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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

Sixth Objections (Mersenne and others) and Descartes's replies

[In the contemporary French translation of the work, done by Descartes's friend Clerselier who was presumably well informed, the Sixth Objections are said to be by 'various philosophers, theologians, and geometricians'.]

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

(1) From the fact that •we are thinking it doesn't seem to be entirely certain that •we exist. For you can't be certain that you are thinking unless you know •what thinking is, and •you can't be certain that you exist unless you know •what your existence is; and you don't yet know either of these things, so how can you know that you are thinking or that you exist? You say 'I am thinking' and then you go on to say 'therefore, I exist', but in neither of these do you really *know what you are saying*. Indeed, you don't even

know that you are saying or thinking *anything*, since this seems to require that you should

know that you know what you are saying; which in turn requires that you

be aware of knowing that you know what you are saying, and so on ad infinitum. Hence it is clear that you cannot know whether you exist or even whether you are thinking.

REPLY

(1) It is true that no-one can be certain that he is thinking or that he exists unless he knows what thought is and what existence is. But this doesn't require •reflective knowledge - i.e. knowledge gained by looking into one's own mind - or •knowledge through demonstrations; still less does it require •knowledge *of* reflective knowledge, i.e. knowing that we know, and knowing that we know that we know, and so on ad infinitum, this being a kind of knowledge that can't possibly be had about anything. All that is required is to know it by the internal awareness that always precedes reflective knowledge. This inner awareness of one's thought and existence is so innate in all men that we can't help having it. Some people tell themselves (and us) the story that they *don't* have it, but they are folk who are up to their ears in preconceived opinions and pay more attention to words than to their meanings. In fact, when anyone notices that he is thinking and that it follows from this that he exists, even though he may never before have asked what thought is or what existence is, he can't *not* know enough of both to meet the requirements.

OBJECTION

(2) When you say that you •are thinking and that you •exist, it might be maintained that you are mistaken - that what you are doing is not •thinking, but merely moving; and that •you don't •exist, meaning that you aren't a *thing* or *substance* that exists, because you are nothing but corporeal motion. For no-one has managed to understand your 'demonstration' that what you call thought can't be a kind of corporeal motion. Have you used your method of analysis to slice up the motions of that rarefied matter of yours so finely that you can be certain that it is self-contradictory that our thoughts should be reducible to these corporeal motions? Can you make *us* certain of this? We'll give our closest attention to anything you say, and our powers of perception are, we think, reasonably keen.

REPLY

(2) [This paragraph expands what Descartes wrote - not drastically, but in ways that can't easily be indicated by small dots.] When someone who knows what motion is notices that he is thinking, it simply *can't*

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

happen that he believes that he is mistaken and is ‘not thinking but merely moving’. His idea or notion of •thought is quite different from his idea of •corporeal motion, so he *must* understand each as different from the other. Still, he often ascribes many different properties to a single subject, without being aware of any connection between them; so he may wonder whether - or even believe that - he is a single subject that •thinks and also •moves. To evaluate this question or belief of his, we have to attend to the fact that when we have an idea of x and a quite different idea of y, there are two different things we might mean when say that ‘x is y’: we may be speaking of

(a) the unity or identity of their nature,
or we may be speaking of

(b) their unity of composition.

(a) Our ideas of shape and of motion are not the same, nor are our ideas of understanding and volition, But we clearly perceive that a substance that is capable of having a shape is also capable of being moved; and so it can happen that spherical x and rotating y are one and the same in virtue of a unity of nature. Similarly with understanding and willing: thoughtful x and ambitious y are one and the same in virtue of a unity of nature. (b) Our ideas of bones and of flesh are not the same; but these differ in such a way that we can’t take bony x to be fleshy y in virtue of a unity of nature. If we are to say ‘x is y’ we should be asserting only a unity of composition, based on the fact that a single animal has those bones and has that flesh. Now I have looked at two different sorts of case:

(a) shape and motion
understanding and willing

(b) flesh and bones.

Into which of these two categories should we put
thought and extension?

Can we rightly say that thinking x is extended y by virtue of a unity of nature? Do thought and extension (a) have the same kind of affinity or connection that we find between shape and motion, or understanding and volition? Or is it rather that (b) when we say ‘thinking x is walking y’ we ought to mean this to hold in virtue of unity of composition, simply because the thought and extension are found in the same man, just as bones and flesh are found in the same animal? I maintain that the right answer is (b), because I find an extended thing to be so utterly different from a thinking thing - at least as different as bones are from flesh.

You go on to say that no-one has been able to grasp this demonstration of mine. I can’t let that stand, because it may get in the way of the truth ·by persuading people not to take the argument seriously·. I reply: so far, only a few people have examined the demonstration, and several of them have said that they do understand it. ‘Who should be relied on - they or you?’ One witness who has sailed to America, and says that he has also seen the antipodes, is more entitled to be believed than a thousand others who have no knowledge of America or the antipodes and therefore deny that they exist! Similarly, those who put a proper value on reasoning will have more respect for the authority of •one person who says he has understood a proof correctly than for •a thousand others who claim - with no reasons - that it can’t be understood by anyone. *Their* failure to understand the argument doesn’t imply that others can’t understand it; and their thinking that it does - i.e. thinking that if they can’t understand it, it must be unintelligible - shows that they are sloppy in their thinking and don’t deserve to have their views accepted.

Lastly, my critics ask whether I have used my method of analysis to sort out all the motions of that rarefied matter of mine. Is this (they ask) what makes me certain 'that nothing extended can think'? If so, can I show my critics, who are most attentive and (they think) reasonably perceptive men, that it is self-contradictory that thought should be reduced to corporeal motions? By 'reduced' I take it that they mean that thought and corporeal motions are one and the same. I reply that I'm very certain about this, but I can't guarantee that others can be convinced of it, however attentive they may be, and however sharp-minded they *think* they are! I can't guarantee that they will be convinced, at least while they focus their attention not on objects of pure understanding but only on objects of the imagination 'and the senses'. You *must* have misdirected your attention in this way if you imagine that the way to distinguish thought from motion is by conceptually slicing up some kind of rarefied matter! The only way of understanding the distinction is by taking in that (a) the notions of •a thinking thing and of •an extended or mobile thing are completely different, and independent of each other; and (b) that it is self-contradictory to suppose that things that we clearly understand as different and independent couldn't be separated, at least by God, 'and (c) if *x could be separated* from *y*, then *x is distinct* from *y*. Thus, however often we find such a pair of properties in one and the same subject - e.g. finding thought and corporeal motion in the same man - we ought not to infer that they are one and the same in virtue of a unity of nature, but should regard them as the same only in respect of unity of composition.

