SCIENCE AND RELIGION IN DESCARTES' *MEDITATIONS*

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I

DESCARTES' WORK HAS always been among the most problematic in the history of philosophy, combining, as it does, genius and clarity with apparent inconsistency and circularity. Since these latter difficulties generally involve a tension between theological and rationalistic strains in his thought, they have occasioned such explanations as the "dual allegiance" theory, according to which Descartes was so strongly under the influence of his Catholic training, and took his religious beliefs so for granted, that he failed to perceive that they were challenged by his rationalist philosophy; and the "insincerity" theory, according to which he was aware that his religious statements conflicted with his rationalism, but maintained them for prudential reasons, such as to ingratiate himself with the powerful church. The former view may thus be said to give the benefit of the doubt to Descartes' honesty, the latter to his acuity.

The latter view has never been the dominant one, though it has been advocated periodically, beginning with some of Descartes' contemporaries. Bernard Williams, in his article on Descartes in *The Encyclopaedia of Philosophy* (New York and London: Macmillan, 1967), writes that Descartes' suppression of his early treatise, *Le Monde*, when he learned of Galileo's condemnation,

> reveals that spirit of caution and conciliation toward authority which was very marked in him (and which earned the disapproval of some, including Leibniz and Bossuet). The suppression also

[1] For much in this article I am indebted to Richard Kennington and Stanley Rosen.

affected the subsequent course of his publications, which were from then on strategically designed to recommend his less orthodox views in an oblique fashion. (p. 344)

This is, I think, undeniable. The question is, how unorthodox were his "less orthodox" views, and would his "obliqueness" extend to presenting unorthodox views masked as orthodox views which he believed to be false? [2]

Betty Powell has made use of this theory in a recent paper,[3] arguing that Descartes was more of a mechanist than commonly supposed and that his dualism was ultimately an explanatory rather than substantial dualism. Descartes' attitude, she claims, was that the mind which explains the world in mechanistic terms cannot itself be regarded mechanistically, or an infinite regress would develop which would render the explanation uncompleteable. She suggests that Descartes posited mind as distinct from body so that it would function in explanation as outside the events to be explained, thus precluding an infinite regress. Thus it does not entail, she points out, the belief that men are not machines. To be sure, Descartes speaks as if it does; but she gives evidence that, for reasons of personal prudence in an age of persecution and concern for public morality in an age of dogmatic faith, Descartes was sometimes careful not to reveal his true views to the reader.

I am interested here not so much in examining Miss Powell's thesis in particular as the general attitude toward Descartes which it implies. If, as this theory suggests, Descartes was capable of dissimulation so as to present his unorthodox views in the guise of orthodoxy, does it mean that we cannot trust his orthodox statements at all, and must be suspicious of his philosophy wherever it seems at all orthodox, such as in his theology

[2] The term "orthodoxy" in this context is somewhat ambiguous, since, if one takes orthodoxy to mean 17th century Thomism, Descartes is not orthodox in any case. In what follows I shall use "orthodox" (if not quite accurately) to refer to theological views which might be acceptable to, though not necessarily identical with, the prevailing orthodoxy.

[3] "Descartes' Machines," in *Proceedings of the Aristotelian Society* 71 (1970-1), pp. 209-22.

or his anti-materialism? The present study is an attempt to discover what sort of picture of Descartes' philosophy would emerge from such an interpretation, and what evidence exists for it.

There is no question that Descartes sometimes acted from motives of personal prudence, such as in his suppression of *Le Monde*, and it is also obvious that he was aware of the danger to public morality posed by any statements that might undermine religious faith. Near the beginning of the letter to the theologians of the Sorbonne, which prefaces the *Meditations*, he writes:

> And since in this life one frequently finds greater rewards offered for vice than for virtue, few persons would prefer the just to the useful if they were not restrained either by the fear of God or by the expectation of another life. (p. 2)[4]

And in the *Discourse on Method* he says:

> next to the error of those who deny God, which I think I have sufficiently refuted, there is none which is so apt to make weak characters stray from the path of virtue as the idea that the souls of animals are of the same nature as our own, and that in consequence we have no more to fear or to hope for after this life than have the flies and ants. (p. 574)

Nor is there any question but that in times of persecution people must often veil their true beliefs, or not be heard at all.[5] Schopenhauer interprets Vanini in this way,[6] and Russell's interpretation of Leibniz is similar. That this sort of dissimulative writing was fairly common is witnessed by Kant's reference to it in the *Critique of Pure Reason* (A749). Even David Hume, living at a more liberal time in a more tolerant country, put his skeptical views "Of a Particular Providence and a Future

[4] All page references to Descartes are to Adam and Tannery's edition of the Latin text. Translations are either by Laurence J. Lafleur (Descartes' *Meditations*, 1960, and *Philosophical Essays*, 1964, New York: Bobbs-Merrill) or are my own.

