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[Brackets] enclose editorial explanations. Small ·dots· enclose material that has been added, but can be read as though it were part of the original text. Occasional •bullets, and also indenting of passages that are not quotations, are meant as aids to grasping the structure of a sentence or a thought. Every four-point ellipsis indicates the omission of a brief passage that seems to present more difficulty than it is worth. The fine translation and edition by John Cottingham (Cambridge University Press) is the basis from which this text was constructed. The seventh set of objections, by Bourdin, is omitted because it is so long and so bad. As first published, Hobbes's comments were divided into sixteen episodes, each immediately followed by Descartes's reply to it. That format is adopted here for all the sets of replies; it involves some strain with the replies to Caterus, but works smoothly for each of the others. Unadorned surnames in this version usually replace something less blunt - 'Dominus Cartesius', 'the author', 'my critic', 'the learned theologian' and so on.

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Objections to Descartes's *Meditations*, and his Replies

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Third Objections (Hobbes), and Descartes's Replies

First Meditation, 'On what can be called into doubt'

OBJECTION

(1) The things that are said in this Meditation make it clear enough that there is no criterion by which we can distinguish our dreams from the waking state and from truthful sensations. So the images we have when we're awake and having sensations aren't properties that inhere in external objects, and don't prove that any such external object exists at all. Therefore, if we follow our senses and leave our reason out of it, we'll be justified in doubting whether anything exists. Thus, I acknowledge the correctness of this Meditation. But since Plato and other ancient philosophers discussed this uncertainty relating to the objects of the senses, and since the difficulty of distinguishing the waking state from dreams is common knowledge, I am sorry that Descartes, who is an outstanding original thinker, should be publishing this old stuff.

REPLY

(1) •The arguments for doubting that Hobbes here accepts as valid are ones that I was presenting as merely plausible. I wasn't hawking them as novelties! ·In offering them, I had three purposes in mind·. (a) I wanted to prepare my readers' minds for the study of things related to the intellect, and help them to distinguish those from corporeal things; and •such arguments seem to be wholly necessary for this purpose. (b) I introduced the arguments partly so that I could reply to them in the subsequent Meditations. (c) And I wanted to show the firmness of the truths that I advance later on, in the light of the fact that they can't be shaken by these metaphysical doubts. I wasn't looking for praise when I presented these arguments; but I don't think I could 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.

Second Meditation, 'The nature of the human mind'

OBJECTION

(2) [In this next paragraph, 'I think' translates *cogito*, and 'I am thinking' translates *sum cogitans*. The latter is deliberately clumsy Latin, which Hobbes uses in order to get *sum* = 'I am' = 'I exist' into the picture.]

'I am a thinking thing.' Right! For from the fact that I think, or have an image (whether I'm awake or dreaming), it follows that I am thinking; for 'I think' and 'I am thinking' mean the same thing. And from the fact that *I am thinking* it follows that *I am*, because something that thinks isn't *nothing*. But when Descartes adds 'that is, I am a mind or intelligence or intellect or reason', a doubt arises.

'I am thinking, therefore I am thought.'

'I am using my intellect, hence I am intellect.'

Neither of those seems to be valid. Compare

'I am walking, therefore I am a walk.'

Descartes is identifying •the thing that understands with •thinking, which is something that the thing *does*. Or at least he is identifying •the thing that understands with •intellect, which is a power ·or faculty· that the thing *has*. Yet all philosophers distinguish a subject from its acts and faculties, i.e. distinguish a subject from its properties and its essences: an entity is one thing, its essence is another; ·the entity *has* the essence·. Hence it may be that the thing that thinks - the subject that *has* mind, reason or intellect - is something corporeal. Descartes assumes that it isn't, but he doesn't prove this. Yet the conclusion that he seems to want to establish is based on this inference.

[This page is kept short so that pagination will be uniform with that of the complete text.]

In the same passage we find the following:

I know that I exist, and am now asking: what is this *I* that I know? If the *I* is understood strictly, as I have been doing, it can't depend on things of whose existence I am still unaware.

It is quite certain that the knowledge of the proposition 'I exist' depends on the proposition 'I think', as Descartes himself has explained to us. But where do we get our knowledge of the proposition 'I think' from? It can only be from our immediate awareness of some *thinking*, together with our inability to conceive an act without its subject - 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 - the thing that performs the act - can be understood only in terms of a body or in terms of matter. Descartes himself shows this later on, with his example of the wax - which despite its changes in colour, hardness, shape and other acts is still understood to be the same thing, i.e. the same matter that is the subject of all these changes. Also, I don't arrive at 'I think' through another thought. Someone can think that he *did* think (for that is simply an act of remembering), but it is impossible to think that one thinks, or to know that one knows. For then an infinite chain of questions would arise: 'How do you know that you know that you know . . . ?'

Knowing the proposition 'I exist' thus depends on knowing the proposition 'I think'; and knowing 'I think' depends on our inability to separate •thought from •the matter that is thinking. So the right conclusion seems to be that the thinking thing is material rather than immaterial.

REPLY

(2) When I said 'that is, I am a •mind, or •intelligence, or •intellect or •reason', I meant those terms to stand not for mere faculties or abilities, but for things that *have* the faculty of thought. Nearly everyone understands the •first two terms in that way, and the •third and fourth are also often understood like that. I said this so explicitly and so often 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 or ability to perform the act, and sometimes to the •thing that has the faculty and performs the act. [Latin doesn't distinguish 'walk' from 'a walk', or 'thought' from 'a thought'. This version follows Cottingham in selecting 'a walk' and 'thought', this being what best fits the context.]

I don't say that the thing that understands is the same as the •act of understanding. And I don't identify the thing that understands with the intellect, if 'the intellect' is taken to refer to a •faculty or capacity; they are identical only if 'the intellect' is taken to refer to the thing that understands. I admit that I referred to this thing or substance using absolutely •abstract words, because I wanted to strip away from it everything that didn't belong to it; whereas Hobbes uses absolutely •concrete words - 'subject', 'matter' and 'body' - to refer to this thinking thing, so as to make it something that couldn't be separated from the body.

I have no fear that anyone will think Hobbes's procedure - running together many different things - is better suited to the discovery of the truth than my procedure of distinguishing each individual item as far as I can. But let's stop discussing words, and come to the subject-matter. 'It may be', Hobbes says, 'that the thing that thinks is something corporeal. Descartes assumes that it isn't, but he doesn't prove this.' But I *didn't* assume it, nor did I 'base' my argument on it. I left it quite undecided until the sixth Meditation, where it is proved.

Hobbes is quite right in saying that ‘we can’t conceive an act without its subject’. We can’t conceive of thought without a thinking thing, because something that thinks isn’t nothing. But he then goes on to say, quite without any reason, and in violation of all usage and all logic: ‘So the right conclusion seems to be that the thinking thing is something corporeal, ·i.e. something in the nature of a body·.’ The subject of any act has to be understood as a •substance, but it doesn’t follow that it must be understood as a •body. Hobbes likes to say that it must be understood as ‘matter’; that is all right, as long as it’s understood to mean *metaphysical* matter, ·but Hobbes means *physical* matter, which is on a par with ‘body’·. [Descartes means ‘metaphysical matter’ to refer to an Aristotelian tradition in which each thing is seen as a combination of *form* with *matter*, where ‘form’ includes all the qualities/properties/attributes/accidents and ‘matter’ stands for whatever it is that *has* the form. In those terms, a mind could be seen as involving •mentalistic acts and properties and of •the ‘matter’ that has them; which doesn’t imply that the mind in question is a ‘material’ thing in the physical sense, something that takes up space etc.]

Logicians and plain folk usually say that some substances are spiritual and some corporeal. All that I proved with the example of the wax was that colour, hardness and shape don’t belong to the concept of *wax*. I wasn’t dealing there with the concept of *mind* or even with that of *body*.

I’ll explain the point briefly. It is certain that a thought can’t exist without a thing that is thinking; and quite generally no act or property can exist without a substance for it to belong to. But we don’t ·ever· come to know a substance •immediately, knowing it in itself, but only •through its being the subject of certain acts. This makes it perfectly reasonable and normal for us to use different names for substances that we recognize as being the subjects of radically different acts or properties, and then later on to consider whether these different names signify different things or one and the same thing. Now there are certain acts ·and properties· that we call ‘corporeal’, such as size, shape, motion and all others that can be thought only in terms of spatial extension; and we label as ‘body’ the substance that they are in - ·i.e. the thing that *performs* the acts and *has* the properties·. We can’t intelligibly supposed that one substance •has shape, and another substance •moves, and so on, because all these acts fall under the common concept of *extension*. There are other acts that 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 that has them a ‘thinking thing’ or a ‘mind’ or any name you like as long as you don’t confuse this substance with corporeal substance. ·That confusion would be very bad·, because •acts of thought have nothing in common with •corporeal acts, and thought (the common concept of the •former) is radically different from extension (the common concept of the •latter). Once we have formed two distinct concepts of these two substances, it is easy, on the basis of what I have said in the sixth Meditation, to establish whether they are one and the same or different. [A passing remark of Descartes’s - ‘One thought can’t be the subject of another thought, says Hobbes; but who ever thought that it could?’ - occurs at the *start* of this paragraph, a position suggesting that it connects with the rest of the paragraph, which it doesn’t.]

OBJECTION

(3) ‘Which of all these activities is •distinct from my thinking? Which of them can be said to be •separate from myself?’

One might answer this question as follows: I who am thinking am •distinct from my thought; but I am not •separate from my thought - I’m •distinct from it ·only· in the way that (to repeat my earlier example) a jumper is distinct from his jump. If Descartes means to suggest that •he who understands is the same as •the understanding, we’ll be going back to the scholastic way of talking: the understanding understands, the sight sees, the will wills, and, by a very close analogy,

the walking (or at least the faculty of walking) walks. All these expressions are obscure, improper, and quite unworthy of Descartes's usual clarity.

REPLY

(3) I don't deny that I, who am thinking, am distinct from my thought, in the way a thing is distinct from a mode or property that it has. But when I ask 'Which of all these activities is distinct from my thinking?', I'm referring to the various ways of thinking that I have just listed, not to myself as a substance. And when I add, 'Which of them can be said to be separate from myself?', I simply mean that all these ways of thinking inhere in me. I don't see how one can pretend that there is any doubt or obscurity here.

OBJECTION

(4) 'I'm forced to admit that the nature of this piece of wax isn't revealed by my imagination, but is conceived [Descartes wrote 'perceived'] by the mind alone.'

•Imagining (i.e. having an idea) is *very* different from •mentally conceiving (i.e. reasoning one's way to the conclusion that something is, or exists). But Descartes hasn't explained what the difference is. Even the Aristotelians in ancient times taught clearly enough that a substance is not perceived by the senses but is inferred by reasoning.

Now, suppose it turned out that reasoning is nothing but the joining together and linking of names or labels by means of the verb 'is' - what should we say then? It would follow that the inferences in our reasoning tell us nothing about the nature of things, but merely tell us about the labels applied to them - specifically, tell us whether we are combining the names of things in compliance with the arbitrary conventions that we have laid down for what they are to signify. If this is so, as it may well be, it will follow that reasoning depends on names, that names depend on the imagination, and that imagination depends (as I believe it actually does) on the motions of parts of our bodies. So the bottom line will be this: the mind is nothing more than the movements of various parts of an organic body.

REPLY

(4) I did explain the difference between •imagination and a •purely mental conception in this very example, where I listed the features of the wax that we imagine and those that we conceive by using the mind alone. And in another place I also explained how one and the same thing, say a pentagon, is •understood in one way and •imagined in another. As for the joining that occurs in reasoning, what we join are not •names but •things signified by them, and I'm surprised that anyone should think otherwise. Who doubts that a Frenchman and a German can reason about the same things, although the words they think of are completely different? And surely Hobbes refutes his own position when he talks of 'the arbitrary conventions that we have laid down for what words are to signify'. For if he grants that the words signify something, why won't he allow that our reasoning deals with this signified *something* rather than merely with the words? As for his conclusion that the mind is a movement, if he is entitled to say *that* then he is entitled to say that the earth is the sky, or anything else he likes!

Third Meditation, 'The existence of God'

OBJECTION

(5) 'Some of my thoughts are, so to speak, images or pictures of things - as when I think of a man, or a chimera, or the sky, or an angel, or God - and strictly speaking these are the only thoughts that should be called "ideas".'

When I think of a •man, I am aware of an idea or image with a certain shape and colour; and I can wonder whether this image portrays a man. Similarly when I think of the sky. When I think of a •chimera, I am aware of an idea or image, and I can wonder whether it portrays a non-existent animal that could exist, or one that may but may not have existed at some previous time.

But when I think of an •angel, what appears before my mind is an image, now of a flame, now of a beautiful child with wings, but nothing that accurately portrays an angel - so it isn't an *idea* of an angel. But I believe that there are invisible and immaterial creatures who serve God; and we give the name 'angels' to these things that we believe in or suppose to exist. But the idea I use in order to 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 'God'. That's why we are forbidden to worship God in the form of an image; for if we did, 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, knows that there is something that makes him hot; and when he hears this being called 'fire' he concludes that fire exists. But he doesn't know what shape or colour fire has, and absolutely no idea or image of fire appears before his mind. The same applies to a man who recognizes that his images or ideas must have a cause, which must have a prior cause, . . . and so on until eventually he arrives at the supposition of some eternal cause that can't have a *prior* cause because it never *began* to exist. And so he concludes that something eternal must necessarily exist. But he has no idea that he could call the 'idea of' that eternal being; he merely gives the name or label 'God' to the thing that he admits or believes in.