OBJECTION

(3) Several of the Church Fathers believed, as did the Platonists, that •angels are corporeal (from which the Lateran Council inferred that they can be depicted); and they took exactly the same view of the •rational soul, some of them maintaining that 'its corporeal nature can be seen from the fact that it' is passed on from parents to child in procreation. Yet they still maintained that •angels think, and that •the soul thinks. They seem to have thought that this could occur by means of corporeal motions, or even that angels are themselves corporeal motions - which they didn't in any way distinguish from thought. There is confirmation for their view in the thoughts of apes, dogs and other animals. Dogs bark in their sleep as if they were chasing hares or robbers, and when they are awake they know that they are running, just as in their dreams they know that they are barking; yet we agree with you that there is nothing to these animals except their bodies. You may say that a dog doesn't know that it is running or thinking, but you can't prove this; and the dog might well think the same about us, namely that when we are running or thinking we don't know that that's what we are doing. You don't see the dog's internal mode of operation any more than the dog sees yours; and there have been plenty of distinguished men who have been prepared to allow that the beasts have reason. We don't accept that all their operations can be satisfactorily explained in terms of mechanics, without invoking •sensation, •life or •soul - indeed we'll bet you anything you like that this ridiculous claim is impossible. And if it is maintained that apes, dogs and elephants can perform all their operations by mechanical means, lots of people will say that man himself lacks sensation and intellect, and can do everything by means of mechanical structures, without any mind. For the limited reasoning power to be found in animals differs from human reason only in degree; it doesn't imply any essential difference.

REPLY

(3) What you take here from the Platonists and their followers is something that has now been rejected by the entire Catholic Church and is commonly hooted off the stage by philosophers. The

Lateran Council did conclude that angels could be depicted, but that didn't mean they were granting that angels are corporeal. And even if they really were believed to be corporeal, it wouldn't make sense to suppose their minds to be inseparable from their bodies (·and therefore not distinct from their bodies·), any more than it is in the case of men. Another point: even if the human soul *were* passed on ·from the parents· in procreation, it wouldn't have to be corporeal; it could have been derived from the *soul* of the parents, just as the body grows from the parents' body. As for dogs and apes: if I conceded that they have thought, that would imply that ·in this respect they resemble men·, not because

- in men as well as in animals there is no mind distinct from the body,

but rather because

- in animals as well as men there is a mind distinct from the body.

This was the view taken by the very Platonists whom my critics were taking as authorities a moment ago, as can be seen from their following the Pythagoreans in believing that a soul could move from one body to another. Actually, though, the brutes don't have any thought. My critics imply that this is merely something that I *said*; but I didn't just *say* it - I proved it by very strong arguments that so far no-one has refuted. As for the charge of 'saying without proving', the boot is on the other foot: my critics *say*, as if they were present in the animals' hearts, that 'dogs when awake know that they are running, and in their dreams know that they are barking'. They go on to say that they don't believe that the behaviour of the beasts can all be 'explained in terms of mechanics, without invoking sensation, life or soul' (I take this to mean 'without invoking thought'; for I accept that the brutes have what is commonly called 'life', and a corporeal soul and organic sensation); moreover, they are ready to bet any amount that this 'ridiculous claim' is impossible. But those remarks aren't *arguments*; they are the sort of thing one can say about *any* thesis, however true it might be. Usually when someone resorts to bets in a debate, it is because he has run out of arguments! And ·the label 'ridiculous', which invites people to laugh at my views, doesn't count for anything either·: there was a time when distinguished people used to laugh at those who claimed that the antipodes exist. I don't think that a claim should be immediately dismissed as false just because some people laugh at it.

My critics add in conclusion: 'If it is maintained that apes, dogs and elephants can perform all their operations by mechanical means, lots of people will say that man himself lacks sensation and intellect, and can do everything by means of mechanical structures, without any mind.' This isn't an argument that proves anything, except perhaps that some muddled people are so strongly wedded to their preconceived opinions (or their pre-adopted *sentences*) that rather than change them they will deny truths about themselves - truths that they must continually experience within themselves as true. We can't fail to experience constantly within ourselves that we are thinking. When it is shown that animate brutes can do everything they do without any thought, no-one should infer from this that he himself doesn't think! Here is my diagnosis of someone who does make that inference:

He used to attribute thought to the brutes, which helped to convince him that he operates in exactly the same way as the brutes do. Then, when it is pointed out to him that the brutes don't think, he has a choice between giving up 'I think' and giving up 'Men and the brutes operate in the same way'; and he actually - ·bizarrely· - prefers to deny that he thinks, because he is so wedded to the *sentence* 'Men and the brutes operate in the same way' that he won't give it up.

But I can't convince myself that there are many people of this sort. Most people who believe that thought is not distinct from corporeal motion are led by that to the conclusion 'not that men don't think but that brutes do think, and that their thought is similar in kind to ours (basing this on their observations of animal behaviour). And they will add that the difference between animal thought and human thought is merely one of degree; from which they will infer - a reasonable inference, although it is to a false conclusion - that the beasts, although they have *less* reason than we do, have minds that are of exactly the same type as ours.

