one.

Given that contact occurs only at this boundary, and that we have sensory awareness of something only by contact, we may now consider the statement that the substances of the bread and wine are changed into the substance of something else in such a way that this new substance is contained within the same boundaries as those occupied by the previous substances, or exists in precisely the same place where the bread and wine were, or, rather, since their boundaries are in continual motion, in the same place where they would be if they were still present. Clearly, from this statement alone, it necessarily follows that the new substance must affect all our senses in exactly the same way as that in which the bread and wine would be affecting them if no transubstantiation had occurred.

Everyone who believes that the bread is changed into the body of Christ also supposes that this body of Christ is precisely contained within the same surface that would contain the bread were it present. All these matters are so neatly and correctly explained by means of my principles, that I have no reason to fear that anything here will give the slightest offense to orthodox theologians. On the contrary, I am confident that I will receive their hearty thanks for putting forward opinions in physics which are far more in accord with theology than those commonly accepted. As far as I know, the Church has never taught that the forms of the bread and wine that remain in the sacrament of the Eucharist are real accidents, which miraculously subsist on their own when the substance in which they used to inhere has been removed.

There is a contradiction, at least for those who concede that all sense perception occurs by means of contact, in supposing that objects, in order to stimulate the senses, require anything more than the various configurations of their surfaces. For, it is self-evident that a surface is on its own sufficient to produce contact.

The human mind cannot think of the accidents of the bread as real, and yet existing apart from its substance, without conceiving of them by employing the notion of a substance. So it seems to be a contradiction, given that the whole substance of the bread changes, as the Church believes, to suppose that something real which was previously in the bread nonetheless remains. For if something real is understood to remain it must be thought of as something which subsists. And though the word ‘accident’ may be used to describe it, it must nonetheless be conceived of as a substance. Hence the supposition that real accidents remain is in fact just like saying that the whole substance of the bread changes but nevertheless a part of that substance called a real accident remains. Although this may not be a verbal contradiction, it certainly involves a conceptual contradiction.

The supposition of real accidents is inconsistent with theological arguments, as I think I have just shown clearly enough. It is also completely opposed to philosophical principles, as I hope I shall clearly demonstrate in the comprehensive philosophical treatise on which I am now working. I shall show there how color, taste, heaviness, and all other qualities which stimulate the senses depend simply on the exterior surface of bodies.

From Sixth Objections (Mersenne, 417): **How can the surface of a corporeal object not be corporeal?**

A difficulty concerns the surface in which, or by means of which, you say all our sensations occur. We do not understand how it can be that it is neither a part of the bodies which are perceived by the senses, nor a part of the air and its vapors. For you say it is no part of these things, not even the outermost layer. Nor do we grasp your assertion that there are no real accidents belonging to any body or substance, accidents which could by divine power exist apart from any subject, and which do really exist in the sacrament of the alter. However, there is no reason for our professors to be upset by your assertion until they see whether you propose to demonstrate it in the treatise on physics which you promise us. For, they can hardly believe that this will provide us with such a clear account of the matter as to enable or require your view to be accepted in preference to the traditional view.

Descartes's Response (433-5):

My conception of the surface by which I think our senses are affected is exactly the same as the normal conception which all mathematicians and philosophers have (or should have) when they distinguish a surface from a body and suppose it to be wholly lacking in depth. But the term 'surface' is used in two sense by mathematicians. In one sense, they use the term of a body whose length and breadth alone they are studying and which is considered quite apart from any depth it may have, even though the possession of some degree of depth is not ruled out. Alternatively, they use the term simply for a mode of a body, in which case all depth is completely denied. So to avoid this ambiguity, I stated that I was talking of the surface which is merely a mode and hence cannot be a part of a body. For a body is a substance, and a mode cannot be a part of a substance. But I did not deny that the surface is the boundary of a body. On the contrary, it can quite properly be called the boundary of the contained body as much as of the containing one, in the sense in which bodies are said to be contiguous when their boundaries are together. For when two bodies are in mutual contact, there is a single boundary common to both which is a part of neither. It is the same mode of each body, and it can remain even though the bodies are removed, provided only that other bodies of exactly the same size and shape take their places. Indeed, the kind of place characterized by the Aristoteleans as the surface of the surrounding body can be understood to be a surface in no other sense but this, namely as something which is not a substance but a mode. For the place where a tower is does not change even though the air which surrounds it is replaced, or even if another body is substituted for the tower. Hence, the surface, which is here taken to be the place, is not a part either of the surrounding air or of the tower.