Now, from the ·very suspect· premise that we have an idea of God in our soul, Descartes proceeds to derive the theorem that God (i.e. the supremely wise and powerful creator of the world) exists. But he ought to have •given a better account of this 'idea' of God, and to have •inferred - ·showing how the inference works· - not only the existence of God but also the creation of the world.

REPLY

(5) Hobbes wants the term 'idea' to be used to refer only to the images of material things that are portrayed in the corporeal imagination; and with this on board he can easily 'prove' that there can't be any proper idea of an angel or of God. But I make it quite clear in several places throughout the *Meditations*, and especially in this very place, that I take 'idea' to refer to *whatever is immediately perceived by the mind*. For example, when I want (or fear) something, I simultaneously perceive that I want (or am afraid); and that's why I count wanting and fearing among my ideas. I used the word 'idea' because it was the term that philosophers standardly used to refer to the kinds of perception belonging to the divine mind, although we recognize that God doesn't have any corporeal imagination. And I had no more appropriate term at my disposal. I think I explained the idea of God fully enough to satisfy anyone who is prepared to attend to my meaning; I cannot possibly satisfy those who prefer to give my words a different sense from the one I intended. As for the final comment about the creation of the world - that is quite irrelevant.

OBJECTION

(6) 'Other thoughts have more to them than that: thus when I will, or am afraid, or affirm, or deny, my thought represents some particular thing but it also includes •something more than merely the likeness of that thing. Some thoughts in this category are called volitions or emotions, while others are called judgments.'

When someone wills, or is afraid, he has an image of the thing that he fears or the action that he wills; but what is the •‘something more’ that his thought includes? This isn’t explained. Even if fear were a thought, I don’t see how it could be anything but the thought of the thing we are afraid of. For *fear of a charging lion* is nothing but *the idea of a charging lion* together with *the effect that this idea has on the heart*, which in turn causes in the frightened man the animal motion that we call ‘flight’. And this motion of fleeing is not a thought; so we are left with the conclusion that fear doesn’t involve any thought except the thought that portrays the thing feared. And the same applies to willing.

As for affirmation and denial, these don’t exist apart from language and names; which is why brute beasts can’t affirm or deny, even in thought; and therefore can’t make judgments. But *thought* may be similar in man and beast. For when we say ‘That man is running’ our thought is just like the thought that a dog has when it sees its master running. Therefore, affirmation and denial don’t add anything to simple *thoughts*, except perhaps the thought that the names involved in the assertion stand for the very things that the asserter means them to stand for. And that isn’t a case of a thought’s including more than a portrayal of a thing; it’s a case of portraying the thing twice.

REPLY

(6) It is *self-evident* that •seeing a lion while being afraid of it is different from simply •seeing it; and that •seeing a man run is different from •silently affirming to oneself that one sees him. I don’t see anything here that needs answering. **OBJECTION**

(7) ‘ It remains for me only to ask *how* I received this idea from God. I didn’t get it from the senses: it has never come to me unexpectedly, as do most of the ideas that occur when I seem to see and touch and hear things. And it’s not something that I invented, either; for clearly I can’t take anything away from it or to add anything to it. The only remaining alternative is that my idea of God is innate in me, just as the idea of myself is innate in me.’

If there isn’t any idea of God (it hasn’t been proved that there is, and there seems not to be), then this entire argument collapses. As for ‘the idea of myself’: if ‘myself’ refers to •my body then this idea arises from eyesight; and if it refers to my soul, then there isn’t any idea of it. We infer by reason that there is •something in the human body that causes in it the animal movements by which it has sensations and moves; and we call this •something a ‘soul’, without having an idea of it.

REPLY

(7) If there is an idea of God (and obviously there *is*), then this entire objection collapses. As for the further claim that (a) we don’t have an idea of the soul but (b) infer its existence by reason, this amounts to saying that (a) we don’t have an image ·or likeness· of the soul in the corporeal imagination, but (b) we nevertheless do have what I call an ‘idea’ of it.

OBJECTION

(8) ‘The other idea of the sun is based on astronomical reasoning, i.e. is derived from certain notions that are innate in me.’

Whether we are •looking at the sun with our eyes, or •learning through reasoning that it is much bigger than it looks, it seems that there is only one idea of the sun at any one time. The ‘other idea’ isn’t an *idea* of the sun; it is a reasoned *inference* that the idea of the sun would be many times larger if one looked at the sun from a much closer distance.

There can of course be different ideas of the sun at different times, e.g. if one looks at the sun with the naked eye and then later looks at it with a telescope. But astronomical arguments don't make the idea of the sun larger or smaller; what they do is to show that the idea acquired from the senses is deceptive.

REPLY

(8) Here again, what Hobbes says is not an idea of the sun, but which he nevertheless describes, is the very thing that I call an 'idea'.

OBJECTION

(9) 'Undoubtedly, the ideas that represent substances amount to something more - they contain within themselves more representative reality - than do the ideas that merely represent modes [= 'qualities']. Again, the idea that gives me my understanding of a supreme God - eternal, infinite, omniscient, omnipotent and the creator of everything that exists except for himself - certainly has in it more representative reality than the ideas that represent merely finite substances.'

I have already remarked, *often*, that we don't have any idea of God or of the soul. I now add that we don't have any idea of substance. For substance, considered as the 'metaphysical' matter [see note on page 41] that is the subject of accidental properties and of changes, is something that is brought out purely by reasoning; it isn't something that is conceived, or that presents any idea to us. If this is true, how can it be said that ideas that represent substances to me have more to them, contain more representative reality, than those that represent qualities? And Descartes should re-think what 'more reality' means. *Does* reality admit of more and less? Does he think that one thing can be more of a thing than another? [Reminder: in Latin 'reality' and 'thing' - *realitas* and *res* - are cognate terms.] If so, he should think about how to explain this to us with the degree of clarity that every demonstration demands, and that he himself has employed elsewhere.

REPLY

(9) I have pointed out, *often*, that I use the term 'idea' to apply to •what is brought out by reasoning as well as •anything else that is perceived in any way whatsoever. And I have adequately made clear how reality admits of more and less. A substance is more of a thing than a mode; if there are real qualities or incomplete substances, they are things to a greater extent than modes but to a lesser extent than complete substances; and, finally, if there is an infinite and self-sufficient substance, it is more of a thing than a finite and dependent substance. All this is completely self-evident. [For an explanation of 'real qualities', see the note on pages 74-5.]

OBJECTION

(10) 'So there remains only the idea of God: is there anything in *that* which couldn't have originated in myself? By the word "God" I understand

- a •substance that is
 - infinite,
 - independent,
 - supremely intelligent,
 - supremely powerful,
 - the creator of myself and of anything else that may exist.

The more carefully I concentrate on these attributes, the less possible it seems that *any* of them could have originated from me alone. So this whole discussion implies that God necessarily exists.'

When I consider the attributes of God in order to get an idea of God and to see whether that idea contains anything that couldn't have been derived from myself, what I think I find is this:- What I think of in connection with the name 'God' doesn't originate in myself but needn't be derived from any source other than external ·material· objects. By the term 'God' I understand

a •substance,

i.e. I understand that God *exists*, though I get this not from an idea but from reasoning.

•Infinite,

i.e. I can't conceive or imagine any supposed limits or outermost parts of it without being able to imagine further parts beyond them; so that what the term 'infinite' presents me with is not an idea of the infinity of God but an idea of my own boundaries or limits.

•Independent,

that is, I don't conceive of a cause that produced God; which makes it clear that the ·only· idea I have linked to the term 'independent' is simply the memory of my own ideas, which began at different times and hence are dependent ·on the causes, whatever they were, that started them up·. Hence 'God is independent' simply means that God is one of the things for which I can't imagine an origin. And 'God is infinite' means that God is one of the things that we don't conceive of as having bounds. This rules out any *idea* of God - for what sort of idea is it that has no origin and no limits?

•Supremely intelligent.

What, may I ask, is the idea through which Descartes understands the operation of God's understanding?

•Supremely powerful.

Again, through what idea is *power* understood - power that relates to future things, i.e. things that don't yet exist? My own understanding of power comes from an image or memory of past events, and I arrive at it as follows: 'It did that, so it was able to do that, so if it continues to exist it will be able to do that again - which is to say that it has the *power* to do that.' And these are all ideas that could have arisen from external objects.

•The creator of all that exists.

I can construct a sort of image of creation from what I have seen, e.g. a man being born or growing from a single point (as it were) to the size and shape that he now has. That's the only sort of idea anyone has to go with the term 'creator'. But our ability to imagine the world to have been created isn't an adequate proof of the creation! Even if it had been demonstrated that there exists something infinite, independent, supremely powerful etc., it still wouldn't follow that a creator exists. Unless anyone thinks that the following inference is correct: 'There exists a being whom we believe to have created all things; therefore, the world was in fact created by him at some stage'!

Also, when Descartes says that the ideas of God and of our souls are innate in us, I want to know: when people are in a deep, dreamless sleep, are their souls *thinking*? If they aren't, they don't have any ideas at that time. It follows that no idea is innate, because what is innate is always present.

REPLY

(10) Nothing that we attribute to God can have been derived from external objects by copying them, because nothing in God resembles anything in external things, i.e. bodies. And elements in our thought that don't •resemble external objects clearly can't have •come from external objects, and must have come from ·another· cause that produced this diversity in our thought

What, may I ask, is the method Hobbes uses to derive his notion of God's understanding from external things? I can easily explain the idea *I* have of God's understanding; for by 'idea' I mean 'anything that is the form of some perception'. [Descartes thinks of a perception as a fully detailed mental event, and the ideas that it involves are aspects of it, properties of it, its 'form'.] Now *everyone* perceives that he understands some things. So everyone has the form - or idea - of *understanding*; and by indefinitely extending this he can form the idea of God's understanding; and similarly with God's other attributes.

I proved the existence of God by using the idea of God that is within me. This idea contains a representation of such immense power that I understand that if God exists it is a contradiction that anything else should exist that he didn't create. The upshot, clearly, is that in demonstrating the existence of God I also demonstrated that God created the entire world, i.e. everything that exists apart from him.

Lastly, when we say that an idea is innate in us, we don't mean that it is always on view; that would mean that no idea was innate. All we mean is that we have within ourselves the faculty or ability to summon up the idea.

OBJECTION

(11) 'The core of the argument is this: I couldn't exist with the nature that I have - that is, containing within me the idea of God - if God didn't really exist. By "God" I mean the very being the idea of whom is within me.'

Well, it hasn't been demonstrated that we have the idea of God; and the Christian religion obliges us to believe that God cannot be conceived of (which I think implies that we have no idea of him); so it follows that no demonstration has been given of the existence of God, let alone of the creation of the world.

REPLY

(11) When they say that God 'cannot be conceived of', this means 'conceived of in such a way as to have a fully adequate grasp of him. As for how we can have an idea of God, I have gone over this till I'm sick of it! There's absolutely nothing in this objection to invalidate my demonstrations.

Fourth Meditation, 'Truth and Falsity'

OBJECTION

(12) 'So error is not something real, but is merely a defect. So there is nothing positively error-producing in the faculty of judgment that God gave me.'

Certainly *ignorance* is merely a defect, and we don't need any positive faculty or power in order to be ignorant; but it's not obvious that the same thing holds for *error*. Why can't sticks and stones be guilty of errors? It seems to be because they don't have the power of reasoning and imagining. If that is right, then it follows that one can't err unless one has the power of reasoning, or at least the power of imagining; and these are *positive* faculties that have been given to everyone who sometimes errs, and not to anyone else.

What is more, a page later Descartes writes: 'It comes to my attention that my errors have two co-operating causes - my faculty of knowledge and my faculty of choice or freedom of the will.' This seems to contradict the earlier passage. It should also be noted that Descartes *assumes* freedom of the will, opposing the view of the Calvinists but giving no argument for his view.

REPLY

(12) It's true that in order to go wrong we need the faculty of reasoning, or rather of judging (i.e. affirming and denying), because error is a defect in this faculty. But it doesn't follow that this

defect is something real, any more than *blindness* is something real. I am sure Hobbes would agree about blindness, but then he should consider the fact that sticks and stones cannot see and yet we don't call them 'blind'. I am surprised that so far I haven't found a single valid argument in these objections.

I don't see why the passage about 'two co-operating causes' is said to contradict the earlier one.

On the question of our freedom, all I 'assumed' was something that we all experience within ourselves. Our freedom is very evident by the natural light. There may indeed be many people who worry about how •God's pre-ordaining everything is consistent with our being free. But anyone who simply thinks about •us will realize from his own experience that voluntariness and freedom are one and the same thing; and of course it is beyond dispute that many of our actions are voluntary. This is no place for examining the opinion of other people on this subject.

OBJECTION

(13) 'For example, a while ago I asked whether anything in the world exists, and I came to realize that the fact of my raising this question shows quite clearly that *I* exist. I understood this so clearly that I couldn't help judging that it was true. This wasn't the "couldn't help" that comes from being compelled by some external force. What happened was just this: *a great light in the intellect was followed by a great inclination in the will*. I wasn't in a state of indifference, but this lack of indifference was a measure of how spontaneous and free my belief was.' ['Indifference' is the state of being evenly balanced between two alternatives - not forced or even slightly pushed towards one of them.]

The phrase 'a great light in the intellect' is metaphorical, and so has no argumentative force. And in any case, *anyone* who •has no doubt concerning some opinion of his claims to •have this sort of 'great light' and is just as strongly drawn to affirm his opinion as someone would be who •had real knowledge of it. So this 'light' can explain why someone stubbornly defends or holds on to a given opinion, but not why he *knows* it to be true.

Further, it's not only •knowing something to be true that lies outside the scope of the will, but also •believing it or •assenting to it. If something is supported by valid arguments, or reported as credible, we are forced to believe it. It is true that affirming and denying propositions, defending and refuting them, are acts of will; but it doesn't follow that our inner assent depends on the will.