OBJECTION

(4) Regarding the kind of knowledge that an atheist can have:- When the atheist asserts 'If equals are taken from equals the remainders will be equal' or 'The three angles of a triangle are equal to two right angles' or the like, he maintains that his knowledge of these truths is very certain and indeed - on your own criterion - utterly evident. For he can't think of these propositions without believing them to be wholly certain. He maintains that this is so true that even if God doesn't exist - even if God isn't even *possible* (which is what he believes) - he is just as certain of these truths as if God really existed. No reason for doubt can be produced (he thinks) that could shake his confidence. What reason can you produce? That God, if he exists, may deceive him? The atheist will reply that he can't be deceived about these truths even by a God who exercises all his omnipotence to this end.

REPLY

(4) It is easy to demonstrate that the atheist's kind of knowledge is not rock-solid and certain. As I have already said, the less power the atheist attributes to his creator the more reason he will have to suspect that his nature may be so imperfect that he can be deceived even in matters which seem utterly evident to him. And he'll never get free of this doubt until he recognizes that he has been created by a true God who doesn't have it in him to be a deceiver.

OBJECTION

(5) You say firmly that no deception is to be found in God. Now many theologians believe that the damned, both angels and men, are continually deceived by the idea of a tormenting fire that God implants in them; they firmly believe and think they perceive very clearly that they are really being tormented by the fire, although there is no such fire. So might not God deceive *us* with similar ideas, continually deluding us by sending such images or ideas into our souls? [The critics develop this point a little, adding that God could have good reasons for such deceptions. They then cite two biblical passages which mean, they say, that humans can't really know anything:] 'If anyone thinks he knows something, he doesn't yet know anything as he ought to' (1 Corinthians 8:2); 'Then I understood that of all the works of God, a man can find no reason for the works that are performed under the sun; and the harder he works to find it the less success he will have; indeed, even if a wise man says that he knows it, he doesn't know it and won't be able to find it out' (Ecclesiastes 8:17). The whole book of Ecclesiastes makes it clear that the 'wise man' speaks on the basis of carefully considered reasons, not hastily or thoughtlessly; this is exceptionally clear when the issue of the mind, which you maintain is immortal, is discussed. For Ecclesiastes 3:19 says that the death of a man 'is as the death of a beast'. Don't think that this refers only to the death of body, because the text adds that 'a man has no pre-eminence above a beast'. And it says regarding the spirit of man that no-who knows 'whether it goes upward' (i.e. is immortal), or whether it 'goes downward' (i.e. perishes) like the spirits of beasts. Don't reply that these are words put into the mouth of an unbeliever; if they were, the writer would have said so,

and then refuted these assertions, ‘whereas in fact he does neither’. And don’t claim that you don’t have to reply to these points because Scripture is the theologian’s affair, not the philosopher’s. You as a Christian ought to be ready to reply as best you can to every objection that can be raised against the faith, especially when it also goes against a position you wish to establish.

REPLY

(5) It is self-contradictory that men should be deceived by God; this is clearly demonstrated from the fact that the •supreme being can’t have anything to do with •non-being, and that’s what deception essentially is. All theologians are agreed about this. Also, the certainty of the Christian faith depends on it, for why would we believe what God has revealed to us if we thought that he sometimes deceived us? Theologians do indeed commonly say that the damned are tormented by the fires of hell; and what they mean is not that the damned are ‘deceived by •the idea of a tormenting fire that God implants in them’, but rather than they are tormented by •a real fire. As Peter Lombard writes in his ‘authoritative’ work *Sentences* (at IV:44), ‘just as the incorporeal spirit of a living man is naturally confined within the body, so after death it can easily be confined in corporeal fire, through the power of God’, and so on.

As for the passages cited from Scripture, I don’t think there is any onus on me to comment on them, except when they seem conflict with some opinion that is mine alone. For when the Scriptures are invoked against opinions of Christians generally, e.g. that something can be known, and that human souls are not like those of animals, it would look like arrogance on my part if I came up with replies of my own rather than resting content with replies already discovered by others. For I have never pursued theological studies much except as part of my private education, and I don’t feel within myself enough divine grace to give me a calling to such sacred studies. So I hereby declare that from now on I’ll refuse to respond to questions of this kind; but I make an exception just this once, so that I shan’t be accused of keeping silent because I don’t know what to say.

First, then, I maintain that the passage from Corinthians 8:2 should be understood as referring only to knowledge that isn’t conjoined with love, i.e. to the knowledge that atheists have. [Descartes defends this interpretation at some length, concluding:] Thus this passage that has been invoked •against me so openly •confirms my own opinion on the subject that I don’t think it can possibly be explained by anyone who disagrees with me ‘on the matter that is in question here’. [He offers supporting evidence from I John 2:2 and 4:7.]

The same reasoning applies to the passages in Ecclesiastes. In this book Solomon is not adopting the role of an unbeliever but is speaking in his own voice as a sinner who has turned away from God and now repents. He says that back in the days when he used merely human wisdom without bringing in God, he couldn’t find anything wholly satisfying, anything that didn’t contain ‘vanity’. He warns us in various passages that we should turn to God, . . . including one of the passages my critics bring against me: ‘Then I understood that of all the works of God, a man can find no reason for the works that are performed under the sun’. This isn’t being said about any and every man, but about the man described in the preceding verse: ‘There is a man who doesn’t sleep, day or night.’ As though the prophet meant to warn us that those who stick to their studies too assiduously are not suited to the pursuit of truth. Those who know me won’t think that this applies to me! [A couple of years after this, Descartes wrote to the Princess Elizabeth: ‘The chief rule that I have always observed . . . is never to spend more than •a few hours a day in thoughts that occupy the imagination (including in that serious conversations and anything else that requires attention), and •a few

hours a year in ones that occupy the intellect alone. I have given all the rest of my time to the relaxation of the senses and the repose of the mind.’] The phrase ‘works that are performed under the sun’ is important. It turns up frequently in Ecclesiastes, always referring to natural ‘created’ things considered apart from their relation to God, the point being that God is •above everything and hence is not •‘under the sun’. So the true sense of the quoted passage is that a man can’t achieve correct knowledge of natural things so long as he doesn’t know God - which is just what I too have asserted. Finally, the statements in 3:19 that •the death of a man ‘is as the death of a beast’ and that •‘a man has no pre-eminence above a beast’ are obviously meant to apply only to *the body*, for the passage mentions only things pertaining to the body. Just after that we find a separate comment about the soul: ‘Who knows whether the spirit of the sons of Adam goes upward and whether the spirit of the beasts goes downward?’ In other words: *so long as man relies on human reasoning and doesn’t turn to God*, who knows whether human souls are destined to for bliss in heaven? Well, I have certainly tried to prove by •natural reason that the human soul •is not corporeal, but I agree that only •faith can enable us to know whether it •will go to heaven.