It order to demolish the reality of accidents, I do not think we need to look for any arguments beyond those I have already deployed. First, since all sense perception occurs through contact, only the surface of a body can be the object of sense perception. Yet if there were real accidents, they would have to be something different from the surface, which is nothing but a mode. Hence, if there are any real accidents, they cannot be perceived by the senses. But surely, the only reason why people have thought that accidents exist is that they have supposed that they are perceived by the senses.

Second, it is completely contradictory that there should be real accidents, since whatever is real can exist separately from any other subject. Yet anything that can exist separately in this way is a substance, not an accident. The claim that real accidents cannot be separated from their subjects naturally, but only by the power of God, is irrelevant. for to occur naturally is nothing other than to occur through the ordinary power of God, which in now way differs from his extraordinary power, the effect on the real world is exactly the same. Hence if everything which can naturally exist without a subject is a substance, anything that can exist without a substance even through the power of God, however extraordinary, should also be termed a substance. I do admit that one substance can be attributed to another substance. Yet, when this happens it is not the substance itself which has the form of an accident, but only the mode of attribution. Thus when clothing is the attribute of a man, it is not the clothing itself which is the accident, but merely being clothed. But the principal argument which induced

philosophers to posit real accidents was that they thought that sense-perception could not be explained without them. This is why I promised to give a very detailed account of sense perception in my writings on physics, taking each sense in turn. Not that I want any of my results to be taken on trust; but I thought that the explanation of vision which I had already given in the *Optics* would make it easy for the judicious reader to guess what I was capable of accomplishing with regard to the remaining senses.

From Fifth Objections (Gassendi, 283-4): **We have one, not two, ideas of the sun.**

You press the example of the sun, of which you have two ideas: one is derived from the senses, and this makes the sun appear small; the other is based on astronomical reasoning and gives us a conception of the sun as huge. The latter idea, you say, is truer and more closely resembles the sun, and it is not drawn from the senses but derived from innate notions or produced in some other way. But both these ideas of the sun resemble the sun and are true, or conform to the sun, though one does so more than the other. In just the same way, if we have two ideas of the same man, one transmitted from ten feet away and the other from a hundred or a thousand feet, both ideas resemble the man and are true, or conform to him, but the former idea does so more than the latter. The idea which comes from nearby is not so weakened as the one which comes from farther away.

Although the second, vast idea of the sun is perceived by the mind alone, it does not follow that the idea is derived from some innate notion. Since experience establishes, and reasoning based on experience confirms, that objects when distant appear smaller than they do when they are near us, the idea of the sun which comes to us through sense perception is so amplified by the mind's own power as to correspond exactly with the agreed distance of the sun from us, so that its diameter equals so many radii of the earth.

If you want to grasp the fact that no part of this idea has been implanted in us by nature, you should inquire about the idea which a man born blind has. You will find first of all that the idea in his mind has no color or luminosity. Next you will find that it is not even round, unless someone has told him the sun is round and he has previously held a round object in his hands. And lastly you will find that the idea is not nearly so large, unless he has amplified his previously accepted idea as a result of reasoning or the influence of some authority.

Do we, who have looked at the sun so often and have so often seen its apparent diameter and reasoned about its true diameter, have any other than the ordinary image of the sun? Reasoning tells us that the sun is more than a hundred and sixty times bigger than the earth, but do we therefore have an idea of such a vast body? We certainly amplify the idea derived from the senses as much as possible, and exert our mind as much as we can. But despite this, all we succeed in constructing for ourselves is darkness and obscurity. If we wish to have a distinct idea of the sun, then our mind must always return to the image which it has received via the eye. It is enough if the mind accepts that the sun is in reality bigger, and that it would have a larger idea if the eye could move closer to the sun. But in the meantime the idea that the mind attends to is nevertheless no larger than the one it actually takes in.

Descartes's Response (363-4):

Your point about the sun proves nothing. Your taking the two ideas as one on the grounds that they are referred to only one sun is like saying that a true statement does not differ from a false one because it is asserted of the same subject. In saying that the idea we arrive at by astronomical reasoning is not in fact an idea, you are restricting the term 'idea' to images depicted in the corporeal imagination; but this goes against my explicit assumption.