Thus, no valid demonstration is given for the conclusion that 'The privation that constitutes the essence of error lies in the incorrect use of free will'. [A privation - Latin *privatio* - is an absence, or lack, of something that ought to be present; Descartes holds that being in error is merely *not* having some knowledge that one ought to have. He and some of his critics often use *privatio* just to mean lack or absence, with no implication about what ought to be present; for example on pages 62-3 the question of whether cold is just a 'privation' of heat, translated there by 'absence'.]

REPLY

(13) It is quite irrelevant whether the phrase 'a great light' has •argumentative force; what matters is whether it has •explanatory force - and it does! Everyone knows that 'light in the intellect' is taken to mean transparent clarity of knowledge. Perhaps not everyone who thinks he has this does in fact have it, but that doesn't stop it from being quite different from a stubborn opinion that is arrived at without any evident perception.

As for the claim that we assent to things that we clearly perceive, 'even if we don't want to', that's like saying that we seek a clearly known good even if we don't want to! The qualification 'even if we don't want to' is inappropriate in such contexts, because it implies that

we both will and don't will the same thing. [The clause 'even if we don't want to' replaces the Latin *volentes nolentes* = 'wanting-to not-wanting-to'. It's like the English 'willy-nilly', but it would hardly do to have Descartes saying 'the qualification "nilly" is inappropriate!']

Fifth Meditation, 'The Essence of Material Things'

OBJECTION

(14) 'Even if there are not and never were any triangles anywhere outside my thought, still, when I imagine a triangle there is a determinate nature or essence or form of *triangle* that is eternal, unchanging, and independent of my mind. This is shown by the fact that the triangle can be demonstrated to have various properties.'

If triangles don't exist anywhere, I don't understand how *triangle* can have a nature. For what isn't anywhere doesn't exist, and so doesn't have any essence or nature. A triangle in the mind comes from a triangle we have seen, or else it is made up out of things we have seen. But once we give the name 'triangle' to the thing from which, we *think*, the idea of a triangle came, then the •name remains even if the triangle itself is destroyed. Similarly, when our thought leads us to conceive that the angles of a triangle add up to two right angles, and we give the triangle this second name 'having its angles equal to two right angles', then the •name would remain even if no angles existed in the world; and so this will be the case:

The proposition 'a triangle is that which has its angles equal to two right angles' is forever true.

But this will not be the case:

The nature of a triangle exists for ever;
for it may be that every single triangle will cease to exist.

Similarly, the proposition 'Man is an animal' is eternally true because the names are eternal; but when the human race ceases to be, there will be no human nature any more.

This shows clearly that *essence*, considered as distinct from *existence*, is merely a linking of names by the verb 'is'. And hence *essence without existence* is a human artifact. It seems that •essence is to •existence as •the mental image of a man is to •the man. Or •we could say that •the essence of Socrates is to the •existence of Socrates as •the proposition 'Socrates is a man' is to •the proposition 'Socrates exists'. At a time when Socrates doesn't 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. [Hobbes has said that so-called 'essences' are merely pairs of 'names' linked by 'is' (Latin *est*). In that last sentence he throws in 'or "to be"' (Latin *vel esse*), Why? Because *esse* - 'to be' - is the root of *essentia* = 'essence'. This little subtlety is lost when we move out of Latin.]

REPLY

(14) The distinction between essence and existence is known to everyone. And this talk about eternal names, as opposed to concepts or ideas of eternal truths, has already been amply refuted.

Sixth Meditation, 'The existence of material things'

OBJECTION

(15) 'God has given me no faculty for finding out whether ideas are emitted by bodies or not; but he has strongly inclined me to believe that bodies produce them. So if the ideas were transmitted from a source other than corporeal things, God would be a deceiver; and he is not. So bodies exist.'

It is generally thought that doctors aren't at fault if they deceive their patients for their health's sake, and that fathers aren't at fault if they deceive their children for their own good. The wrongness of deception consists not in the falsity of what is said but in the harm done by the

deceiver. Descartes should thus consider whether the proposition ‘God can never deceive us’ is *universally* true. For if it isn’t universally true, the conclusion ‘So bodies exist’ doesn’t follow.

REPLY

(15) My conclusion doesn’t require that we can never be deceived (indeed, I have readily admitted that we are often deceived). All it requires is that we aren’t deceived in cases where our going wrong would be evidence that God intended to deceive us - which would be inconsistent with his essence. Yet again, bad argument!

OBJECTION

(16) ‘For I now notice that the waking state is vastly different from dreams, in that dreams are never linked by memory with all the other actions of life as waking experiences are.’

Consider someone who dreams that he isn’t sure whether or not he is dreaming; couldn’t he *dream* that his dream fits in with his ideas of a long series of past events? If this is possible, then the dreamer will judge certain items that appear to be events from his past life to be true occurrences, just as he might if he were awake. Moreover, as Descartes himself asserts, the certainty and truth of all knowledge depends solely on our knowledge of the true God. But in that case an atheist can’t infer that he is awake on the basis of memory of his past life. The alternative is that someone can know he is awake without knowledge of the true God.

REPLY

(16) A dreamer cannot *really* connect his dreams with the ideas of past events, though he may dream that he does. Everyone knows 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 if he doesn’t know that he was created by a non-deceiving God, he can’t know for sure that this criterion is sufficient to make it certain that he isn’t mistaken.

Fourth Objections (Arnauld) and Descartes’s Replies

INTRODUCTION TO THE OBJECTIONS

[Arnauld, born in 1612, wrote these Objections in 1640; his important exchange of letters with Leibniz began in 1686! Here he addresses his comments to Mersenne, who had solicited them.] You have done me a kindness, but are making me pay a high price for it! You have allowed me to see this brilliant work only on condition that I make public my opinion of it. This is a hard condition, which I have been driven to accept by my eagerness to see this superb piece of work. . . . You know how highly I rate the power of Descartes’s mind and his exceptional learning.

The work you are giving me to scrutinize requires an uncommon intellect; and if *you* overrate my powers, that doesn’t make *me* any less aware of my own inadequacy. The work also requires a mind that is calm, free from the hurly-burly of all external things, and attentive to *itself* - which can happen only if the mind meditates attentively and focuses on itself. You know this, and you also know about all the tiresome duties that are keeping me busy; but still you command, and I must obey! If I go astray it will be your fault, since it’s you who are making me write.

This work could be claimed to belong entirely to philosophy; but Descartes has very properly submitted himself to the judgment of the theologians, so I am going to play a dual role here. I shall first present what seem to me to be the possible philosophical objections concerning the major issues of the nature of our mind and [starting at page 61] of God; and then [starting at page 72] I shall present problems that a theologian might come up against in the work as a whole.

INTRODUCTION TO REPLIES

[Descartes addresses his replies to Mersenne.] I couldn't possibly wish for a more perceptive or more courteous critic of my book than ·Antoine Arnauld·, whose comments you have sent me. He has dealt with me so gently that I can easily see his good will towards myself and the cause I am defending. ·He does attack various things in the *Meditations*, but two aspects of his attacks keep me cheerful. •When he does attack me, he has looked into the issues so deeply, and examined all the related topics so carefully, that I am sure there aren't any other difficulties that he has overlooked. •And where he thinks my views are not acceptable, he presses his criticisms so acutely that I'm not afraid of anyone's thinking that he has kept back any objections for the sake of the cause. So I am not so much •disturbed by his criticisms as •happy that he hasn't found more to attack.

OBJECTIONS CONCERNING THE NATURE OF THE HUMAN MIND

The first thing that I find remarkable is that Descartes has based his whole philosophy on a principle that was laid down by St Augustine - a man of amazing abilities in theology and also in philosophy. In his book *On Free Will* a participant in a dialogue [Arnauld gives the details] prepares the way for a proof of the existence of God, thus:

First, if we start from what is most evident, I ask you: Do you yourself exist? Or are you perhaps afraid of making a mistake in your answer? ·You shouldn't be, because· if you didn't exist it would be quite impossible for you to make a mistake.

Compare that with what Descartes says:

·Perhaps· there is a supremely powerful and cunning deceiver who deliberately deceives me all the time. Even then, if he is deceiving me I undoubtedly exist.

But let us move on from this to the more central matter of Descartes's way of getting from this principle to the result that our mind is separate from our body [Arnauld here fairly represents Descartes's argument, but this isn't an exact quotation from the *Meditations*]:

•I can doubt whether I have a body, and even whether there are any bodies at all in the world; but I can't doubt that I am, or that I exist, so long as I am doubting or thinking.

•So I who am doubting and thinking am not a body. For if I were, my doubts about my body's existence would be doubts about *my* existence, and we have just seen that the latter doubt is ruled out.

•Indeed, even if I stubbornly maintain that there are no bodies whatsoever, the conclusion I have reached still stands: I am something, and therefore I am not a body.

This is certainly very acute. But someone will bring up the objection that Descartes raises against himself: the fact that I have doubts about bodies, or even deny that there are any, doesn't make it the case that no body exists. He writes [this is quoted from the *Meditations*]:

These things that I suppose to be nothing because they are unknown to me - mightn't they in fact be identical with the *I* of which I am aware? I don't know; and just now I shan't discuss the matter, because I can form opinions only about things that I know. I know that I exist, and I am asking: what is this *I* that I know? My knowledge of it can't depend on things of whose existence I am still unaware.

But Descartes admits ·in his Preface to the *Meditations*· that in the ·version of the· argument set out in his *Discourse on the Method*, the proof excluding anything corporeal from the nature of the mind was put forward not 'in an order corresponding to the actual truth of the matter' but in an order corresponding to his 'own perception' - so that the sense of the passage was that he wasn't aware of anything that *he knew* belonged to his essence except that he was a thinking thing. That

makes it clear that the objection still stands, exactly as before, and that he still owes us an answer to the question ‘How does he get from the premise that •he isn’t aware of anything else belonging to his essence to the conclusion that •nothing else does in fact belong to it?’ I admit that I’m a bit slow about such things, but I haven’t been able to find an answer to this question anywhere in the second Meditation. It seems, though, that Descartes *does* attempt a proof of this conclusion in the sixth Meditation, ‘presumably postponing it because’ he takes it to depend on his having clear knowledge of God, which he hadn’t yet achieved in the second Meditation. This is how the proof goes:

I know that (1) if I have a clear and distinct thought of something, God could have created it in a way that exactly corresponds to my thought. So the fact that (2) I can clearly and distinctly think of one thing apart from another assures me that the two things are distinct from one another - ‘that is, that they really are *two*’ - since they can be separated by God. Never mind *how* they could be separated; that doesn’t affect the judgment that they are distinct. . . . On the one hand I have a clear and distinct idea of myself as something that thinks and isn’t extended, and one of body as something that is extended and doesn’t think. So it is certain that I am really distinct from my body and can exist without it.

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

First of all, if premise (1) of this argument is to be true, its topic must be not •any kind of knowledge of a thing, or even •clear and distinct knowledge, but rather •knowledge that is adequate. For Descartes admits in his reply to Caterus [page 16] that for one thing to be conceived distinctly and separately from another they don’t have to be really distinct - ‘i.e. to be two things rather than one’ - and that all that is needed is for them to be ‘formally distinct’, which can be achieved ‘by an abstraction of the intellect that conceives the thing inadequately’. And in that same passage he draws the following conclusion:

In contrast with that, when I think of a body as merely something having extension, shape and motion, and deny that it has anything belonging to the nature of mind, this involves me in a complete understanding of what a body is. Conversely, (2) I understand the mind to be a complete thing that doubts, understands, wills, and so on, while denying that it has any of the attributes contained in the idea of a body. This would be quite impossible if the mind weren’t really distinct from the body.

But someone may question whether (2) is true, and maintain that the conception you have of yourself (‘your mind’) when you conceive of yourself as a thinking, non-extended thing is an inadequate one; and the same may be true of your conception of yourself (‘your body’) as an extended, non-thinking thing. So we must look at how this is proved in the earlier part of the argument. For I don’t think that this matter is so clear that it should be assumed without proof as a first principle that can’t ‘and therefore needn’t’ be demonstrated.

Let us start with the first part of your claim, namely that

when you think that a body is merely something having extension, shape, motion etc., and deny that it has anything in the nature of a mind, you have a complete understanding of what a body is.

This ‘is evidently true, but it’ doesn’t do much for you. Those who maintain that our mind is a body don’t infer from this that every body is a mind. On their view, •body relates to •mind as •genus to •species. A *complete* thought of a genus can leave out a species, and can even include a denial of properties that are special to that species - which is why logicians say ‘The negation of

the species doesn't negate the genus', for example, 'x is not a marmoset' doesn't entail 'x is not a mammal'. Thus I can understand the genus *figure* without bringing in my understanding of any of the properties that are special to a *circle*. So it remains to be proved that the mind can be completely and adequately understood apart from the body.

I can't see anywhere in the entire work an argument that could serve to prove this claim, apart from what is laid down at the start [this isn't an exact quotation from the *Meditations*]:

I can deny that *any body* exists, or that anything is extended, but while I am thus denying, or thinking, it goes on being certain to me that *I* exist. Thus, I am a thinking thing, not a body, and *body* doesn't come into the knowledge I have of myself.

But so far as I can see, all that follows from this is that I can obtain some knowledge of myself without knowledge of the body. But it isn't transparently clear to me that this knowledge is *complete and adequate*, enabling me to be certain that I'm not mistaken in excluding body from my essence. I'll explain through an example.

Suppose someone knows for certain that the angle in a semi-circle is a right angle, and thus that this angle and the diameter of the circle form a right-angled triangle. In spite of knowing this, he may •doubt, or •not yet have grasped for certain, that the square on the hypotenuse equals the sum of the squares on the other two sides; indeed he may even •deny this if he has been misled by some fallacy. (For brevity's sake, I'll express this as 'the triangle's having the property P'.) But now, if he argues in the same way that Descartes does, he may appear to have confirmation of his false belief, as follows: 'I clearly and distinctly perceive that the triangle is right-angled; but I doubt that it has the property P; therefore it doesn't belong to the essence of the triangle that it has the property P.'