OBJECTION

(6) We have a problem concerning the indifference of •our will or• our judgment, i.e. concerning *liberty*. [In this context, the ‘indifference’ of someone’s will is its being evenly balanced among the options, its not being driven to go one way rather than another.] According to you, this indifference is not a perfection in the will but an imperfection - one that goes away whenever the mind clearly perceives what it should believe or do or refrain from doing. But don’t you see that this view of yours destroys God’s freedom, removing from his will the indifference as to whether he shall create this world rather than another world or no world at all? It is an article of faith that God was from eternity indifferent as to whether he should create one world, or countless worlds, or none. But who doubts that God has always perceived utterly clearly what he ought to do or not do? Thus, a very clear perception of things *doesn’t* remove indifference of choice. And if indifference can’t be a proper part of our freedom it won’t be a part of God’s freedom either, because the essences of things are, like numbers,

- indivisible, •so it can’t be that God has one part of the essence of freedom and we have another part•,

and

- immutable, •so it can’t be that the essence of freedom somehow changes when it moves from God to us•.

So indifference is involved in God’s freedom of choice just as much as it is in human freedom of choice. [The critics write as though they had first argued that indifference •isn’t part of human freedom, and then inferred that it •isn’t part of divine freedom either; whereas really they have moved in the opposite direction. This oddity doesn’t, fortunately, get in the way of the important things that Descartes says in reply.]

REPLY

(6) The way freedom of the will exists in God is quite different from how it exists in us. **God’s will was indifferent from eternity with respect to everything that has happened or will ever happen.** The supposition that this is *not* so is self-contradictory, because we can’t make up any •coherent• story according to which •something is thought of in God’s intellect as good or true, or worthy of belief or action or omission, in advance of •his deciding to make it so. I don’t mean *temporally* ‘in advance’. What I am denying is that God’s idea of the good preceded his actions in the order of *reasons*, so that it impelled him to choose one thing rather than another. Thus, these are false:

- God willed the creation of the world *in time* because he saw that it would be better this way than if he had created it *from eternity*.

- God willed that the three angles of a triangle should be equal to two right angles because he recognized that they couldn't be equal to anything else.

These are true:

- Because God willed the creation of the world *in time*, it is better this way than if he had created it *from eternity*.

- Because God willed that the three angles of a triangle should be equal to two right angles, they couldn't be equal to anything else.

[In that striking passage, Descartes expresses *two* of his doctrines. They are a natural pair, but still they are *two*.

- It is impious to think that there is any objective standard of value, independent of God's will, in terms of which God's conduct can be evaluated.

- It is impious to think that there are any objective facts about what is and what isn't possible, independent of God's will, which circumscribe what God can do.]

The merit of the saints can be said to be the cause of their obtaining eternal life, and that would be a problem for me if it meant that •their merit determines •God to will that they have eternal life. But that isn't how things stand. Rather, •their merit •directly• causes •their eternal life, this being a cause-effect link that God established from eternity. In short, God's supreme indifference is the supreme indication of his omnipotence. [Descartes's point is that if God were not supremely indifferent, that would mean that •he chooses to act as he does because he sees *reasons* for that choice; which would require that •there are standards of good/bad or right/wrong to which are valid for God and are independent of his will; which would mean that •he is in some way limited, and thus not omnipotent.] In contrast with this, man finds that the nature of all goodness and truth has already been determined by God, and his [i.e. man's] will can't tend towards anything else; so it is obvious that the more clearly he sees what is good and true the more •willingly and thus •freely he will embrace it. The only times he is indifferent are when he doesn't know which of the two alternatives is the better or truer, or at least when he doesn't see this clearly enough to rule out any possibility of doubt. So human freedom relates to indifference very differently from how divine freedom relates to it. The thesis that the essences of things are indivisible isn't relevant here. For one thing, no essence that can be attributed to God can be attributed *in the same sense* to any of his creatures. Also, indifference isn't part of the essence of human freedom: we are free when ignorance of what is right makes us indifferent, but we are *especially* free when a clear perception impels us to pursue some object.

OBJECTION

(7) Concerning the surface in which, or by means of which, you say all our sensations occur [page 76]: we don't understand how it can be that it isn't a part of the bodies that are perceived by the senses, and isn't a part of the air and its vapours; for you say it is no part of these things, not even the outermost layer. And we don't grasp your assertion that there are no real accidents belonging to any body or substance - accidents that God •could make exist out of any subject, and that really •do exist in the sacrament of the Eucharist. [See note on page 75.] But our professors need not be upset by what you say, until they see whether you demonstrate it in the treatise on physics that you promise us; •and they needn't be anxious about this in the interim; for they can hardly believe that your work on physics will provide us with such a clear account of the matter as to enable or require your view to be accepted in preference to the traditional one.

REPLY

(7) I conceive of the surface by which I think our senses are affected in exactly the same way that all mathematicians and philosophers do (or ought to do), when they distinguish a •surface from a •body and suppose it to be wholly lacking in depth. That is one of the senses in which mathematicians use the term 'surface'. In the other sense, they use 'surface' to refer to a •body

whose length and breadth they are studying, not considering any depth it may have, though not denying that it *has* some degree of depth. The first sense - the one I am copying - takes a 'surface' to be not a body or part of a body but rather a •mode of body - something that a body *has* in the way it *has* properties; and a surface in *this* sense has no depth. To avoid ambiguity, I stated that I was talking about the surface that is merely a *mode* and hence can't be a *part* of a body - because a body is a substance, and a mode can't be a part of a substance. But I didn't deny that the surface is the boundary of a body; on the contrary it can quite properly be called the boundary of the contained body as much as of the containing one, in the sense in which bodies are said to be contiguous when their boundaries are together. For when two bodies are in mutual contact - for example, when a ball is immersed in water - they share a single boundary that isn't a part of either of them; it is the same mode of each body, and it can remain even though the bodies are removed, provided only that other bodies of exactly the same size and shape take their places - for example, replacing the water by other water. . . .