From Fifth Objections (Gassendi, 284-6): **We have no real idea of a substance.**

You recognize the inequality and diversity to be found among our ideas. I am not bothered by what you call objective reality. It is commonly said that external things exist subjectively or formally in themselves, but exist objectively or ideally in the intellect; and it is enough that you appear to follow this usage and mean simply that an idea must conform to the thing of which it is an idea. Thus an idea contains representatively nothing which is not in fact in the thing itself, and the more reality the thing represented has in itself, the more representative reality the idea possesses. You do in fact immediately afterwards distinguish between objective and formal reality, where formal reality, as I understand it, applies to the idea itself not as it represents something but as an entity in its own right. But we agree that the idea, or its objective reality, is not to be measured by the total formal reality of the thing (i.e. the reality which the thing has in itself) but merely by that part of the thing of which the intellect has acquired knowledge (i.e. by the knowledge that the intellect has of the thing). Thus you will be said to have a perfect idea of a man if you have looked at him carefully and often from all sides. But your idea will be imperfect if you have merely seen him in passing and on one occasion and from one side. If you have not seen the man himself, but only a mask covering his face and a set of clothes which completely cover his body, then we must say either that you do not have an idea of him at all or, if you do have one, that it is very imperfect and utterly confused.

In the light of this I claim that we do have a distinct and genuine idea of accidents, but that our idea of the unseen substance beneath them is confused and utterly fictitious. So when you say that there is more objective reality in the idea of a substance than in the idea of its accidents, first of all it has to be denied that we have a true idea or representation of a substance, and hence that this idea possesses any objective reality. And next, even if we grant that it has some objective reality, we must still deny that this is greater than the reality to be found in the idea of the accidents, since whatever reality of this sort it possesses it gets form the ideas of the accidents under which, or in the guise of which, we conceive of the substance (as I said above when I stated that a substance cannot be conceived except as something extended and having shape and color).

Descartes's Response (364):

You repeat a mistake when you deny that we have a true idea of a substance on the grounds that a substance is perceived not by the imagination but by the intellect alone. I have already made it clear that I will have nothing to do with those who are prepared to use only their imagination and not their intellect.

You next say, "Whatever reality the idea of a substance possesses, it gets from the ideas of the accidents under which, or in the guise of which, we conceive of the substance." Here you prove that in fact you have no distinct idea of a substance. For a substance can never be conceived in the guise of its accidents, nor can it derive its reality from them. (On the contrary, philosophers commonly conceive of accidents in the guise of substances, since they often say that they are real.) In fact, no reality, i.e. no being apart from a purely moral one, can be attributed to accidents unless it is taken from the idea of a substance.

From Fifth Objections (Gassendi, 271-273): **The imagination plays a role in our conception of the wax.**

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 color, 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, 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 color, 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 color, 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 and coats does not show that it is the mind rather than the imagination that makes judgments. A dog, which you will not allow to possess a mind like yours, certainly makes a similar kind of judgment 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 color and hardness and so in 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.

Descartes's Response (359):

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 kind 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 judgments 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.

From Fifth Objections (Gassendi, 291-4): **Our ideas of bodies arise from sense perception.**

From what you have already said, you are not the cause of the reality of your ideas. The cause is,

rather, the things themselves which are represented through the ideas, and which send images of themselves to you as if to a mirror (though you may sometimes take these images as the basis for constructing pictures of chimeras). But whether or not you yourself are the cause, does that make you uncertain about whether anything besides you exists in the world?

You make a survey of the ideas which are in you, and, besides the idea of yourself, you list the ideas of God, corporeal and inanimate things, angels, animals, and men. Since you say there is no problem about the idea of yourself, you are then able to infer that the ideas of men, animals, and angels can be put together from the ideas which you have of yourself, of God, and of corporeal things; you also infer that the ideas of corporeal things could have come from yourself.

I could be awkward and ask how you are supposed to have an idea of God, unless it is the kind of idea that is acquired. And how can you have an idea of the angels, since I take it you would never have thought of them if you had not been told about them? What about animals and other things? If they had not impinged on your senses I am practically certain you would never have had any ideas of them, just as you have no idea of countless things which you have never seen or heard of.

There is a considerable difficulty about how you can derive the ideas of corporeal things from yourself or simply from the idea of yourself, when you claim to be incorporeal and consider yourself as such. For if you have knowledge only of an incorporeal substance, how can it be that you also have some grasp of corporeal substance? Is there any analogy between the latter and the former? You may say they have it in common that they are capable of existing, but this point of agreement cannot be understood unless we have some prior understanding of each of the two things which have this in common. Before we can form the common notion you make use of here, we must understand the particular items to which it applies. If the intellect can form the idea of corporeal substance from its understanding of an incorporeal substance, then there is surely no reason to doubt that a blind man, or one who has been confined in utter darkness since birth, can form in his mind the idea of light and colors. You say that you can go on to acquire the ideas of extension, shape and motion and other properties common to the things which can be perceived by the senses, which is easy enough for you to say. What surprises me is why you do not find it just as easy to derive light and colors and so on.

Descartes's Response (367):

None of your discussion concerning ideas needs to be answered, since you restrict the term 'idea' to images depicted in the imagination, whereas I extend it to cover any object of thought.