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

Therefore, 'I might argue', the property P that I can doubt - or indeed that I can *remove* - while leaving my idea 'of the triangle' intact doesn't belong to the essence of the triangle. Now look again at what Descartes says:

I know that if I have a clear and distinct thought of something, God could have created it in a way that exactly corresponds to my thought. So the fact that I can clearly and distinctly think of one thing apart from another assures me that the two things are distinct from one another - i.e. that they are *two* - since they can be separated by God.

Well, I clearly and distinctly understand •that this triangle is right-angled, without understanding •that the triangle has the property P. It follows, on Descartes's pattern of reasoning, that God at least could create a right-angled triangle with the square on its hypotenuse not equal to the sum of the squares on the other sides!

The only possible reply to this that I can see is to say that the man in this example *doesn't* clearly and distinctly perceive that the triangle is right-angled. But how is my perception of the nature of my mind any clearer than his perception of the nature of the triangle? He is just as certain •that the triangle in the semi-circle has one right angle (which is the criterion of a right-angled triangle) as I am 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 property P doesn't belong to the nature 'or essence' of the triangle. Similarly, although I clearly and distinctly know my nature to be something that thinks,

mightn't I also be *wrong* in thinking that nothing else belongs to my nature apart from my being a thinking thing? Perhaps my being an extended thing *also* belongs to my nature.

Someone might also point out that since I infer my •existence from my •thinking, it's not surprising if the •idea that I form by thinking of myself in this way represents me to myself purely as a thinking thing; for the •idea was derived entirely from my thought. So •this idea can't provide any evidence that only what is contained in •it belongs to my essence.

One might add that the argument seems to prove too much, and takes us back to the Platonic view (though Descartes rejects it) that nothing corporeal belongs to our essence, so that man is only a mind, with the body being merely its vehicle - giving rise to the definition of man as 'a mind that makes use of a body'.

You might reply, 'in an attempt not to be pushed to the Platonic extreme of denying that I am any way corporeal', that body is

- excluded from my essence only in so far as I am a thinking thing,

and not

- excluded from my essence *period*.

But that could raise the suspicion that in my knowledge of myself as a thinking thing I don't, 'after all', have a complete and adequate conception of myself, but only an inadequate conception reached through 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. Well, in the same way someone might suspect that every thinking thing is also an extended thing, having •the attributes that all extended things have - shape, motion, etc. - and also •the special power of thought. Given that it had that power, it could by an intellectual abstraction be thought of as just a thinking thing, though really it had bodily attributes as well. In the same way, although quantity can be conceived in terms of length alone, in reality breadth and depth belong to every quantity, along with length.

The difficulty is increased by the fact that the •power of thought seems to be tied to bodily organs, since •it can be thought to be dormant in infants and extinguished in madmen. Impious soul-destroyers - 'i.e. those who deny there is such a thing as the soul' - make a great deal of this fact; but it can also be appealed to by those who think that there are indeed souls, which are bodies.

Up to here I have been discussing the real distinction between our mind and the body. But since Descartes has undertaken to demonstrate •the immortality of the soul, we ought to ask whether •this obviously follows from soul's being distinct from the body. No it doesn't, according to the philosophical principles of the man in the street; for people ordinarily take it that the souls of brute animals are distinct from their bodies, but nevertheless perish along with them.

I reached this point in my comments, and was planning to show how Descartes's own principles, which I thought I had gathered from his way of doing philosophy, would make it easy to infer •the immortality of the soul from •the mind's real distinctness from the body. But then a little study composed by our illustrious author - 'namely, his 'Synopsis of the *Meditations*' - was sent to me. It sheds much light on the *Meditations* as a whole, and offers the treatment of the immortality issue that I had been about to propose. As for the souls of the brutes, Descartes elsewhere indicates that they don't have souls; all they have is a body whose structure of parts is such that all the movements we see 'the animal make' can be produced *in* it and *by means* of it.

I'm afraid this view won't be widely accepted unless it is supported by very solid arguments. Consider just one example:

The light reflected from the body of a wolf onto the eyes of a sheep moves the tiny fibres of the optic nerves, and when this motion reaches the brain it spreads the animal spirits throughout the nerves in the manner required for the sheep to start running away.

At first sight it seems incredible that this should happen without the assistance of any soul. [Cartesians and others believed in ‘animal spirits’, which have been described as the animal body’s ‘hydraulic system’ - a fluid or gas that was so superfine that it could move around the body very fast and get in anywhere.]

I want to add here that I wholly agree with Descartes’s views about •how imagination differs from intellect or thought, and about •how much more certain we can be of things we have grasped through reason than of what we observe through the bodily senses. I long ago learned from Augustine that we must completely dismiss those who think that what we see with the intellect is less certain than what we see with these bodily eyes He wrote that when doing geometry he found •the senses to be like a ship, because . . .

when •they had brought me to the place I was aiming for, I sent them away; and now that I was standing on dry land I started to examine these ‘geometrical’ matters using only my thought, ‘with no appeal to my senses’, though for a long time my footsteps were unsteady. Thus, I think that a man has a better chance of •sailing on dry land than of •perceiving geometrical truths through the senses, although the senses do seem to help a little when we begin to learn.

REPLIES CONCERNING THE NATURE OF THE HUMAN MIND

I shan’t waste time here by thanking my distinguished critic for bringing in Augustine’s authority to support me, and for setting out my arguments so vigorously that his ‘main’ fear seems to be that others won’t see how strong they are.

But I will begin by pointing out *where* it was that I set out to prove that from

•the fact that all I am aware of as belonging to my essence (that is, the essence of the mind alone) is my being a thinking thing

it follows that

•nothing else does in fact belong to my essence

- namely, in the place where I proved that God exists, a God who can bring about everything that I clearly and distinctly recognize as possible.

Now there may be much within me that I’m not yet aware of. For example, in the passage in question I was supposing that I wasn’t yet aware - ‘as I would come to be in the sixth Meditation’ - that the mind had the power of moving the body, or that the mind was substantially united to the body. [That later awareness was expressed in a memorable passage in the sixth Meditation:

Nature teaches me, through these sensations of pain, hunger, thirst and so on, that I (a thinking thing) am not merely *in* my body as a sailor is in a ship. Rather, I am *closely joined to it* - intermingled with it, so to speak - so that it and I form a unit. If this weren’t so, I wouldn’t *feel* pain when the body was hurt but would *perceive* the damage in an intellectual way, like a sailor seeing that his ship needs repairs.

Descartes uses ‘substantial unity’ and its cognates in various places, though not in the *Meditations*, to refer to the ‘not-like-a-sailor-in-a-ship’ idea. He never provides an account of what this substantial unity *is*, as distinct from what it *is not*.] But what I *am* aware of ‘in the second Meditation’ is sufficient for me to be able to exist with it and it alone; so I am certain that •I *could* have been created by God without having other attributes of which I am unaware, and hence that •these other attributes don’t belong to the essence of the mind. For it seems to me that if something can exist without attribute A, then A isn’t included in its essence. And although •mind is part of the essence of •man, •being united to a human body is not part of the essence of •mind.

I must also explain what I meant by this:

A real distinction between x and y can't be inferred from the fact that x is conceived apart from y by an abstraction of the intellect that conceives x inadequately. It can be inferred only if we have a •complete understanding of x as apart from y, an understanding of x as a complete thing.

Arnauld assumes my view to be that •adequate knowledge of a thing is required here; but that's not what I was saying. Complete knowledge is different from adequate knowledge. If a piece of knowledge about x is to be *adequate*, it must contain absolutely all the properties of x. God has adequate knowledge of •everything, and knows that he has; but that is his special privilege. A created intellect, though it may have adequate knowledge of many things, can never know for sure that it has such knowledge of •anything unless God tells it through a special revelation.

It isn't hard to *have* adequate knowledge of x: all you need is an intellect whose power of knowing is adequate for x. But for the intellect to *know for sure* •that it has such knowledge, i.e. •that God put nothing into x beyond what the intellect is aware of, its power of knowing would have to equal the infinite power of God, and for this to happen would be flatly self-contradictory.

For us to recognize that x and y are distinct things through the 'conceiving-separately' test, it *can't* be required that we have adequate knowledge of them, because - as I have just explained - we can never know that we have such knowledge, so that the test would never be usable.

So when I said that

For x to be really distinct from y, it isn't enough that x is understood apart from y by an abstraction of the intellect that conceives x inadequately,

I didn't think that anyone could take this to imply that what is needed for the 'conceiving-separately way of establishing a real distinction is adequate knowledge. All I meant to be requiring was knowledge that we haven't ourselves *made* inadequate by an abstraction of the intellect. There is a great difference between

'My knowledge of x is wholly adequate',

which we can never know for sure unless God reveals it to us, and

'My knowledge of x hasn't been made inadequate by an abstraction of the intellect'.

It's not hard for our knowledge to be adequate enough us to know that *that* is true.

Similarly, when I said that x must be understood completely, I didn't mean that my understanding of x must be adequate, but only that I must understand x well enough to know that my understanding is complete.

I thought I had made this clear from what I had said just before and just after the passage in question. For a little earlier [page 16] I had distinguished 'incomplete' from 'complete' entities, and had said that for there to be a real distinction between x and y each of them must be understood as 'an entity in its own right that is different from everything else'.

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

You could fairly enough ask at this point (1) 'What do you mean by "complete thing"?' and (2) 'How do you prove that all it takes to establish that x is really distinct from y is •that x and y be understood as "complete" and that •each be capable of being understood apart from the other?'

My answer to (1) is that all I mean by a 'complete thing' is a substance endowed with forms or attributes that suffice for me to recognize that it is a substance.

We don't have immediate knowledge of substances, as I have pointed out elsewhere. We know them only by perceiving certain forms or attributes that can't exist except as inhering *in* something; and we call the thing they inhere in a 'substance'. If we then tried 'in thought' to strip the substance of the attributes through which we know it, we would be destroying our entire knowledge of it. We might still be able to apply various words to it, but we couldn't have a clear and distinct perception of what we meant by these words.

I realize that certain substances are commonly called 'incomplete'. But if the reason for that is that they can't exist on their own, then this involves something that I see as self-contradictory:

- they are substances, i.e. things that exist on their own;
- they are incomplete, i.e. not fit to exist on their own.

We can also call a substance 'incomplete' in a different sense: *x* is itself a complete substance, but it has a kind of incompleteness because •it combines with some other substance *y* to form something that has a unity in its own right, and so •considered in the light of that combination *x* is 'incomplete' because it is only a part of the larger thing. For example, a hand is a complete substance when it is considered on its own, but it is an incomplete substance when it is thought of in relation to the whole body of which it is a part. In just that way, a mind and a body are incomplete substances when thought of in relation to the human being which they together make up. But 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 called 'mind'. And I don't have any less grasp of a thinking substance as a complete thing than I have of an extended substance as a complete thing.

Arnauld suggests that 'body relates to mind as genus relates to species', but there is no way that can be right. For although a •genus can be understood without this or that specific differentia - i.e. without thinking of this or that •species falling under the genus - there is no way for a •species to be thought of without its •genus.

For example, we can easily understand the genus 'figure' without thinking of a circle (though our understanding won't be distinct unless it *does* involve a specific figure, and it won't involve a complete thing unless it also brings in the nature of body). But we can't understand the specific differentia that marks off *circle* without at the same time thinking of the genus *figure* - because to be a circle is, precisely, to be a figure that is characterised by that specific differentia.

Now, I think I showed well enough in the second Meditation that the mind can be perceived distinctly and completely (i.e. 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. And similarly a body can be understood distinctly and as a complete thing without any of the attributes belonging to mind.

Arnauld comes in at this point, arguing that although I can have some knowledge of myself without knowledge of the body, it doesn't follow that this knowledge is complete and adequate, so as to enable me to be certain that I'm right to exclude body from my essence. He uses the example of a triangle inscribed in a semi-circle, which we can clearly and distinctly understand to be right-angled although we don't know, or may even deny, that 'it has property P, i.e.' the square on the hypotenuse equals the sum of the squares on the other sides. But we can't infer from this that there could *be* a right-angled triangle that lacked the property P.

But this example differs in many ('at least three') respects from the case under discussion.

First: a triangle may be taken concretely as a substance with a triangular shape, but there is certainly no way of understanding the property P as a substance! So neither the triangle nor the property can be understood as a complete thing, as mind and body are. And neither of them can be called a 'thing' in the sense I was using when I said in the sixth Meditation 'it is enough that I can understand one thing apart from another' and so on, meaning 'thing' as '*complete* thing'. This is clear from what I said at the start of the paragraph that came after that: 'Besides I find in myself faculties' and so on. I didn't say that these faculties were things, but carefully distinguished them from things or substances.

Second: although we can clearly and distinctly understand that a triangle in a semi-circle is right-angled without being aware of its having property P, we cannot have a clear understanding of a triangle's having property P without at the same time taking in that it is right-angled. In contrast with that, we can clearly and distinctly perceive the mind without the body *and* the body without the mind.

Third: although it is possible to have a concept of *triangle inscribed in a semi-circle* that doesn't include

- the triangle's having property P, i.e. equality between the square on the hypotenuse and the sum of the squares on the other sides,

it is *not* possible to have a concept of *triangle inscribed in a semi-circle* that *does* include

- there being no ratio at all between the square on the hypotenuse and the squares on the other sides.