The two arguments I have already used suffice to demolish the doctrine of the reality of accidents - i.e. to demolish the view that accidents or property-instances are 'real' in the sense of *thing-like*, and are able to move from one substance to another and to exist out of any substance.

(a) All sense-perception occurs through contact, so only the surface of a body can be the object of sense-perception; but real accidents (if there were any) would have to be something different from the surface, which is nothing but a mode; so if there are any real accidents, they can't be perceived by the senses. That doesn't prove that there are no real accidents, but it undercuts the only reason for believing that there are. The only reason why people have thought that 'real' accidents exist is that they have believed that we perceive them by our senses. (b) The notion of *real accident* is completely self-contradictory: whatever is real can exist separately from any other subject; and anything that can exist separately in this way is a substance, not an accident. It might be said that real accidents can't be separated from their subjects 'naturally', but only by the power of God. And this claim, it might be thought, blocks my argument (b): their being separable by God (the thought goes) is enough to make them 'real', while their not being separable naturally is enough to stop them from counting as 'substances'. But that move doesn't achieve anything. To occur •'naturally' is simply to occur •through the ordinary power of God, which in no way differs from his extraordinary power - the effect on the real world is exactly the same. Hence if

•everything that can *naturally* exist without a subject is a substance,
then we should hold that

•anything that can exist without a substance *through the (perhaps extraordinary) power of God* is a substance.

. . . . But what primarily led philosophers to believe in real accidents was their belief that sense-perception couldn't be explained without them, and that's why I promised to give a very detailed account of sense-perception in my writings on physics, taking each sense in turn. I didn't expect any of my results to be taken on trust; but I thought that the explanation of vision that I had already given in my *Optics* would help the judicious reader to guess what I could accomplish with regard to the other senses.

OBJECTION

(8) Concerning one of your replies to Gassendi [page 125]: How can the truths of geometry or metaphysics, such as the ones you mention, be •unchangeable and eternal and yet *not* be •independent of God? What sort of causal dependence on God do they have? Could he have brought it about that there was never any such thing as *the nature of a triangle*? And how could

he have made it untrue from eternity that twice four makes eight, or that a triangle has three angles? Either these truths depend solely on the intellect that is thinking of them, or on existing things, or else they are independent, since it seems that God could not have brought it about that any of these essences or truths were not as they were from all eternity. [This very condensed sentence may be worth unpacking. The point seems to be this:- There are only three non-absurd stories we can entertain about the nature of modal truths such as those of logic and geometry: (a) they are somehow reflections of our own thinking, (b) they are very abstract truths about how things stand in the natural world, (c) they report on a free-standing self-sufficient objective realm of absolutely necessary modal truths. And on *none* of these accounts is it plausible to say that modal truths are made true by God. It is puzzling that the critics didn't see both (a) and (b) as possible ways for modal truths to depend on God; yet the above does seem to be what they are saying, and it is certainly how Clerselier understood them in his French version.]

REPLY

(8) Anyone who attends to the immeasurable greatness of God will find it utterly clear that there can't be *anything at all* that doesn't depend on him. This applies not just to all existing things, but also to all order, every law, and every reason for anything's being true or good. If this were not so, then, as I pointed out a little earlier, God would not have been completely indifferent with respect to the creation of what he did in fact create. If in advance of all God's decrees there had been a reason for something's being good, this would have determined God to choose the things that it was best to do; and this can't be right, because it is grossly impious to suggest that anything could determine God, i.e. act on him or sway him or incline him or anything like that. The real story runs in the other direction: precisely *because* God resolved to prefer certain things, those things are, as Genesis says, 'very good'; they are good *because* God exercised his will to create them [the Latin could mean: '... exercised his will to make them good']. What kind of causality (you ask) is involved in the dependence of this goodness on God, or in the dependence on him of other truths, both mathematical and metaphysical? There doesn't have to be an answer to this; it wouldn't be surprising if we didn't have a label for this kind of causality; the various kinds of cause were listed and named by thinkers who may not have attended to this type of causality. But in fact we *do* have a name for it - namely 'efficient causality', in the way in which a king may be called the efficient cause of a law, although the law is merely what they call a 'moral entity', not a thing that exists out there in the world. *How* could God could have brought it about from eternity that it was not true that twice four make eight? I admit that we have no understanding of how he could have done that. But there are two things that I *do* understand:

- There can't be any kind of entity that doesn't depend on God.
- Even with matters where we can't grasp the possibility of things' being other than the way they are, God could easily have brought it about that they were other than the way they are.

So it would be irrational for us to doubt things that we do understand correctly just because there is something that we don't understand and that there is no visible reason why we *should* understand. So let us not suppose that eternal truths depend on the human intellect, or on other existing things; they depend on God alone, who, as the supreme legislator, has ordained them from eternity.

OBJECTION

(9) Our most worrying difficulty is your assertion that •we ought to mistrust the operations of the senses and that •the reliability of the intellect is much greater than that of the senses. How can the intellect enjoy any certainty that it didn't first get from the senses when they are working properly? It can't correct a mistake made by one of the senses unless it gets a lead from some

other sense. Owing to refraction, a straight stick appears bent in water. What corrects the error? - the intellect? Not at all; it is the sense of touch. And similarly with other cases. Thus, if you appeal to all your senses when they are in good working order, and they all give the same report, that will give you the greatest certainty that man is naturally capable of. But you will often fall short of such certainty if you trust the operations of the mind; for the mind often goes astray in just those areas where it had previously thought doubt was impossible.