I did not assert that the ideas of material things are derived from the mind, as you somewhat disingenuously make out. Later on I explicitly showed that these ideas often come to us from bodies, and that it is this that enables us to prove the existence of bodies. In the passage under discussion I simply explained that we never find so much reality in these ideas as to oblige us to conclude (given the premise that there is nothing in the effect which did not previously exist in the cause, either formally or eminently) that they could not have originated in the mind alone. And this claim you do not attack at all.

XI. Arguments for the Mind-Body Distinction

From First Objections (Caterus, 100): **Our ability to conceive two things distinctly does not entail that they are really distinct.**

Your 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 you, 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's Response (120-1):

The *formal* distinction 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 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 the 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. 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. 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. 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.

From Second Objections (Mersenne, 122-3): **A body might be able to think.**

In the Second Meditation, 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?

Descartes's Response:

I 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. Whatever can think is a mind, or is called a mind. 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. 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 for 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. 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. 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 can not 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.

From Third Objections (Hobbes, 172-3): **Descartes confuses an action with a subject which acts.**

In the Second Meditation, Descartes concludes, "I am a thinking thing." Correct. 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." 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. This subject may thus be something corporeal.

Descartes's Response:

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.

From Third Objections (Hobbes, 173-4): **The subject of any act must be corporeal.**

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 color, 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.

Descartes's Response:

This philosopher 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 color, 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 certain that a thought cannot exist without a thing that is thinking. 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.

From Fourth Objections (Arnauld, 198-202): **Clear and distinct knowledge of one's mind does not exclude one's body from one's essence.**

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 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."

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. 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.

Descartes's Response (219-223):

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.

From Fourth Objections (Arnauld, 200-1): **Body could be related to mind as genus is to species.**

You claim 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. Your claim proves too 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.

Descartes's Response (223):

It is quite impossible to assert 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 as a complete thing, without any of the attributes which belong to the mind.

From Fourth Objections (Arnauld, 201-3): **Our clear and distinct idea of ourselves might not be complete.**

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."

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 if its angles is a right angle. 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.

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 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.

Descartes's Response (224-225, 227):

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 neither 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.

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.

From Fourth Objections (Arnauld, 203-4): **The idea of the thinking thing could be merely the result of intellectual abstraction.**

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.

Descartes's Response (220, 221-3):

I must 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." 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."

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.

From Fourth Objections (Arnauld, 203): **The argument proves that the body is a mere vehicle for a distinct mind.**

It seems that the argument proves too much, and takes us back to the Platonic view (which you reject) 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.

Descartes's Response (227-8):

I do not 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 though 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.

From Fourth Objections (Arnauld, 203-4): **Thought seems attached to the body, as in the cases of infants and madmen.**

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

Descartes's Response (228):

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.

From Fifth Objections (Gassendi, 336-7): **The argument for the mind/body distinction only applies to the solid body.**

You may be a rarefied body infused into a solid one, or occupying some part of it. You have not convinced us that you are something wholly incorporeal. You declared that you are not a wind, fire, air, or breath. But, you asserted this without any proof. What discussion and proof you do offer simply establishes that you are not this solid body, and there is no difficulty about this.

Descartes's Response (386-7):

I should like to know 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 vapor, or breath, or any other body, however thin and rarefied.

XII. The Nature of the Self, and the Faculties of the Mind

From Third Objections (Hobbes, 183): **We have no idea of the soul.**

As for the idea of my own self, if we are talking about my body, I get it from looking at my body. If we are talking about the soul, there is no idea of the soul at all. Rather, we deduce by reasoning that there is something internal to the human body, which gives it the animal motion by which it senses and moves. Whatever it is, we call it the 'soul', but without having any idea of it.

Descartes's Response (183):

When he says that there is no idea of the soul, but that it is deduced by reasoning, it is just as if he were to say that there is no image of it portrayed in the imagination, but that all the same there is what I myself have called an idea of it.

From Fourth Objections (Arnauld, 214): **There are thoughts of which we are not aware.**

You lay it down as certain that there can be nothing in you, in so far as you are a thinking thing, of which you are not aware. It seems to me that this is false. For by yourself, in so far as you are a thinking thing, you mean simply your 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's Response (246-7):

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.

From Fifth Objections (Gassendi, 260-1, 263, 265): **The soul may be a wind infused in (informing) the body.**

I ask you, Soul, or whatever name you want me to address you by, have you corrected the thought which previously led you to imagine that you were something like a wind diffused through the parts of the body? Why is it not possible that you are a wind or rather a very thin vapor, 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 vapor 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 limb, 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?

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 principle part - the 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.

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? Why do you assume that you are none of these things?