Hence, though we may be unaware of what the ratio is, we can't rule out any candidate unless we clearly understand that it is wrong for the triangle; and we can't clearly understand this for the ratio *equality*, because it is right for the triangle. So the concept in question must, in an indirect and oblique way, involve the property P: it must involve a thought of 'some ratio or other' which *could* take the value *equality*. In contrast with this, the concept of *body* doesn't include - or even indirectly and obliquely involve - anything at all that belongs to the mind, and the concept of *mind* doesn't include - or even indirectly and obliquely involve - anything at all that belongs to the body.

Summing up: Although I said 'it is enough that I can clearly and distinctly understand one thing apart from another' and so on, I can't go on to argue 'yet I clearly and distinctly understand that this triangle is right-angled without understanding that the square on the hypotenuse' and so on: •because the ratio between the square on the hypotenuse and the sum of the squares on the other sides isn't a complete thing; •because we don't clearly understand the ratio to be equality except in the case of a right-angled triangle; and •because there is no way of understanding the triangle distinctly while denying that it has property P.

But now I must move towards question (2) [on page 57] and explain how the mere fact that I can clearly and distinctly understand one substance apart from another is enough to make me certain that one excludes the other.

The answer is that the notion of a substance is just this: a substance is something that can exist by itself, i.e. without the help of any other substance. And no-one has ever perceived two substances by means of two different concepts without judging them to be really distinct - i.e. judging that they are two substances and not one.

Thus, if I hadn't been looking for greater than ordinary certainty, I'd have settled for showing in the second Meditation that the mind can be understood as a subsisting thing without anything belonging to the body being attributed to it, and conversely that the body can be

understood as a subsisting thing without anything belonging to the mind being attributed to it. I wouldn't have added anything more to my demonstration that the mind is really distinct from the body, because it is generally accepted that the way things are according to our perception of them is the way they are in reality. But one of the extravagant doubts that I put forward in the first Meditation deprived me of certainty about this very point (namely whether things are in reality as we perceive them to be), as long as I was supposing myself to be ignorant of 'God', the author of my being. That's why everything I wrote about God and truth in the third, fourth and fifth Meditations contributes to the conclusion - finally established in the sixth Meditation - that the mind is really distinct from the body.

Arnauld says: 'I have a clear understanding of a triangle inscribed in a semi-circle without knowing that the triangle has the property P.' It is true that one can understand the triangle without thinking of the ratio of •the square on its hypotenuse to •the sum of the squares on the other sides; but one can't understand it as *not* having this ratio. Whereas we can understand the mind to exist •without bringing in any thought of the body, and indeed •while denying of it all the attributes of a body. For it is of the nature of substances that they should mutually exclude one another.

Arnauld continues: 'Since I infer my existence from my thinking, it's not surprising if the idea that I form in this way represents me purely as a thinking thing.' But this is no objection to my argument. For in the same way when I examine the nature of the body, I don't find the least trace of thought in it. And there can't be a stronger argument for a distinction between two things than the fact that when we examine them separately everything we find in one is different from what we find in the other.

And I don't see why this argument 'proves *too much*'. The *least* thing one can say to establish that x really is distinct from y is that x can be separated from y by the power of God. Also, I thought I was being very careful to ward off the false inference that man is simply 'a mind that makes use of a body'. In the sixth Meditation, where I dealt with the mind's distinctness from the body, I showed along with this that the mind is substantially united with the body [see note on page 56]. And the arguments I used to prove this are as strong as any I can remember ever having read. Saying that •a man's arm is a substance that is really distinct from the rest of his body isn't denying •that the arm belongs to the nature of the whole man. And saying that •the arm belongs to the nature of the whole man doesn't create the suspicion that •it can't subsist apart from the rest of the man's body. I don't think I proved too much in showing that the mind can exist apart from the body, or that I proved too little in saying that the mind is substantially united with the body, for that substantial union doesn't prevent us from having a clear and distinct concept of the mind on its own, as a complete thing. This is quite different from the concept of a surface or a line, which can't be understood as complete things unless we attribute to them not just length and breadth but also depth.

Finally the fact that •the power of thought is dormant in infants and disturbed - not 'extinguished', as Arnauld said - in madmen doesn't show that we should regard •it as attached to bodily organs in such a way that it can't exist without them. We have plenty of experience of thought being •impeded by bodily organs, but it doesn't follow from this that thought is •produced by those organs - a view that there's not the slightest reason to accept.

Admittedly, the closeness of the mind's union with the body - a union that we experience constantly through our senses - makes us unaware of the real distinctness of mind from body unless we attentively meditate on the subject. But I think that those who repeatedly ponder on

what I wrote in the second Meditation will be easily convinced that the mind *is* distinct from the body - not merely *thought of as* distinct by a fiction or abstraction of the intellect, but *known to be* a distinct thing because that's what it really is.

I shan't respond to Arnauld's observations about the immortality of the soul, because they don't conflict with my own views. As for the souls of brute animals: this isn't the place to go into that subject. I make some explanatory remarks about it in Part 5 of my *Discourse on the Method*, and I couldn't add to them without giving an account of the whole of physics. Still, so as not to pass over the topic in complete silence, I'll say the thing that it is most important to say, namely: **in our bodies and those of the brutes, no movements can occur without the presence of all the organs or instruments that would enable the same movements to be produced in a machine.** So even in our own case the mind doesn't directly move the physical limbs, but simply controls the animal spirits [see note on page 56] that flow from the heart via the brain into the muscles, and sets up certain motions in them; for the spirits are naturally adapted to moving in all sorts of ways without difficulty. Many of the motions occurring inside us don't depend in any way on the mind: heartbeat, digestion, nutrition, breathing when we are asleep, and also such waking actions as walking, singing and the like when we do them without thinking about them. When someone falls, and holds out his hands so as to protect his head, he isn't instructed by reason to do this. Rather, the sight of the impending fall reaches the brain and sends the animal spirits into the nerves in the manner needed to produce this movement of the man's hands, 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?

Are any of the movements of the brutes similar to ones that occur in us with the help of the mind, or do they all resemble only those that depend merely on the flow of the animal spirits and the disposition of the organs? If we want to think our way through to an answer to this, we should consider the differences between men and beasts - I mean the differences set out in Part 5 of my *Discourse on the Method*, for I don't think there are any others. If we do this, we'll easily see that •all the actions of the brutes resemble only •human actions that occur without help from the mind. This will force us to conclude that we don't know of any source of movement in animals other than the layout of their physical parts and the continual flow of the spirits that are produced by the heat of the heart as it rarefies the blood. We shall also see that what led us to imagine that the brutes have some other source of motion was merely our failure to distinguish the two sources of motion just described: seeing that the source depending solely on the animal spirits and physical organs exists in the brutes just as it does in us, we jumped to the conclusion that the other source - mind or thought - also exists in them. Beliefs that we have had since our earliest years, even though we have since had solid evidence against them, can't easily be eradicated unless we think long and hard about that evidence.

OBJECTIONS CONCERNING GOD

(1) The first proof of the existence of God, which Descartes sets out in the third Meditation, falls into two parts: **(a)** God exists if there is an idea of God in me; **(b)** Given that I possess such an idea, the only possible source of my existence is God.

I have only one criticism of **(a)**. Descartes 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 strikes me as inconsistent with his own principles.

I am anxious to be clear about this dark matter, so I'll discuss an example, which may help to clarify things. Descartes says that 'if cold is merely the absence of heat, the idea of cold that represents it to me as a positive thing will be materially false'.

But if cold is merely an absence, there can't be an *idea* of cold that represents it to me as a positive thing; so Descartes is here confusing a •judgment with an •idea.

What *is* the idea of cold? It is coldness itself existing representatively in the intellect. But if cold is an absence, it can't exist representatively in the intellect by means of an idea whose representative existence is something positive. So if cold is merely an absence, there can't ever be a positive idea of it, so there can't be an idea ·of it· that is materially false.

This is confirmed by an argument of Descartes's own - the argument to prove that the idea of an infinite being *has to* be a true idea because, although I can tell a story according to which no such being exists, I can't tell one according to which the idea of such a being doesn't represent anything real to me.

This obviously holds for any positive idea. For although I can tell a story according to which cold is represented ·to me· by a positive idea, but is actually not something positive, I can't tell one according to which the positive idea doesn't represent anything real and positive to me. For what makes an idea count as 'positive' isn't •any fact about it considered as a psychological event (for if *that* were the test all ideas would be positive), but rather •the facts about its representative nature, what it represents to our mind. Thus, the idea we have been discussing may perhaps not be the idea of cold, but it can't be a false idea.

You may reply: 'What makes it false is precisely its not being the idea of cold.' No: what is false is your *judgment* that it's the idea of cold; the *idea* that you have is, in itself, perfectly true. Just as the idea of God should never be called 'false' - not even 'materially false', though someone might transfer it to something that isn't God, as idolaters have done.

Summing up ·this part of my discussion·: what *does* the idea of cold - the one you say is materially false - represent to your mind? An absence? Then it is true. A positive entity? Then it isn't the idea of cold.

Also: what is the cause of the positive representative being - ·the *content* of the idea· - which you say makes the idea materially false? The cause is myself', you may answer, 'in so far as I come from nothing.' But in that case the positive representative being of an idea can come from nothing, which shakes the foundations of Descartes's theoretical structure.

START OF REPLIES TO OBJECTIONS CONCERNING GOD

(1) Up to here I have tried confront Arnauld's arguments and refute them. But now I am going to do what people do when fighting stronger opponents: instead of meeting him head on I will dodge his blows.

He presents only three criticisms in this section, and each can be accepted if what I wrote is understood in his way, But I meant each in a different sense from his, one that seems to me to be equally correct.

The first point concerns my statement that certain ideas are materially false - by which I mean that those ideas provide subject-matter for error. But Arnauld concentrates on ideas considered *formally*, and maintains that there is no falsity in them. [Descartes then sketches the other two points; these sketches will be presented at the starts of his **(2)** and **(3)** respectively. He continues:] But let us deal with the points more carefully one at a time.

When Arnauld says 'if cold is merely an absence, there can't be an *idea* of cold that represents it to me as a positive thing', it's clear that he is dealing solely with an idea taken

formally. Since ideas are forms of a kind, and aren't composed of any matter, when we think of them as representing something we are taking them not materially but formally. But if we consider ideas not as •representing this or that but simply as •intellectual events, *then* we can be said to be taking them materially; but in that case no question arises about whether they are true or false of their objects. The only remaining sense for 'materially false' as applied to an idea is the one I am presenting here, namely 'providing subject-matter for error'. Whether cold is something positive or merely an absence makes no difference to my idea of cold, which remains the same as it always was. It is this idea which, I claim, can provide subject-matter for error if cold is in fact an absence and doesn't 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 can't tell that one of them represents more reality to me than the other.

I certainly didn't '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 Arnauld says that the idea of cold 'is coldness itself existing representatively in the intellect', I think we need to make a distinction. It often happens with obscure and confused ideas - such as the ideas of heat and cold - that an idea of something is wrongly taken to be the idea of something else. Thus if cold is merely an absence, the idea of cold is not •'coldness itself existing representatively in the intellect' but something else that I wrongly mistake for this absence, namely •a sensation that in fact doesn't exist outside the intellect.

This doesn't apply to the idea of God, because that can't be taken to be the idea of something that it doesn't fit, i.e. of something other than God. I'm saying that about the *clear and distinct* idea of God; as for the confused ideas of gods that idolaters concoct, I see no reason why *they* can't be called 'materially false' because they provide the idolaters with subject-matter for false judgments. But 'material falsity is a matter of degree': ideas that give the judgment little or no scope for error don't seem *as much* entitled to be called 'materially false' as those that give great scope for error. It's easy to show by examples that some ideas provide much more scope for error than others. Confused ideas that •are made up at will by the mind, such as the ideas of false gods, don't provide as much scope for error as the confused ideas that •come from the senses, such as the ideas of colour and cold (if I am right that these ideas don't represent anything real). The greatest scope for error is provided by the ideas arising from the sensations of appetite. Thus the idea of thirst that 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.

But Arnauld asks, concerning the idea of cold that I called 'materially false', what it represents to me. He says:

If it represents an absence it is true.

If it represents a positive entity, it isn't the idea of cold.

That is correct; but my only reason for calling the idea 'materially false' is that its obscurity and confusedness made me unable to judge whether what it represents to me is something positive existing outside of my sensation; so that I may be led to judge that it is something positive when really it is a mere absence.

So when Arnauld asks 'What is the cause of the positive representative being which you say makes the idea materially false?', he is asking an improper question. I don't claim that an idea's material falsity results from some positive entity; it arises solely from the obscurity of the idea - although something positive underlies it, namely the actual sensation involved.

Now this positive entity, ‘the sensation’, exists in something real, namely *me*; but the obscurity of the idea (which is the only cause of my judging that the idea of the sensation of cold represents some external item called ‘cold’) doesn’t have a real cause but arises simply from the fact that my nature is not perfect in all respects.

This doesn’t in any way ‘shake the foundations’ of my philosophy. When I use the label ‘materially false’ for ideas that I think provide subject-matter for error, am I moving too far away from standard philosophical usage? I might have been worried about this (I have never spent very much time reading philosophical texts), but I found the word ‘materially’ used in exactly my sense in the first philosophical author I came across, namely Suarez, *Metaphysical Disputations*, Part IX.ii.4.

OBJECTION

(2) I turn now to (b) the second half of the proof [given on page 61], where Descartes asks ‘whether I who have the idea of an infinite being could derive my existence from any source other than an infinite being, and in particular whether I could derive it from myself’. He maintains that I couldn’t derive my existence from myself, because ‘if I had given existence to myself I would also have given myself all the perfections of which I find I have an idea’. But Caterus ‘in the first set of Objections’ has an acute reply to this: ‘derived from oneself’ should be taken not •positively but •negatively, so that it simply means ‘not derived from anything else’. He continues:

But now, if something gets its existence ‘from itself’ in the sense of not getting it from anything else, how can we prove that this being takes in everything and is infinite? Don’t tell me: ‘If it derived its existence from itself, it could easily have given itself everything.’