REPLY

(9) To get a clear view of what kind of certainty attaches to the senses, we must distinguish three levels of sensory response. (a) There is

- the immediate stimulation of the bodily organs by external objects;

this can only be the motion of the particles of the organs, together with any change of shape and position resulting from this motion. (b) There are

- the immediate effects produced in the mind as a result of its being united with a bodily organ that is affected thus and so.

Examples are the perceptions of pain, pleasure, thirst, hunger, colours, sound, taste, smell, heat, cold and the like, which arise from the union - the *intermingling*, as it were - of the mind with the body, as I explained in the sixth Meditation. (c) Then there are

- the judgments about things outside us

that we have been accustomed to make from our earliest years - judgments that are triggered by the movements of these bodily organs.

When I see a stick, what happens? A wrong answer: certain 'intentional images' fly off the stick towards the eye. The right answer: rays of light are reflected off the stick and set up certain movements in the optic nerve and, via the optic nerve, in the brain, as I have explained at some length in my *Optics*. This movement in the brain is the first level of sensory response; we have it and so do the brutes. It leads to the second level, which takes in the bare perception of the colour and light reflected from the stick; it occurs because the mind is so intimately conjoined with the body that it is affected by the movements that occur in the body. If we want a clean line between

•the sensory faculty and the intellect, those two levels are all we should attribute to •the former. But now take a case where this happens:

I am affected ·at the second level· by a sensation of colour. This leads me to judge that a certain physical stick is coloured. Also, on the basis of the layout of the colour and its boundaries, together with its position in relation to the parts of my brain, I make a rational calculation about the size, shape and distance of the stick.

Such reasoning is commonly assigned to the senses (which is why I called it the third level of 'sensory' response), but clearly it depends solely on the intellect. I demonstrated in the *Optics* how •size, •distance and •shape can be perceived by reasoning alone, which works out any one of those features from the other two. ·What we have here is a difference not of process but only of circumstances·. •When we have some new kind of observation, and arrive at our first judgment about it, we think of this judgment as the work of the intellect. •When we have some sensory input of a familiar kind, and arrive at the old familiar judgment about it, we think of this judgment as coming from the senses. Yet the process of judgment-formation is exactly the same in the two cases, so why do we have a feeling that they differ? It is because in the latter case we work our way to the judgment at great speed because we have done this so often; or rather we remember our past judgments about similar objects ·and copy them in the present case, thus not having to 'work our way' to the judgment at all·.

This shows that when we say

‘The •intellect is much more reliable than the •senses’,
we mean merely that

•the judgments we make as adults on the basis of various new observations are more reliable than •the judgments we unreflectively arrived at in our early childhood; and this is undoubtedly true. The first and second levels of sensory response don’t come into this at all, because there can’t be anything false in *them*. So when people say that a stick in water ‘appears bent because of refraction’, they aren’t attributing falsehood to the second level of sensory response. Rather, they are saying in effect that the stick appears to us in a way that would lead a child - or would lead us if we weren’t careful - to judge that it was bent. My critics say that if we make that wrong judgment it is corrected not by the intellect but by the sense of touch; and I think they are wrong about that. When we touch the stick we may judge that it is straight, and we may assign this judgment to the senses because it is of a kind that we have been accustomed to make since childhood. To correct the visual error we need not just •the sense of touch but also •some reasoning that tells us to believe the touch-based judgment rather than the sight-based one. . . . Thus even in my critics’ own example it is the intellect alone that corrects the error of the senses; and in reply to their final statement, I say that they can’t possibly produce an example of error resulting from our trusting the operation of the mind more than the senses.

OBJECTION

(10) After dealing with our questions, will you please give us help with this? You say that we can understand something entirely apart from some other thing in such a way as to make it certain that the one is so distinct from the other that they could exist apart - if only through the power of God. We need a reliable rule, and firm criteria, that will enable us to know clearly and distinctly in a given case that the distinction our intellect is making isn’t •produced purely by the intellect itself rather than •arising from the nature of the things themselves. Example of the difficulty: when we contemplate God’s •immensity while not thinking of his •justice, or contemplate God •the •Father while not thinking of the •Son or the •Holy Spirit, don’t we have a complete perception of God •the Father as existing, entirely apart from the other persons of the Trinity? If so, why can’t an unbeliever deny that the Son and the Holy Spirit belong to God on the same reasoning that leads you to deny that the mind or thought belongs to the body? If anyone infers from this simple thought-experiment that •the Son and the Holy Spirit are essentially distinct from God the Father, or that they can be separated from him, this will be an unsound inference because its premise is true and its conclusion false. Well, the threat is that no-one will grant you the inference from •the separate conceivability of mind and body to the conclusion that •thought or the human mind is distinct from the body, despite your belief that the separate thinkability doesn’t come about simply through an abstraction of your mind. If you can give a satisfactory answer to these points, then, so far as we can see, nothing at all remains that can displease our theologians.

REPLY

(10) These comments are put forward as doubts rather than as objections, and I’m not so confident of my powers that I’ll risk promising to give a satisfactory explanation of matters that I see still cause doubts in the minds of many learned and highly intelligent men. But I shan’t throw in my hand either: I’ll tell you frankly how I managed to free myself entirely from these same doubts. If this gives help to others, I’ll be delighted; if not - well, I didn’t make any promises!

When the arguments set out in the *Meditations* first led me to conclude that the human mind •is really distinct from the body, •is better known than the body, and so on, I *had to* accept

these results because all the reasoning was coherent - inferred in accordance with the rules of logic from quite evident principles as premises. And yet, I confess, I wasn't entirely convinced. I was in the same plight as astronomers who have established by argument that the sun is many times larger than the earth, yet can't help judging that it is smaller, when they actually look at it. But I pushed ahead, investigating physical things by the same basic principles that had led me to where I was. First I attended to my own ideas or notions of individual things, carefully distinguishing them from one another so that all my judgments should match them, i.e. match the physical things. Here is what I found:

- (a) The concept of *body* entails that every body has length, breadth and depth and is capable of various shapes and motions, and that is the *whole* content of that concept.
- (b) These shapes and motions are not so-called 'real accidents'; there is nothing thing-like about them; they are merely modes, which no power can cause to exist apart from body.
- (c) Colours, smells, tastes and so on are not qualities out there in the world, but are merely certain sensations that exist in my thought, and differ from bodies as much as pain differs from the shape and motion of the weapon that causes it.
- (d) All the qualities that we experience in bodies - heaviness and hardness, power to heat or to attract, and so on - depend on nothing but •whether and how the parts of the bodies are moving, •how they are organized, and •where they are.