Descartes's Response (352-3, 356):

I ask you, 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.

It is generally the ignorant who have given things their names, and so the names do not always fit the things with sufficient accuracy. 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 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. I consider the mind not as a part of the soul, but as the thinking soul in its entirety.

From Fifth Objections (Gassendi, 261-3): **The mind is affected by the body.**

You 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 vapor, then given that the lings, 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 for 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.

Finally, you read 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 vapor 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 ben without it, and have so far never had any thoughts when separated from it). You will this 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 vapors or fumes which from time to time have such a bad effect on the brain.

Descartes's Response (353-5):

There is no more force in your 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 for; 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.

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 his 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.

From Fifth Objections (Gassendi, 263-5): **The mind is not perpetually thinking.**

You add that thought alone cannot be separated from you. In saying that, do 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. You should bear in mind how obscure, meager, and virtually non-existent your thought must have been during those early periods of your life.

Descartes's Response (356-7)

Why should the soul 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?

From Fifth Objections (Gassendi, 274-7): **The nature of the mind is not known better than the nature of the body.**

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.

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, 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. 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.

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.

Descartes's Response (359-61):

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 color 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 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. Hence the nature of the mind is the one we know best of all.

From Fifth Objections (Gassendi, 306-7): **We do not resemble God.**

You say that it is reasonable to believe that you are made in the image and likeness of God. This is certainly believable given religious faith, but how may it be understood by natural reason, unless you are putting forward an anthropomorphic picture of God? Moreover, what can that likeness consist in?

Since you are dust and ashes, can you presume that you resemble that eternal, incorporeal, immense, most perfect, most glorious, and above all most invisible and incomprehensible nature? Have you known that nature face to face, that you compare yourself with it and can assert that you resemble it? The fact that he created you, you say, makes it reasonable to believe you resemble him. On the contrary, this fact makes such a resemblance utterly unlikely, since the work is not similar to the workman except when he engenders it by communicating his nature to it. But you are not begotten of God in this way. You are not his offspring, or a participator in his nature, but are merely created by him, that is produced by him in accordance with an idea. Hence you cannot say that you resemble him any more than a house resembles a bricklayer.

You say that you perceive the likeness when you understand that you are a thing which is incomplete and dependent and aspires to greater and better things. But is this not rather an argument for a dissimilarity between you and God, since God is, by contrast with you, utterly complete and independent and self-sufficient, being the greatest and best of all things?

I pass over the fact that when you understand yourself to be dependent you are not immediately entitled to understand that the thing on which you depend is anything other than your parents; or if you do understand it to be something else, this does not explain why you should think you resemble it.

Descartes's Response (372-3):

You deny that we are made in the image of God, and say that this would make God like a man; and you go on to list the ways in which human nature differs from the divine nature. Is this any cleverer than trying to deny that one of Apelles' pictures was made in the likeness of Alexander on the grounds that this would mean that Alexander was like a picture, and yet pictures are made of wood and paint, and not of flesh and bones like Alexander? It is not in the nature of an image to be identical in all respects with the thing of which it is an image, but merely to imitate it in some respects. And it is quite clear that the wholly perfect power of thought which we understand to be in God is represented by means of that less perfect faculty which we possess.

You prefer to compare the creation of God to the labor of a workman rather than to parental procreation, but you have no reason to do so. Even if the three modes of action involved here are completely different in kind, nevertheless the analogy between natural procreation and divine creation is closer than that between artificial production and divine creation. I did not say, however, that the resemblance between us and God is as close as that between children and parents. Again, it is not always true that there is no resemblance between the work of a craftsman and the craftsman himself, as is clear in the case of a sculptor who produces a statue resembling himself.

How unfairly you report my words when you pretend that I said I perceive my likeness to God in the fact that I am an incomplete and dependent thing. On the contrary, I cited these facts as evidence of a dissimilarity, to prevent anyone thinking I wished to make men equal to God. What I said was this: I not only perceive that I am in this respect inferior to God in so far as I aspire to greater things, but also that these greater things are in God; and moreover, there is in me something resembling these greater qualities, since I venture to aspire to them.

From Fifth Objections (Gassendi, 329-332): **There is no distinction between imagination and understanding.**

You distinguish between imagining and understanding. But surely, O Mind, these two appear to be acts of one and the same faculty, as we have suggested above, and if there is a distinction between them it seems to be no more than one of degree. You said previously that imagining is simply contemplating the shape or image of a corporeal thing. But, you do not deny that understanding consists of contemplating triangles, pentagons, chiliagons, myriagons and so on, and these are shapes of corporeal

things. Imagination, you say, involves the application of the cognitive faculty to a body, but understanding does not require this kind of application or effort. and hence, when without any effort you perceive a triangle as a figure consisting of three angles, you say that you understand it. But when, not without some effort on your part, you make the figure become, as it were, present before you, contemplate and examine it, and discern the three angles distinctly and in detail, then you say you imagine it. thus, you perceive without effort that a chiliagon is a figure with a thousand angles, but you cannot by any mental application or effort discern them or make them become, as it were, present before you, or see them all in detail. You are in a confused state, just as you are when dealing with a myriagon or any other figure of this sort. Hence you think that in the case of the chiliagon or myriagon, you have understanding, not imagination.