For the thing we are now talking about *didn’t* get its existence from itself as a cause; it *didn’t* exist prior to itself so as to be able to choose in advance what it would come to be.

[page 4 above]

To refute this argument, Descartes maintains that the phrase ‘deriving one’s existence from oneself’ should be taken not •negatively but •positively, even when it refers to God, so that ‘in a certain way God relates to himself as an efficient cause relates to its effect’ [page 8]. This seems to me to be a hard saying, and indeed to be false.

Thus I partly agree with Descartes and partly disagree with him. I agree that I couldn’t derive my existence from myself in any way but positively; but I don’t agree that the same holds for God. On the contrary, I think it is obviously self-contradictory to maintain that anything derived its existence positively - as it were *causally* - from itself. So I propose to establish Descartes’s conclusion but by a completely different route, as follows [this slightly expands Arnauld’s formulation]:

(1) To derive my existence from myself, I would have to derive it positively - as it were, causally.

(2) Nothing can positively - as it were, causally - derive its existence from itself.

Therefore (3) it is impossible that I should derive my existence from myself.

Premise (1) is proved by Descartes’s own arguments based on the fact that, since the moments of time are separable from each other - ‘meaning that the existence of one stretch of time doesn’t logically necessitate the existence of any others’ - my existing now doesn’t imply that I’ll still exist in a minute from now, unless there is some cause which as it were creates me anew at each moment’ [page 7].

As for premise (2), I think this is so clearly shown to be true by the natural light that it can hardly be given any proof except for the piffling kind of ‘proof’ that establishes a well-known

result by means of premises that are less well-known. And Descartes seems to have recognized its truth, since he hasn't ventured to deny it openly. Consider this reply that he makes to Caterus:

I didn't say that nothing could possibly be its own efficient cause. This is obviously true when the term 'efficient' [see note on page 6] is taken to apply only to causes that are •temporally prior to or •different from their effects. But in the present context that seems not to be the best way of interpreting 'efficient', . . . because the natural light doesn't demand that we think of an efficient cause as having to be •temporally prior to its effect.
[page 7 above]

The •temporal-priority part of this is quite true, but why did Descartes drop the •having-to-be-different part? Why didn't he add that the natural light doesn't demand that an efficient cause of x be different from x? Was it because the light of nature wouldn't let him say this 'because it *does* make that demand'?

Since every effect depends on its cause, gets its existence from its cause, isn't it clear that no thing can depend on *itself*, receive its existence from *itself*?

Again, every cause is the cause of *an effect*, and every effect is the effect of *a cause*. So there is a two-way relation between cause and effect, and a relation must involve two terms.

Also, it's absurd to conceive of a thing as having existence and then at a later time receiving existence. But that's what we would be thinking if we applied the notion of cause and effect to a thing in respect of itself, 'thinking that there are cases of cause-effect that instead of the form x-y have the form x-x'. The notion of *cause* is the concept of •giver of existence. The notion of *effect* is the concept of •receiver of existence. The notion of a cause is essentially prior to the notion of an effect.

We can't use our notion of *cause* to conceive of something as giving existence unless we conceive of it as having existence; for no-one gives what he doesn't have. So 'in our attempted thought of something as cause of itself' we would be putting our conception of the thing as having existence before our conception of it as receiving existence; but in the case of any receiver, it *first* receives x and *then* has x.

Another way of putting the argument: No-one gives what he doesn't have. So no-one can give himself existence unless he already has it. But if he already has it, why should he give it to himself?

Finally, Descartes asserts that 'there is no real distinction between preservation and creation - only a conceptual one - this being one of the things that the natural light makes evident'. But the same natural light makes it evident that nothing can create itself. Therefore nothing can preserve itself, 'i.e. keep itself in existence'.

If we come down from the general thesis to the application of it to God in particular, I think it is even more clearly true: God cannot get his existence from himself positively, but only negatively, i.e. not getting his existence from anything else.

This is clear first of all from Descartes's own argument to prove that if a body gets existence from itself it must do so in the positive way. He says:

The parts of time don't depend on one another; so the supposed fact that this body has existed until now 'from itself', i.e. without a cause, isn't sufficient to make it the case that this body will continue to exist in future, unless the body has some power which (as it were) re-creates it continuously. [pages 7-8]

But so far from this argument being applicable to a supremely perfect or infinite being, we can actually infer the opposite result, and for opposite reasons. It goes like this:

Built into the idea of an infinite being is the being's having a duration that 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' can't be applied to it, except through an error and imperfection of our intellect.

It obviously follows from this we can't conceive of an infinite thing as existing, even for a moment, without conceiving of it as something that has always existed and will always exist, for eternity (Descartes himself establishes this elsewhere). So there's no point in asking *why* this being continues to exist.

Augustine, whose remarks on the subject of God are as noble and sublime as any that have appeared since the time of the sacred authors, frequently teaches that in God there is no past or future but only eternally present existence. This makes it even clearer that 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.

And God can't be thought of as positively getting his existence 'from himself', as if he had created himself in the beginning. For that would require him to exist (so as to give existence) before he existed (as a result of receiving it). As Descartes often says, his sole basis for holding that God gets existence 'from himself' is his view that God really does *keep* himself in existence.

But an infinite being can't be thought of as •keeping itself in existence, any more than it can be thought of •being brought into existence. For what is keeping-in-existence except continual re-creation, i.e. continual being-brought-into-existence? Thus all keeping-in-existence presupposes being-brought-into-existence. . . .

So we should conclude that God cannot be conceived of as positively getting existence from himself, except through an imperfection of our intellect, which conceives of God after the fashion of created things. Another argument will make this even clearer.

When we look for the efficient cause of something, we are looking for the cause of its •existing, not the cause of its •essence. When I see a triangle, I may look for the efficient cause of this triangle's existing; but it would be absurd to inquire into the efficient cause of this triangle's having three angles equal to two right angles. If anyone asks what causes the triangle to have that property, the right response is not to give an efficient cause but rather to explain that this is the nature (or essence) of a triangle. That's why mathematicians, who aren't concerned with the existence of the objects they study, never give demonstrations involving efficient or final causes [see note on page 6.] But it belongs to the *essence* of an infinite being that it exists - or stays in existence, if you wish - just as it belongs to the essence of a triangle to have its three angles equal to two right angles.

•Why does a triangle have three angles equal to two right angles? •Because this is the eternal and unchangeable nature of a triangle.

•Why does God exist, or continue in existence? •Because this is the nature of a supremely perfect being.

That is the answer we should give. We shouldn't try to find any efficient cause either in God or outside him. (Nor any 'quasi-efficient' cause! My concern is with realities, not labels.)

Descartes says that the light of nature lays it down that for *any* existing thing we may ask why it exists - that is, we may ask •what its efficient cause is or, if it doesn't have one, •*why* it doesn't. I reply to this that if someone asks

Why does God exist?

we oughtn't to answer in terms of an efficient cause, but should explain that he exists simply •because he is God, or •because he is an infinite being. And if someone asks

What is the efficient cause of God's existing?

we ought to reply that he doesn't need an efficient cause. And if the questioner goes on to ask

Why doesn't he need an efficient cause?

we ought to answer that it's because he is an infinite being whose existence is his essence. For the only things that need an efficient cause are those in which actual existence can be distinguished from essence.

This disposes of the argument that follows the passage just quoted:

So if I thought that nothing could possibly relate to itself in the way an efficient cause relates to its effect, I certainly would *not* conclude that there was a first cause! On the contrary, if someone postulated a 'first cause' I would ask what *its* cause was, so I would never arrive at a genuine first cause of everything. [page 7 above.]

Not at all! If I thought we ought to look for the efficient cause of any given thing, then what I would be looking for was a cause distinct from the thing in question, because it seems perfectly obvious that nothing can possibly relate to itself in the way that an efficient cause stands to its effect.

Descartes should be advised to re-think this matter very carefully, because I know for sure that almost every theologian will be upset by the proposition that God derives his existence from himself positively, as it were causally.

REPLY

(2) Arnauld's second point concerns my claim that God derives his existence from himself 'positively and as it were causally'. All that I meant by this was that the reason why God doesn't need any efficient cause in order to exist is based on something positive - namely the very immensity of God, which is as positive as anything can be! Arnauld, however, shows that God is not self-created or self-preserved by the positive influence of any efficient cause; and this I quite agree with. [That is the sketch mentioned in a note on page 62. Then we come to what Descartes says when 'dealing with the points more carefully one at a time':]

The complaint that Arnauld emphasizes •most - though it seems to me to be the •least deserving of emphasis - concerns the passage where I said that 'in a certain way God relates to himself as an efficient cause relates to its effect'. Arnauld says that it is 'a hard saying, and indeed false' to suggest that God is his own efficient cause; but I actually *denied* that suggestion in the passage just quoted. For in saying that God 'in a certain way' stands in the same relation 'to himself' as an efficient cause 'does to its effect', 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 because of the imperfection of the human intellect. Indeed, throughout the rest of the passage I confirmed this. Right at the beginning, having said 'we may always ask, of any existing thing what its efficient cause was', and I added 'and if it didn't have one, why didn't it need one?' These words show clearly that I did believe that there is something that doesn't need an efficient cause. And what could that be but God? A little further on I said that there is in God 'such great and inexhaustible power that he needed no help from anything else in order to exist, or in order to stay in existence' so that he is, 'in a way, *his own cause*'. Here the phrase 'his own cause' can't possibly be taken to mean an efficient cause; it simply means that God's inexhaustible power is the cause or reason why he doesn't need a cause. And since that inexhaustible power - that immensity of essence - is utterly positive, I said

that the reason or cause why God needs no cause is a positive one. Now this can't be said of any finite thing, even one that is perfect of its kind. When a finite thing is said to get its existence 'from itself', this has to be taken in a negative sense, meaning that its positive nature provides no basis for thinking that it doesn't need an efficient cause.

Similarly, in every passage where I compared

- the formal cause - the reason provided by God's essence, in virtue of which he needs no cause in order to exist or to stay in existence -

with

- efficient cause - without which *finite* things can't exist -

I always chose my wording so as to make it clear that the two kinds of cause are different. [See the note on them on page 6.] And I *never* said that God preserves himself by some positive force, in the way created things are preserved - 'kept in existence' - by him; what I described as a 'positive' thing was the immensity of his power or essence, in virtue of which he doesn't need a preserver.

So I can freely accept everything Arnauld puts forward to prove (and this is the *only* upshot of his arguments) that God isn't the efficient cause of himself and doesn't keep himself in existence himself by any positive power or by continuously re-creating himself. But I hope Arnauld won't deny that •the immensity of God's power in virtue of which he doesn't need a cause in order to exist is a positive thing in God, and that •nothing else contains anything positive that frees it from needing an efficient cause in order to exist. That is all I meant when I said that the •only sense in which anything *other than God* can be said to get its existence 'from itself' is a •negative one. . . .

But since Arnauld has given me such a sombre warning that 'almost every theologian will be upset by the proposition that God derives his existence from himself positively, as it were causally', I'll explain a little more carefully why this way of talking is very useful - even necessary - when dealing with these matters, and explain why there is absolutely nothing in it to be upset about.

[Then a paragraph about the Latin and Greek terminology used by theologians when writing about relations ('producing', 'begetting' etc.) amongst the members of Christianity's Holy Trinity. In that tricky area, Descartes says, there are reasons to be wary of the word 'cause', but:] where there is no such risk of error, and we are dealing with God not as a trinity but simply as a unity, I don't see why the word 'cause' must be avoided at all costs, especially in a context where it seems to be

- very useful, because it serves to demonstrate the existence of God,

and also

- indispensable, because it is needed if that demonstration is to be completely clear.

I think it is clear to everyone that the concept of *efficient causes* comes into our primary and principal way, if not our only way, of demonstrating that God exists. We can't make the demonstration precise unless we set our minds free to ask about the efficient causes of *everything*, even of God - for we can't legitimately make an exception of God at a stage where we haven't yet proved that he exists! So we should ask about *everything* 'Does it get its existence from itself or from something else?'; and this question leads to the inference that God exists, even though we have not given an explicit account of what it means to say that something gets its existence 'from itself'. Those who are guided purely by the natural light will in this context, unprompted, form a concept of cause that is common to •efficient causes and to •formal causes: they will take

'x gets its existence from something else' to mean that x gets its existence from that thing as an efficient cause, and

•'x gets its existence from itself' to mean that x gets its existence from itself as a formal cause, meaning that x's essence entails that x doesn't need an efficient cause. Accordingly, I didn't explain this point in my *Meditations*, but left it out, assuming it was self-evident.

Some people are in the habit of assuming that nothing can be the efficient cause of itself, and they carefully distinguish efficient causes from formal ones. So when they confront the question

Does anything get its existence from itself?
they find it natural to think of this only in terms of efficient causes, strictly so-called. And that leads them to suppose that the phrase 'from itself' must be taken not as meaning 'positively' •'from a cause' but only negatively •'without a cause' - implying that for some reason we mustn't ask why the thing exists. Caterus showed in the first set of Objections that if we read the phrase 'from itself' in this way, we won't be able to produce any argument for the existence of God based on his effects; so this interpretation must be totally rejected.