This made a complete change in my beliefs regarding physical things; and that led me to look into the causes of my previous beliefs. I found that the principal cause was the following. From infancy I had formed a variety of opinions about physical things - all relating to the features of the things that were relevant to my own survival - and later on I *kept* these early opinions. But at the age at which I had formed them •my mind was more firmly attached to my sense-organs than it became later, and •it employed the bodily organs less correctly than it now does. That double fact had a double upshot: •my mind had no thoughts apart from my sense-organs, and •it perceived things only in a confused manner. Although it was aware of its own nature, and contained an idea of thought as well as an idea of extension, my mind never thought about anything without depicting it in the imagination. It therefore •took thought and extension to be one and the same thing, and •understood in corporeal terms all its notions of things related to the intellect. I had never freed myself from these early opinions, so I didn't *distinctly* know anything, and supposed everything to be corporeal.

Yet many of my ideas or concepts of things that I supposed to be corporeal were really ideas of mental items rather than of bodies! My ideas about *heaviness* were examples of this, in **three** different ways. (a) I thought of heaviness as being some sort of real quality inhering in solid bodies; and although I called it a 'quality' of the bodies in which it inhered, I added 'real', which showed that I was in fact thinking of it as a substance. [See note on 'real accident' on page 75.] In the same way clothing is in itself a *substance*, though in relation to the man who wears it it's a *quality*. And - coming to my present topic - the mind is in fact a substance, but can be said to be a 'quality' of the body to which it is joined. (This comparison is admittedly a fairly abstract one. My old way of thinking about heaviness involved

- thinking of a quality as though it were a substance;

whereas the way of talking about the mind that I have called attention to involves

- speaking of a substance as though it were a quality.)

(b) Although I pictured heaviness as being scattered all through a heavy body, I still didn't attribute to it the *extension* that constitutes the nature of a body. [To understand what Descartes says

next, you need to know a background fact. Descartes accepted, as did many others, the **no sharing** thesis: extended things can't 'interpenetrate', i.e. you can't have two extended things each completely filling a single region of space (though of course you can have one occupying pores and tunnels in the other, like water in a sponge). He also accepted the **no shrinkage or expansion** thesis: you can't have a single extended thing (or a single batch of extended stuff) completely occupying some region of space and then later completely occupying a smaller or larger region of space. In what he says next, as in various other places, Descartes writes as though these two theses were one, or at least that they necessarily stand or fall together.] The true extension of a body excludes any interpenetration of the parts, whereas I thought that there was the same amount of heaviness in a large piece of wood as in a smaller lump of gold - indeed I thought that the whole of the heaviness could be shrunk down to a mathematical point. Also, although the heaviness was scattered throughout the entire body, I saw that it could exercise *all* its force in any one *part* of the body: if the body is hung from a rope attached to one part of it, it would still pull the rope down with all its force, as though all the heaviness were in the part actually touching the rope instead of being scattered throughout all the parts. And that is exactly the way in which I now understand the mind to be coextensive with the body - the whole mind in the whole body, and the whole mind in any one of its parts. (c) But what makes it especially clear that my idea of heaviness was taken largely from my idea of the mind is my thinking of heaviness as carrying bodies towards the centre of the earth as though *it* - heaviness itself - knew where the centre was. For this surely couldn't happen without knowledge, and there can't be knowledge except in a mind. But despite all this I continued to ascribe to heaviness various attributes that *can't* be understood to apply to a mind in this way - for example its being divisible, measurable and so on.

Later on, when I had thought all this through, and distinguished carefully the •idea of the mind from the •ideas of body and bodily motion, I found that all my earlier ideas of 'real qualities' or 'substantial forms' were constructed by me out of them - i.e. out of the ideas of body and bodily motion - and in this way I easily freed myself from all the doubts that my critics here put forward. First of all, I didn't doubt that I had a clear idea of my mind, since I had a close inner awareness of it. And I didn't doubt that this idea was quite different from my ideas of other things, and that there was nothing corporeal about it: in the course of looking for true ideas of all these other things, I had apparently come to have some general knowledge of all of them; and *everything* I found in them was completely different from my idea of the mind. As for the distinctness of mind from body: we have to distinguish two kinds of case:

- (a) x appears to be distinct from y, even while we are thinking hard about both of them;
- (b) we can think of x without thinking of y; but when we think of both of them together, we can't see how they could exist apart from one another.

The examples presented by the critics are both cases of type (b). •We can think about God's immeasurable greatness without thinking about his justice, but if we think about both at once we find that it is flatly self-contradictory to suppose that God is immeasurably great and yet not just. •We can have true knowledge of the existence of God the Father without knowing about the other persons of the Trinity, because the latter can be perceived only by a mind that has been illuminated by faith; but when we *do* perceive them, we find it unintelligible to suppose that they are 'really distinct' from one another in the sense of being different *substances*, though not to suppose that they are different *persons* who stand in certain relationships to one another.

APPENDIX

There now follow a number of points suggested to me by other critics. [This, according to the Clerselier translation, is Mersenne addressing Descartes.] I put them in here to give you the opportunity to reply to them in conjunction with the preceding objections, since they involve the same line of

thought. Some of your most learned and acute critics have ask you to clarify the following three points:

- How do I know for certain that I have a clear idea of my soul?
- How do I know for certain that this idea is wholly different from any other thing?
- How do I know for certain that this idea contains nothing of a corporeal nature?

And the following argument has been sent to me [still Mersenne] with the title: 'From philosophers and geometers to Monsieur Descartes'.