But for all that, there is nothing to prevent your extending your imagination, as well as your understanding to the chiliagon, just as you do to the triangle. For you do make an effort to get some sort of picture of this figure with all its many angles, even though the number of angles is so large that you cannot grasp it distinctly. In any case, although you perceive that the world 'chiliagon' signifies a figure with a thousand angles, that is just the meaning of the term, and it does not follow that you understand the thousand angles of the figure any better than you imagine them.

Note, moreover, that the loss of distinctiveness and the onset of confusedness is gradual. You will perceive (imagine or understand) a quadrilateral more confusedly than a triangle but more distinctly than a pentagon; you will perceive the pentagon more confusedly than a quadrilateral and more distinctly than a hexagon; and so on, until you reach the point where you have nothing you can explicitly visualize. And because you can no longer grasp the figure explicitly, you do not bother to make a supreme mental effort.

Hence, if you want to say that you are simultaneously imagining and understanding a figure when you are aware of it distinctly and with some discernible effort, whereas you are merely understanding it when you see it only confusedly and with little effort, then I am prepared to allow this usage. But it will not follow that you have the basis for setting up more than one type of internal cognition, since it is purely a contingent matter, and a question of degree, whether you contemplate any given figure distinctly or confusedly, and with or without a concentrated effort. At any rate, when we wish to run through all the figures from a heptagon or octagon right up to a chiliagon, and attend all the time to the greater or lesser degree of distinctness, or concentration involved, we shall surely not be able to say at what point, or with what figure, our imagination stops, leaving us with understanding alone. What we shall find, surely, is that there is a progressive scale of awareness such that the distinctness and effort involved continuously and imperceptibly decreases, while the confusion and slackening of effort increases.

You assert that the power of imagining, in so far as it is distinct from the power of understanding, is not a necessary constituent of your essence. How can that be if they are one and the same power, and the difference in functioning is merely one of degree?

You add that when the mind imagines, it turns towards the body, but when it understands, it turns towards itself and to the ideas it has within it. But what if the mind cannot turn to itself or to one of its ideas without simultaneously turning to something corporeal or something represented by a corporeal idea? For triangle, pentagons, chiliagons, myriagons, and the other figures, or their ideas, are wholly corporeal. When it understands, the mind cannot attend to them except as corporeal or quasi-corporeal objects. The ideas of allegedly immaterial things, such as those of God and an angel and the human soul or mind, are corporeal or quasi-corporeal, since the ideas are derived from the human form and from other things which are very rarefied and simple and very hard to perceive with the senses, such as air or ether.

Descartes's Response (384-5):

It is false that our understanding of a chiliagon is confused. Many properties can be very clearly and very distinctly demonstrated of it, which could certainly not happen if we perceived it only in a confused manner or, as you claim, only in a verbal way. In fact, we have a clear understanding of the whole figure, even though we cannot imagine it in its entirety all at once. And it is clear from this that the powers of understanding and imagining do not differ merely in degree but are two quite different kinds of mental operation. For in understanding the mind employs only itself, while in imagination it contemplates a corporeal form. And although the geometrical figures are wholly corporeal, this does not entail that the ideas by means of which we understand them should be thought of as corporeal, unless they fall under the imagination.

Lastly, you say that the ideas of God, an angel, and the human mind are corporeal or quasi-corporeal, since they are derived from the human form, and from other things which are very rarefied and simple and very hard to perceive with the senses, such as air or ether. This is a thought which is worthy of you alone, O Flesh. For if anyone thus represents God, or the mind, to himself he is attempting to imagine something which is not imaginable, and all he will succeed in forming is a corporeal idea to which he falsely assigns the name 'God' or 'the mind'. A true idea of the mind contains only thought and its attributes, none of which is corporeal.

From Fifth Objections (Gassendi, 338-41): **We do not have a clear and distinct idea of the mind.**

You say not only that you are a thinking thing, but also that you are a thing which is unextended. 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?

You still do not know what kind of thing you, who are thinking, are. The most important element is still hidden from you, namely the substance which performs the thinking. 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."