To deal with this matter properly, I think, we have to show that between •'efficient cause' in the strict 'and narrow' sense and •'no cause at all' there is a third possibility, namely •'the positive essence of a thing', *to which the concept of an efficient cause can be extended*. ('This kind of concept-stretching is perfectly legitimate'. In geometry the concept of •'the arc of a circle' is standardly extended, for the case of an indefinitely large circle, to cover •'straight lines'; and the concept of a •'straight-sided polygon' is extended, for the case of a polygon with indefinitely many sides, to cover •'circles'.) I thought I explained this in the best way available to me when I said that when we are exploring this question we shouldn't restrict the meaning of 'efficient cause' to causes that are •'prior in time to their effects' or •'different from them.

'We need to leave •'priority and •'otherness out of the meaning of 'efficient cause' because if we don't, the question would be trivial, since everyone knows that nothing can be •'prior to itself or •'distinct from itself. 'And omitting •'priority is legitimate', because the restriction 'prior in time' can be deleted from the concept while leaving the notion of *efficient cause* intact. That a cause needn't be prior in time 'to its effect' is clear from the fact that something counts as a cause only *while* it is producing its effect, as I have said.

The second condition - 'otherness' - can't also be deleted; but this shows only that a cause that isn't distinct from its effects is not an 'efficient cause' in the strict 'and narrow' sense; and this I admit. But it doesn't follow that such a cause is in no way a positive cause that can be regarded as analogous to an efficient cause; and that's all that my argument requires. The natural light that enables me to perceive that

if I had given myself existence, I would have given myself all the perfections of which I have an idea,

also enables me to perceive that

nothing can give itself existence in the restricted sense usually implied by the proper meaning of the term 'efficient cause'.

For in *that* sense, 'x gives existence to x' would mean that x as giver was different from x as recipient, so that we would have 'x is different from x *and* x is x' - which is self-contradictory.

So the question 'Can anything give itself existence?' must be taken to mean 'Does anything have a nature or essence such that it doesn't need an efficient cause in order to exist?'

The further proposition that

•if there is something that doesn't need an efficient cause in order to exist, it will give itself all the perfections of which it has an idea, if it doesn't already have them,

means that this being must actually have all the perfections it is aware of. This is because we perceive by the natural light that a being whose essence is so immense that it

- doesn't need an efficient cause in order to exist

is also a being that

- doesn't need an efficient cause in order to have all the perfections it is aware of.

The being's own essence is the higher-form source from which it gets everything that we can think of as gettable from an efficient cause.

The point of saying that it will give itself all the perfections 'if it doesn't already have them' is just to help you get your mind around this, and not to imply that such a being might for a while be aware of perfections that it didn't yet have. For the natural light enables us to perceive that it is impossible for such a being to have the power and will to give itself something that it doesn't yet have; rather, its essence is such that it possesses *from eternity* everything that we can now suppose it would give to itself *if* it didn't yet have it. [In all this, 'it' could be replaced by 'he'; there is no difference in the Latin.]

All the above ways of talking, derived from an analogy with the notion of efficient causation, are utterly necessary for guiding the natural light so that we get a clear awareness of these matters. It was exactly that sort of analogy, between a curved-line figure and a straight-line one, that enabled Archimedes to demonstrate various properties of the sphere that could hardly have been grasped in any other way. No-one criticizes these proofs for likening a sphere to a polyhedron, and in the same way - so it seems to me - I shouldn't be criticized for using the analogy of an •efficient cause to explain features that in fact belong to a •formal cause, i.e. to the essence of God.

There's no possible risk of error in using this analogy, because the one feature of an efficient cause that can't be transferred to a formal cause is in no danger of being carried across to the 'cause of itself' context, because that transfer involves an obvious contradiction that no-one would be seduced into accepting: specifically, it involves saying that something could be different from itself

[Descartes then points out that although he calls God the cause of himself, he doesn't call him the effect of himself, because the status of *effect* involves a certain indignity. He sees a precedent for this in what theologians say about the Christian Trinity - the Father is the 'originating source' of the Son, they say, but they don't say that the Son is 'originated'. [This connects with the square-bracketed material on page 68 above.] --He then spends a short paragraph contending that in equating God's essence with his formal cause he is following Aristotle. Then:]

It was, however, scarcely possible for me to handle this topic without applying the term 'cause' to God. See what happened when Arnauld tried to reach the same conclusion as I did, but by another route. He completely failed in this, or so it seems to me. •First, he explains at length that God isn't his own efficient cause, since 'x is the efficient cause of y' entails that x is distinct from y. •Then he shows that God doesn't *positively* get his existence from himself, where 'positively' is taken to imply the positive power of a cause. •And then he shows that God doesn't really preserve himself or keep himself in existence, if 'preservation' is taken to mean the continuous creation of a thing. I am happy to accept all this. But then Arnauld *again* tries to show that God can't be called his own efficient cause, on the grounds that 'when we look for the efficient cause of something, we are looking for the cause of its •existence, not the cause of its •essence'. He continues:

But it belongs to the essence of an infinite being that it exists, no less than it belongs to the essence of a triangle to have its three angles equal to two right angles. And hence if someone asks whether God exists, it wouldn't be right to answer that in terms of an efficient cause than it would be to do that if someone asks why the three angles of a triangle are equal to two right angles.

This line of thought can easily be turned against Arnauld, as follows. Although we don't ask for the efficient cause of something's essence, we can properly ask for the efficient cause of something's existence; and in the case of God, essence is not distinct from existence; therefore we *can* ask for the efficient cause of an essence in the case of God.

But to reconcile our two positions, the question 'Why does God exist?' should be answered not in terms of an efficient cause in the strict sense, but simply in terms of the essence or formal cause of the thing. And precisely because in the case of God there is no distinction between existence and essence, the formal cause will be strongly analogous to an efficient cause, and hence can be called something close to an efficient cause.

Finally, Arnauld adds:

If someone asks 'What is the efficient cause of God's existing?', we should reply that he doesn't need an efficient cause. And if the questioner goes on to ask 'Why doesn't he need an efficient cause?' we should answer that it's because he is an infinite being whose existence is his essence. For the only things that need an efficient cause are those in which actual existence may be distinguished from essence.

This, he says, disposes of my argument that 'if I thought that nothing could possibly relate to itself in the way an efficient cause relates to its effect, then in the course of my inquiry into the causes of things I would never arrive at a first cause of everything'. But it seems to me that this point of Arnauld's neither disposes of my argument nor in any way shakes or weakens it. In fact the principal force of my proof depends on it, as do all the proofs that can be constructed to demonstrate the existence of God from his effects. And most theologians maintain that an argument based on God's effects is the only kind that can be adduced to prove his existence.

Thus, in denying that God relates to himself in a manner analogous to that of an efficient cause to its effect, Arnauld not only fails to clarify the proof of God's existence, but actually prevents the reader from understanding it. This is especially true at the end when he concludes that 'if we thought we ought to look for the efficient cause . . . of any given thing, then what we would be looking for would be a cause distinct from the thing in question'. Think about what this implies regarding arguments for God's existence, arguments that aim to bring non-believers to believe that God exists. Take someone who doesn't yet know that God exists: how can he inquire into the efficient cause of other things (this being his route to the knowledge of God), unless he thinks he can inquire into the efficient cause of anything whatsoever? And how can he terminate his inquiries by arriving at God as the first cause, if he thinks that for any given thing we must look for a cause that is distinct from it?

[Descartes then argues that Arnauld's resistance to concept-stretching, if applied to mathematics, would undercut the good work that Archimedes did on the basis of treating a circle as a polygon with infinitely many sides. Then:]

I have pursued this issue at somewhat greater length than the subject required, in order to show that I am extremely anxious to prevent anything at all being found in my writings which could justifiably give offence to the theologians..

OBJECTION

(3) Let me add something that I missed earlier. Descartes lays it down as certain that there can be nothing in him, considered as a thinking thing, of which he isn't aware, but it seems to me that this is false. For by 'himself, considered as a thinking thing' he means simply his mind, considered as distinct from the body. But surely we can all see that there may be many things in our mind of which the mind isn't aware. To give one example out of ever so many: the mind of an infant in its mother's womb has the power of thought, but isn't aware of it.

REPLY

(3) Arnauld's third and last point concerns my saying that 'there is nothing in the mind of which we aren't aware'. I meant this to refer to the operations of the mind, but Arnauld takes it to apply to the mind's powers, and so denies it. [That is the sketch mentioned in the note on page 62. Then we come to what Descartes says when 'dealing with the points more carefully one at a time':]

It seems to me *self-evident* that the mind, considered as a thinking thing, can't contain anything of which it isn't aware. We can't make sense of the proposition that the mind, seen as a thinking thing, contains something that isn't a thought or something dependent on a thought and we can't have any thought that we aren't aware of at the very moment when it is in us. Which is why I am sure 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 doesn't remember this afterwards because the impressions of these thoughts don't remain in the memory.

But although we are always •actually aware of the acts or operations of our minds, we aren't 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 we immediately become actually aware of it, if the faculty in question resides in our mind. So we can say: it's not in the mind if we aren't *capable* of becoming aware of it.

OBJECTION

(4) I have one further worry, namely how Descartes avoids reasoning in a circle when he says that it's only because 'we know that' God exists that we are sure that whatever we clearly and distinctly perceive is true.

But we can be sure that God exists only because we clearly and distinctly perceive this; so before we can be sure that God exists we need to be able to be sure that whatever we perceive clearly and evidently is true.

REPLY

(4) Lastly, as to my *not* being guilty of circularity when I said that •our only reason for being sure that what we clearly and distinctly perceive is true is the fact that 'we know for sure that' God exists, and that •we are sure that God exists only because we perceive this clearly: I have already given an adequate explanation of this point in items (3) and (4) in my reply to the second Objections [pages 24-5 and 25 respectively], where I distinguished •perceiving something clearly from •remembering having perceived it clearly at an earlier time. At first we are sure that God exists because we are attending to the arguments that prove this; but afterwards all we need to be certain that God exists is our memory that we did earlier perceive this clearly. This 'memory' wouldn't be sufficient if we didn't know that God exists and isn't a deceiver.

SOME POINTS THAT MAY CAUSE DIFFICULTY TO THEOLOGIANs

(1) In order to bring to an end a discussion that is growing tiresomely long, I'll now aim for brevity, and simply indicate the issues rather than argue them out in detail.

First, I am afraid that Descartes's somewhat free style of philosophizing, which calls everything into doubt, may cause offence to some people. He himself admits in his *Discourse on the Method* that this approach is dangerous for those of only moderate intelligence; but I agree that the risk of offence is somewhat reduced in the Synopsis.

Still, I think the first Meditation should be furnished with a brief preface explaining that there is no •serious doubt cast on these matters, and that all he wants to do is to set aside *temporarily* anything about which there is even the •'slightest' and most •'exaggerated' doubt (as Descartes himself puts it elsewhere); this being done as an aid to discovering something so firm and stable that not even the most perverse sceptic will have any scope for doubt about it. And a related point: I suggest that the clause 'since I *didn't* know the author of my being' should be replaced by 'since I *was pretending that I didn't* know . . .' etc.

In the case of the fourth Meditation ('Truth and Falsity'), I strongly urge - for reasons that it would take too long to list - that Descartes should make two things clear, either in the Meditation itself or in the Synopsis.

The first is that when he is inquiring into the cause of error, Descartes is dealing above all with how we go wrong in •distinguishing true from false, not with how we go wrong in •pursuing good and •avoiding evil.

All Descartes needs for his purposes is the discussion of the •first kind of error; what he says there about the cause of error would give rise to *serious* objections if it were stretched to cover •the second. So •errors having to do with good and evil should be *explicitly* declared off-limits: it seems to me that prudence requires, and the expository order that Descartes values so much demands, that anything that isn't relevant and could generate controversy should be omitted. Otherwise the reader may be drawn into pointless quarrels over irrelevancies, and be blocked from taking in the essentials.

The second point I would like Descartes to stress is this:- Where he says that we should assent only to what we clearly and distinctly know, he is talking only about scientific and theoretical matters, and not with matters having to do with faith and the conduct of life; so that he is condemning only •rashly adopted views of the opinionated, not •prudent beliefs of the faithful. As St Augustine wisely points out:

Three things in the soul of man need to be distinguished, even though they are closely related: understanding, belief and opinion.

A person •understands if he grasps something through a reliable reason. He •believes if he is influenced by weighty authority to accept a truth even though he doesn't grasp it through a reliable reason. And he is •opinionated if he thinks he knows something that he actually doesn't know.

Being opinionated is a very grave fault, because: (a) If someone is convinced that he knows the answer already, he won't be able to learn, even when there is something to be learnt; and (b) rashness •in rushing to judgment• is in itself a mark of a disordered soul.

Understanding comes from reason; belief from authority; opinionatedness from error. This distinction will help us to understand that we aren't guilty of being hasty and opinionated when we hold on to our faith in matters that we don't yet grasp.

Those who say that we shouldn't believe anything that we don't know for sure are scared of being thought to be •opinionated. Admittedly •that is a disgraceful and wretched fault; but we should carefully reflect on the fact that

•reckoning one knows something
is very different from

- understanding that one is ignorant about something, while believing it under the influence of some authority.

If we reflect on this we will surely avoid the charges of error on the one hand, and inhumanity and arrogance on the other. (*The Usefulness of Belief*, ch. 15)

A little later, in Chapter 12 [sic], Augustine adds: ‘I could produce many arguments to show that absolutely nothing in human society will be safe if we set ourselves to believe only what we can regard as having been clearly perceived.’ These, then, are the views of Augustine.

Descartes, sensible man that he is, will readily judge how important it is to make those distinctions. Otherwise, people who are prone to impiety (and these days there are plenty of them) may distort his words in order to subvert the faith.

REPLY

(1) I countered Arnauld’s first group of arguments and dodged the second group. The arguments in his final section I completely agree with - except for the last one, and don’t think it will be hard to bring him around to my view on that.