However much we ponder on the question of whether the idea - i.e. our knowledge and perception - of the human mind contains anything corporeal, we don't go so far as to assert that what we call 'thought' can't be squared with the properties of a movable body. Our situation is this: we see that

- There are some bodies that don't think,

and that

- Other bodies do think (human ones, and perhaps sub-human animals ones too).

Well, are we to infer that

- No bodies think

from those two premises? We are pretty sure that if *we* had originally devised this argument from ideas to establish the nature of the mind and the existence of God, you would have brought your method of analysis to bear on it, exposing us to lasting ridicule. Why, then, are you satisfied with this line of argument when it is you who puts it forward? It seems that through your intense preoccupation with it, this 'analytic' method has dulled your mind, so that you are no longer free to see that the individual properties or operations of the soul that you find in yourself depend on corporeal motions - primarily on tiny physical events in the brain.

If you don't accept this, then you should help *us* to reject it also. We can't make our mind soar above every kind of body; you must think that some kind of strong fetters are holding our mind down; and we ask you to undo them! The crux of the trouble is this:- We perceive very well that three and two make five, and that if you take equals from equals the remainders will be equal; we are convinced of these and many other matters, just as you are. Then why aren't we similarly convinced - on the basis of your ideas, or our own - that a man's soul is distinct from his body, and that God exists? You'll say that you can't instil this truth in us unless we are prepared to meditate along with you. Well, we have read what you have written seven times, and have exerted all our powers to raise our minds to the level of the angels, but we're *still* not convinced. We don't think you'll accuse us of having minds that are possessed by a brutish stupor and are wholly unfitted for metaphysical subjects - not when we have pursued such subjects for thirty years! Surely you will prefer to accept that your arguments based on the ideas of the mind and of God aren't weighty or strong enough to conquer the minds of learned men who have tried their hardest to detach themselves from corporeal stuff. We think, indeed, that you will *readily* admit this, if you re-read your *Meditations* in the spirit of analytical scrutiny that you would have adopted if an opponent had put them forward for you to examine.

Lastly, since we - i.e. humanity in general - don't know what can be done through the movements of bodies, and since you accept that without a divine revelation no-one can know everything that God that has imparted or could impart to any object, how could you possibly know that God hasn't given certain bodies a power or property enabling them to doubt, think etc.?

These are our arguments, or our ‘preconceived opinions’ if you like. If you can cure them, Sir, we swear by the ever-living God that we will unite in giving you our fullest thanks for freeing us from the thorns that are choking the seed you have sown! May almighty God in his supreme goodness bring this about, for we can see that it is to his glory alone that you have devoted all your fine efforts.

REPLY TO THE APPENDIX

I have not been so preoccupied with my method of analysis that I risked committing the blunder suggested by these critics. They have me starting from

- seeing that there are certain bodies that don’t think,

and then going on to assert that

- thought doesn’t belong to the nature of the body,

rather than noticing that

- some bodies, namely human ones, *do* think,

and inferring from this that thought is a mode of the body. The starting-point should have been; ‘clearly understanding that certain bodies can exist without thought’, ‘but let that pass’. In fact I have never seen or perceived that human bodies think; all I have seen is that there are human beings who have both thought and a body. This comes from a thinking thing’s being *combined with* a corporeal thing, as I realized when I •examined a thinking thing on its own and discovered nothing in it pertaining to body, and •considered corporeal nature on its own and discovered no thought in it. Instead of discovering some such overlap or cross-connection, what I found was just the opposite: I didn’t find any mode of body (·any property that a body can have·) that isn’t just a special case of *being extended*; and I didn’t find any mode of mind (·any property that a mind can have·) that isn’t just a special case of *thinking*. Also, from the fact that we often see two things joined together we can’t rightly infer that they are one and the same; but from the fact that we sometimes observe one of them apart from the other we *can* rightly infer that they are distinct from one another. Nor should the power of God deter us from making this inference. For it is a conceptual contradiction to suppose that two things which we clearly perceive as *two* should become one and the same (that is, intrinsically one and the same, as opposed to being combined into a single complex thing); this is no less a contradiction than to suppose that things that are in no way distinct should be separated. Hence, if God has implanted the power of thought in certain bodies (as he in fact has done in the case of human bodies), then he can remove this power from them, and so it still remains really distinct from them.

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

What does greatly surprise me is that learned men who have pursued metaphysical studies ‘for thirty years’ and have read my *Meditations* ‘seven times’ think that if I re-read them in the

spirit of analytical scrutiny that I would have adopted if the *Meditations* had been presented by an opponent, I wouldn't believe that the arguments contained there had enough weight or strength to lead everyone to assent to them. I'm surprised that my critics should say this when *they* can't point to *any* flaw in these arguments of mine. They imply that my kind of 'analysis' enables true demonstrations to be overthrown and false ones to be so disguised and tricked out that no-one can refute them. What a massive compliment! The truth is just the opposite: all I have sought is a method that will show the certainty of true arguments and show up the flaws in false ones. What strikes me is not so much that some learned men don't yet accept my conclusions as that after carefully reading and re-reading my arguments they can't point to any false assumptions or invalid inferences in what I have written. Why are they reluctant to accept the conclusions? Probably because they have such long-ingrained habits of making different judgments on these matters; they are like the astronomers I mentioned earlier, who find it hard to picture the sun as being bigger than the earth although they can demonstrate that it is, by most reliable arguments. And why haven't they (or, as far as I know, anyone else) been able to fault my arguments? It must be because the arguments are completely true and certain. They don't start from obscure and unknown principles. Rather, they start from (first) total doubt about everything, and then from (second) principles that appear to be utterly evident and certain to a mind that has been set free from preconceived opinions; and they proceed to the conclusions step by step. So the arguments can't contain any mistakes that wouldn't easily be spotted by anyone of even moderate intelligence. So I think I am entitled to conclude that if these learned gentlemen still can't accept my conclusions after several close readings, their non-acceptance doesn't weaken my position, but in another way they *strengthen* it, through their failure after such a careful and repeated examination to note any errors or fallacies in my demonstrations.