Are you not diffused throughout the body? You say, "The whole mind seems to be united to the whole body." Let me assume to begin with that you are diffused throughout the entire body. 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?

Let us now assume instead that you are in the brain alone, or simply in a small part of it. 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.

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. 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. 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 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 a 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."

Descartes's Response (387-9):

Your point about the idea of the sun, which a man born blind derives merely from 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 thin, indeed it is much more extensive than our knowledge of anything else. Second, 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 whoa re 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). Finally, it is not necessary for the mind itself to be a body, although it has the power of moving the body.

From Fifth Objections (Gassendi, 338): **'I am a thinking thing' is not explanatory.**

You still do not know what kind of thing you, who are thinking, are. The most important element is still hidden from you, namely the substance which performs the thinking. 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."

Descartes's Response (387-8):

Your point 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 thin, indeed it is much more extensive than our knowledge of anything else. Second, 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 whoa re 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.

From Fifth Objections (Gassendi, 337-41; 343-5): **The mind must be extended in order to communicate with the body.**

I do not so much dispute that you have an idea of your body, as insist that you could not have such an idea if you were really an unextended thing. How 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 colors 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?

Are you not diffused throughout the body? You say, "The whole mind seems to be united to the whole body." Let me assume to begin with that you are diffused throughout the entire body. 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?

Let us now assume instead that you are in the brain alone, or simply in a small part of it. 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.

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. 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. 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 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 a 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."

You still have to explain how the joining, 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, no matter how small it is, it still has size or extension? If you wholly lack parts, how are you intermingled with the particles of this region? 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. Must not every union occur by means of close contact? 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's Response (387-90):

You ask how I think that I, an unextended subject, could receive the semblance or idea of a body that is extended. 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 the 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.

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. Finally, it is not necessary for the mind itself to be a body, although it has the power of moving the body.

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. 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.

From Sixth Objections (Mersenne, 413): **Is it impossible for the mind to be corporeal?**

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. Can you show us that it is self-contradictory that our thoughts should be reducible to these corporeal motions?

Descartes's Response (422-4, 425):

When someone notices that he is thinking, 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.

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. 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.

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. 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.

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.

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. We should regard them as the same only in respect of unity of composition.

XIII. The Immortality of the Soul

From Second Objections (Mersenne, 128): **The immortality of the soul has not be shown.**

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 and 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?

Descartes's Response (153-4):

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. 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. This is simply a mode, 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 of 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.

From Fourth Objections (Arnauld, 204): **The immortality of the soul does not follow from the mind/body distinction.**

It may be asked whether the immortality of the soul 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.

Descartes's Response (229-231):

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.

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. 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.

XIV. Differences between Humans and Animals

From Fourth Objections (Arnauld, 204-5): **Animals have souls, as well as bodies.**

As far as the souls of the brutes are concerned, you elsewhere suggest 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 fibers 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.

Descartes's Response (229-231):

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 Five of the *Discourse on 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.

From Sixth Objections (Mersenne, 414): **The souls of animals differ from those of humans only by degree.**

The thinking of monkeys, dogs, and other animals seems to confirm the view that thought could be effected by corporeal motions, or was even identical with those very corporeal motions. For dogs bark in their sleep, as if they were chasing hares or rushing at robbers. They are aware when awake that they

run, and when dreaming, that they bark. With you, I recognize that there is nothing in them distinct from their bodies. But if you deny that the dog knows that it is running or thinking, besides the fact that this is an unproved assertion, the dog himself might perhaps pass a similar judgment with respect to us, that we are also unaware that we run and think, when we run or when we think. For you do not behold the dog's internal mode of operation, just as he is not directly aware of yours. There is no lack of men of great attainments who at the present day concede reason to the animals or have in previous ages done so. So far am I from believing that all these operations can be satisfactorily explained by mechanism, without imputing to them sensation, life, and soul, that I am ready to stake anything in proving that that is both an impossibility and an absurdity. 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. 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.

Descartes's Response (426-7):

Even were I to concede that dogs and apes 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. In fact, the brutes possess no thought whatsoever. I not only stated this, but proved it by very strong arguments, which no one has refuted. 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.

You go on to say that you 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, you 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 such a fashion, I do not think that a claim should be immediately dismissed as false just because some people laugh at it.

You 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 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 premise 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 whey 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 exactly the same type as ours.

XV. Method

From Second Objections (Mersenne, 128): **Would an alternate presentation be better?**

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's Response (155-7):

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. 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, 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. 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. 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. 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 attentive 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.