I completely concede, then, that the contents of the first Meditation, and indeed the others, aren’t suitable for every mind. I said this whenever the occasion arose, and I’ll go on doing so. That is the only reason why I didn’t deal with these matters in the *Discourse on the Method*, which was written in French and therefore aimed at a wider audience, reserving them for the *Meditations*, which I warned should be studied only by very intelligent and well-educated readers. Someone might object: ‘If there are things that very many people ought not to read about, you’d have done better to avoid writing about them!’ I don’t accept that, because I regard these matters as so crucial that without them no firm or stable results can ever be established in philosophy. Fire and knives are dangerous in the hands of careless people or children, but they are so useful for human life that no-one thinks we should do without them altogether.

The next point concerns the fact that in the fourth Meditation I dealt only ‘with how we go wrong in distinguishing true from false, not how we go wrong in pursuing good and avoiding evil’, and that when I asserted that ‘we should assent only to what we clearly know’ this was always subject to the exception of ‘matters having to do with faith and the conduct of life’. This is shown by the structure and texture of my book, and I also said it explicitly in (5) in my reply to the second Objections [pages 28-9], and I also gave advance warning of it in the Synopsis. I say this in order to show how much I respect Arnauld’s judgment and how much I welcome his advice. [What comes next is Arnauld’s ‘last one’.]

OBJECTION

(2) What I see as most likely to offend theologians is the fact that Descartes’s doctrines do damage to the Church’s teaching concerning the sacred mysteries of the Eucharist.

We believe on faith that the substance of the bread is taken away from the bread of the Eucharist and only the accidents - the properties - remain. These are extension, shape, colour, smell, taste and other qualities perceived by the senses.

But Descartes thinks there aren’t any sensible qualities - merely motions in the bodies that surround us, enabling us to perceive the various impressions that we then call ‘colour’, ‘taste’ and ‘smell’. Thus, only shape, extension and mobility remain; and these, Descartes maintains, are not intelligible apart from some substance for them to inhere in, and therefore can’t exist without such a substance. He repeats this in his reply to Caterus.

Also, the only distinctness that he allows between the states of a substance and the substance itself is a *formal* one; and that doesn't seem to be enough distinctness to allow for the states to be separated from the substance even by God.

Descartes's great piety will lead him, I'm sure, to ponder on this matter attentively and diligently, regarding himself as obliged to put his most strenuous efforts into the problem. Otherwise, even though he was aiming to defend the cause of God against the impious, he may seem to have endangered the very faith, founded by divine authority, that he hopes will lead him to the eternal life of which he has undertaken to convince mankind.

REPLY

(2) There remains the sacrament of the Eucharist, with which Arnauld believes my views are in conflict. He says: 'We believe on faith that the substance of the bread is taken away from the bread of the Eucharist and only the accidents remain'; and he thinks that I don't admit that there are any real accidents, but recognize only modes that are unintelligible apart from some substance for them to inhere in and therefore can't exist without such a substance. ['Accident' means 'property'. A 'real accident' - where 'real' comes from *res* = 'thing' - is a thing-like property, which can move across from one substance to another: x becomes cool while y becomes warm because (so the theory goes) the *individual instance of warmth* that x had moves across to y.

As well as this kettle (a **particular** thing), and warmth (a universal **property**), there is the warmth of this kettle (a **particular property**).

Some philosophers thought that real accidents can also exist apart from any substance; hence the contrast with 'modes that are unintelligible apart from some substance'. Descartes's writings show him as sceptical about real accidents, even if he doesn't explicitly deny that there are any. How do 'real accidents' connect with the Eucharist? Descartes is about to tell us.]

I can easily escape this objection by saying that I have never denied that there are real accidents. It is true that in the *Optics* and the *Meteorology* I didn't use them to explain the matters which I was dealing with, but in the *Meteorology* I said explicitly expressly that I wasn't denying their existence. And in the *Meditations*, although I was supposing that I didn't yet have any knowledge of them, that didn't commit me to there not being any. The analytic style of writing [see note on page 33] that I adopted there allows us sometimes to assume things that haven't yet been thoroughly examined; and this is what happened in the first Meditation, where I made many assumptions which I then refuted in the subsequent Meditations. And I certainly didn't intend at that point to reach definite conclusions about the nature of accidents; I simply set down what appeared to be true of them on a preliminary survey. And when I said that modes are not intelligible apart from some substance for them to inhere in, I didn't mean to be denying that they can be separated from a substance by the power of God; for I firmly insist and believe that God can bring about many things that we can't understand.

But I now openly acknowledge that I am convinced that when we perceive a body by our senses, what affects our senses is simply the surface - the outer boundary - of the body in question. That is because (a) nothing can affect our senses except through contact (as all philosophers agree, even Aristotle); and (b) contact with an object takes place only at the surface. So bread or wine, for example, are perceived by the senses only to the extent that the surface of the bread or wine comes into contact with our sense organs, either immediately or via the air or other bodies (as I maintain) or via 'intentional species' (as many philosophers hold). [This use of 'species' has nothing to do with classification, species/genus etc. Its meaning has to do with *resemblance*. Some medievals thought they found in Aristotle a theory of sense-perception according to which when you see (for example) the full moon, the moon is sending to your eyes 'species', i.e. items that *resemble* the moon. As you might expect, some philosophers interpreted these 'species' as real accidents (see note high on this page). A few

lines down the next page Descartes will kidnap 'species' and make it mean something that fits with his utterly different views about sense-perception. All occurrences of 'species' other than in the discussion of the Eucharist will be replaced by 'image'.]

·WHAT IS A SURFACE?·

Our conception of a body's surface shouldn't be based merely on what we could learn through our fingers; it should also cover all the tiny gaps between the particles of flour that make up the bread, the tiny gaps between the particles of alcohol, water, vinegar etc. that are mixed together to make wine, and similarly for the particles of other bodies. ·Don't think of these particles as static, uniform cubes; they have various shapes and motions, so that when they are packed together, however tightly, there are bound to be many spaces between them - spaces that are not empty but full of air or other matter. Bread, for example, has gaps that we can see with the naked eye; they are big enough to contain not just air but water or wine or other liquids. And since bread doesn't lose its identity when the air or other matter in its pores is replaced, it is clear that this matter doesn't belong to the substance of the bread. So the surface of the bread isn't

•the smallest area that completely surrounds the entire piece of bread,
but rather

•the area that immediately surrounds the bread's individual particles.

·That is, the surface isn't smooth; it is extremely bumpy, because it tightly wraps over the outside of each tiny particle at the edge of the bread·.

This surface moves •in its entirety, of course, when a whole piece of bread is moved from one place to another, and there is also •partial movement when some particles of the bread are agitated by air or other bodies that enter its pores. Thus, if a body has some or all of its parts in continual motion (as I think that most of the particles of bread do, and all those of wine), then its surface must be understood to be in some sort of continual motion.

Don't think of the surface of a body - bread, wine or whatever - as •a part of the substance or the quantity of the body in question, or as •a part of the surrounding bodies. It should be thought of as the boundary that •the individual particles share with •the bodies that surround them. This boundary isn't a *thing* out there in the world; it is a *way of conceptualising* a part of the world.

·THE EUCHARIST, SURFACES, REAL ACCIDENTS·

Contact occurs only at this boundary, and we have sensory awareness of things only through contact. With those two results on board, consider the statement that ·in the Eucharist·

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 boundaries that the bread and wine formerly had

- meaning that the new substance •exists in the same place that the bread and wine formerly occupied (or, ·to be really accurate about it·, the place that the bread and wine *would* occupy *now* if they *were* still present; this differs from the other formulation because the boundaries of the bread and wine are continually in motion). Clearly, this ·indented· statement entails that the new substance must affect all our senses in exactly the way that the bread and wine would be affecting them if no transubstantiation had occurred.

Now, the teaching of the Church in the Council of Trent is that 'the whole substance of the bread is changed into the substance of the body of our lord Christ, while the species of the bread remains unaltered'. The only sense that can possibly be made of 'the •species of the bread' is as referring to the •surface between the individual particles of the bread and the bodies surrounding them.

I repeat that contact occurs only at this surface. Aristotle himself acknowledges (*De Anima* III.13) that all the senses - not just the sense of touch - operate through contact. [Descartes quotes this in Greek.]

No-one thinks that ‘species’ here means anything other than ‘whatever it is that is needed in order to act on the senses’. And no-one who believes that the bread is changed into the body of Christ would deny that this body of Christ is precisely contained within the same surface that would contain the bread if it were present. [The Latin means that no believer would *say* this; evidently the word *non* was dropped out.] Christ’s body, however, isn’t supposed to be spatially present, but to be (·and here again I quote the Council of Trent·) present ‘sacramentally, with a kind of existence which •we cannot express in words but which •we nevertheless can, when our thought is enlightened by faith, understand to be possible with God, and in which •we should most steadfastly believe’. All this is so smoothly and correctly explained by my principles that I have no reason to fear that anything here will give the slightest offence to orthodox theologians. On the contrary, I confidently look to them for hearty thanks to me for putting forward opinions in physics that fit with theology much better than those commonly accepted. For as far as I know, the Church has never taught that the ‘species’ of the bread and wine that remain in the sacrament of the Eucharist are real accidents that miraculously subsist on their own when the substance in which they used to inhere has been removed.

[The remaining part of the Replies to Arnauld were added in the second edition of the work.]

·Still, ‘real accidents’ loom large in much of what theologians say about the Eucharist, so that they might be thought to be essential to it. I’ll explain why they aren’t. Perhaps what happened was that the theologians who first tried to give a philosophical account of the Eucharist were so firmly convinced that there are ‘real accidents’ that stimulate our senses and are distinct from any substance that it didn’t enter their heads that there could ever be any doubt about this. They found so many difficulties in the way of doing this that they should have come to think what travellers think when they find themselves confronted by rough territory that they can’t get through - namely they had strayed from the true path! ·I now present three reasons why it was a bad move to interpret the Eucharist in terms of ‘real accidents’·.

(a) Anyone who makes this move, and who agrees that all sense-perception occurs through contact, seems to contradict himself in supposing that for objects to stimulate the senses they need ·real accidents, i.e.· something more than the various configurations of their surfaces. ·Don’t say ‘The real accidents are not something over and above contact; they are needed for there to *be* contact·; for it is self-evident that a surface is *on its own* sufficient to produce contact. As for those who deny that sense-perception occurs through contact, nothing *they* can contribute to the topic will have any semblance of truth!

(b) We can’t have the thought of the accidents of the bread as real [= ‘thing-like’] and yet existing apart from the bread’s substance, without thinking of *them* as substances. So it seems to be a contradiction to say that

•the whole **substance** of the bread changes,
as the Church believes, and that

•**something real** that was previously in the bread remains.

For the ‘something real’ that is thought of as remaining must be thought of as something that subsists and is therefore a substance, even if the word ‘accident’ is applied to it. [Something ‘subsists; if it exists on its own, not supported or possessed by something else.] So the ‘real accidents’ interpretation of the Eucharist maintains that

•the whole substance of the bread changes,

and that

•a part of the bread's substance (the part called a 'real accident') remains.

If this is expressed in terms of 'real accident' without explicitly equating this with 'substance', it isn't *verbally* self-contradictory; but it is still conceptually self-contradictory.

That seems to be the main reason why some people have taken issue with the church of Rome on this matter; but their quarrel should have been not with •the doctrine of the Eucharist as such but only with •the interpretation of it in terms of 'real accidents'. Surely everyone agrees that we ought to prefer opinions that can't give others any opportunity or pretext for turning away from the true faith - as long as •they aren't in conflict with any theological or philosophical considerations, and •we are at liberty to make up our own minds. And the supposition of real accidents *is* inconsistent with theological arguments, as I think I have just shown clearly enough; and it is also completely opposed to philosophical principles, as I hope I shall clearly demonstrate in the comprehensive philosophical treatise [the *Principles of Philosophy*] on which I am now working. I'll show there how colour, taste, heaviness, and all other qualities that stimulate the senses, depend simply on the exterior surface of bodies.

(c) The words of consecration [= 'the words with which the officiating priest blesses the sacramental bread and wine'] imply, all on their own, that a miracle of transubstantiation is occurring. To bring 'real accidents' into the story is to add to that miracle something new and incomprehensible - namely real accidents existing apart from the substance of the bread without themselves becoming substances. As well as being contrary to human reason, this violates the theologians' •axiom that the words of consecration bring about nothing more than what they signify, and their •preference for not explaining in terms of miracles anything that can be explained by natural reason. All these difficulties disappear when my explanation is adopted; for it removes the need to posit a miracle to explain how accidents can remain once the substance has been removed

And there is nothing incomprehensible or difficult about supposing that God, the creator of all things, can change one substance into another substance that remains within the surface that contained the former one. Nor can anything be more in accordance with reason or more widely accepted among philosophers than the general statement that

not just all •sense-perception but all •action between bodies occurs through contact, and this contact can take place only at the surface.

This clearly implies that any given surface must always act and react in the same way, even though the substance beneath it is changed.

So if I can speak the truth here without giving offence, I venture to hope that the theory of 'real accidents' will some day be •rejected by theologians as irrational, incomprehensible and hazardous for the faith, and be •replaced by my theory which will be regarded as certain and indubitable. I thought I should come right out with this here, so as to do what I could to forestall slanders - I mean the slanders of people who want to seem more learned than others, and are thus never more annoyed than when someone comes up with a new scientific proposal that they can't pretend they knew about already. It is often the case with these people that the truer and more important they think a 'new' thesis is, the more fiercely they will attack it; and when they can't refute it by rational argument, they'll claim *without any justification* that it is inconsistent with holy scripture and revealed truth. 'Actually', it is the height of impiety to try to use the Church's authority in this way to subvert the truth. But I appeal against the verdict of such people to the higher court of pious and orthodox theologians, to whose judgment and correction I most willingly submit myself.