From Third Objections (Hobbes, 171): **The doubts are not new.**

From what is said in the First Meditation, it is clear enough that there is no criterion enabling us to distinguish our dreams from the waking state and from veridical sensations. And hence the images we have when we are awake and having sensations are not accidents that inhere in external objects, and are no proof that any such external object exists at all. So if we follow our senses, without exercising our reason in any way, we shall be justified in doubting whether anything exists. I acknowledge the correctness of this Meditation. But since Plato and other ancient philosophers discussed this uncertainty in the objects of the senses, and since the difficulty of distinguishing the waking state from dreams is commonly pointed out, I am sorry that you, who are so outstanding in the field of original speculations, should be publishing this ancient material.

Descartes's Response:

The arguments for doubting, which you here accept as valid, are ones that I was presenting as merely plausible. I was not trying to sell them as novelties, but had a threefold aim in mind when I used them. Partly I wanted to prepare my readers' minds for the study of the things which are related to the intellect, and help them to distinguish these things from corporeal things. Such arguments seem to be wholly necessary for this purpose. Partly I introduced the arguments so that I could reply to them in the subsequent Meditations. And partly I wanted to show the firmness of the truths which I propound later on, in the light of the fact that they cannot be shaken by these metaphysical doubts. Thus I was not looking for praise when I set out these arguments, but I think I could not have left them out, any more than a medical writer can leave out the description of a disease when he wants to explain how it can be cured.

From Fourth Objections (Arnauld, 215): **The doubts may cause offense.**

I am afraid that your somewhat free style of philosophizing, which calls everything into doubt, may cause offense to some people. I rather think that the First Meditation should be furnished with a brief preface which explains that there is no serious doubt cast on these matters but that the purpose is to isolate temporarily those matters which leave room for even the slightest and most exaggerated doubt, as you yourself put it elsewhere. It should be explained that this is to facilitate the discovery of something so firm and stable that not even the most perverse skeptic will have even the slightest scope for doubt.

Following on from this point, where we find the clause 'since I did not know the author of my being', I would suggest a substitution of the clause, 'since I was pretending that I did not know...'

Descartes's Response (247)

I completely concede that the contents of the First Meditation, and indeed the others, are not suitable to be grasped by every mind. I have stated this whenever the opportunity arose, and I shall continue to do so. This was the sole reason why I did not deal with these matters in the *Discourse on Method*, which was written in French, but reserved them instead for the *Meditations*, which I warned should be studied only by very intelligent and well-educated readers. No one should object that I would have done better to avoid writing on matters which a large number of people ought to avoid reading about. For I regard these matters as so crucial that I am convinced that without them no form or stable results can ever be established in philosophy. Although fire and knives cannot safely be handled by careless people or children, no one thinks that this is a reason for doing without them altogether, since they are so useful for human life.

From Fifth Objections (Gassendi, 257-8): **The extreme doubts are unnecessary.**

Why did you not make a simple and brief statement to the effect that you were regarding your previous knowledge as uncertain so that you could later single out what you found to be true? Why instead did you consider everything as false, which seems more like adopting a new prejudice than relinquishing an old one? This strategy made it necessary for you to convince yourself by imagining a deceiving God, or some evil demon who tricks us, whereas it would surely have been sufficient to cite the darkness of the human mind or the weakness of our nature. Whatever you say, no one will believe that you have really convinced yourself that not one thing you formerly knew is true, or that your senses, or God, or an evil demon, have managed to deceive you all the time.

Descartes's Response (348-350)

You would have preferred me to have carried out my project by making a simple and brief statement, that is, only in a perfunctory fashion. Is it really so easy to free ourselves from all of the errors which we have soaked up since our infancy? Can we really be too careful in carrying out a project which everyone agrees should be performed?

When you say that there is no need to imagine that God is a deceiver or that we are dreaming and so on, a philosopher would have supposed that he had to supply a reason why these matters should not be called into doubt. Or if he had no such reason, and in fact none exists, then he would not have made the remark.

It is no help in correcting our errors to say that we make mistakes because our mind is in darkness or our nature is weak. This is just like saying that we make mistakes because we are prone to error.

A philosopher would not have said that considering everything as false is more like adopting a new prejudice than relinquishing an old one. Or at least he would have first tried to prove that such a supposition might give rise to the risk of some deception. But you, on the contrary, assert a little later that I cannot compel myself to regard what I supposed to be false as being in fact uncertain and false, i.e. to adopt the new prejudice which you feared I might adopt.

A philosopher would be no more surprised at such suppositions of falsity than he would be if, in order to straighten out a curved stick, we bent it round in the opposite direction. The philosopher knows that it is often useful to assume falsehoods instead of truths in this way in order to shed light on the truth, e.g. when astronomers imagine the equator, the zodiac, or other circles in the sky, or when geometers add new lines to given figures.