[5] Cf. Leo Strauss, *Persecution and the Art of Writing* (Glencoe, Illinois: The Free Press, 1952).

[6] *Essay on Freedom of the Will* (New York: Bobbs-Merrill, 1960), p. 71.

State" into the mouth of a presumably fictitious "friend," while expressing, in his own person, fears that these views might be detrimental to public morality—a device which he expanded when he further elaborated these views in *Dialogues Concerning Natural Religion.*

None of this, of course, is evidence that Descartes was less than sincere in his writing. At most it establishes a certain historical context within which such a claim might be made intelligible, whereas in our own society it would scarcely be credible, as freedom of speech and publication is prevalent, and the public is kept well informed of any opinions likely to endanger its traditional beliefs and morality. This historical dimension, particularly the historical evidence for supposing Descartes to have been insincere in his religious statements, is discussed in depth in a recent article by Hiram Caton,[7] who makes an impressive case for doubting Descartes' sincerity. It is necessary, however, to examine also the internal evidence of Descartes' work, to see whether it accords with this conclusion and, if so, exactly what is at stake in the issue. To this end, let us examine Descartes' most popular work, the *Meditations.* In particular, I shall discuss five issues in which there appears to be some tension between the religious and scientific sides of his thought and which thus seem to afford a good basis for our inquiry: 1) whether religious truths can be demonstrated by reason alone, 2) the aim of the *Meditations,* 3) whether clear and distinct ideas are indubitable, 4) the proofs for the existence of God, and 5) whether mind and body are distinct substances.

II

Reason and Faith

The Aim of the Meditations

As Descartes hoped to assure maximum circulation for his works, he was anxious that the powerful church give its approval to them rather than condemning them and placing them on the

[7] "The Problem of Descartes' Sincerity," in *The Philosophical Forum* 2 (1971), pp. 355-70.

index of forbidden books as it eventually did. Accordingly, he wrote to the theologians of the Sorbonne, who entirely dominated the intellectual world of France, seeking their approval of the *Meditations*. Descartes published the letter with the *Meditations*, since it purports to be "a brief statement of what I herein propose to do." (p. 1) In it he proposes to convince the atheists of the two "principal questions" of philosophy: the existence of God and the immortality of the soul. Since the atheists lack the faith with which to believe, they must have things proven by natural reason alone. Accordingly, Descartes says he will show how "we can know God more easily and more certainly than we know the things of the world," (p. 2) and will attempt to refute those who argue that the soul perishes with the body. (p. 3) It is his aim to give these truths "so clear and exact a presentation that it would thenceforward be evident to everyone that they are valid demonstrations." (p. 3)

In the next paragraph, however, he states that "not everyone will be able to understand them" because of the complexity of the subject. Accordingly, he decides, "I do not suppose that they will have any great effect unless you take them under your protection," (p. 5) and he concludes that the authority of the theologians

> will cause the atheists, who are ordinarily more arrogant than learned and judicious, to set aside their spirit of contradiction, or perhaps themselves defend the arguments which they see being accepted as demonstrations by all intelligent people, for fear of appearing not to understand them. (p. 6)

I think it is fair to say that this letter ends on a different note from where it began. It begins by saying that we can know God "more easily" than the things of this world, and that the proofs will be so "clear" that their validity will be "evident to everyone," and ends by saying that they are so difficult and complicated that very few will be able to follow them. Similarly, it begins by saying that the work is directed to atheists who accept only what is proven by natural reason, and ends by saying that the atheists will be convinced more by their respect for the

judgment of the theologians (who were burning them for heresy) than by any of the reasonings Descartes advances. This vacillation provokes the question of whether Descartes was sincere in proclaiming the proofs of God's existence and the soul's immortality as the principal aim of the *Meditations*. It is worth turning to the *Meditations* to see whether this seems to be its primary objective.

In the case of immortality, the answer comes surprisingly soon. After stating in the letter that it is one of the two most important questions, he tells us in the synopsis that he has not fully treated the subject,

> partly because we have already discovered enough to show with sufficient clarity that the corruption of the body does not entail the death of the soul, and so to give men the hope of a second life after death; and partly because the premises from which the immortality of the soul may be concluded depend upon the explanation of the whole of physics. (p. 13)

Thus, although he has fulfilled his promise to try to refute those who argue that the soul perishes with the body, it can scarcely be said to occupy a prominent place in the *Meditations*, and does nothing more than give us the " hope " of an afterlife.

As to the proof for God's existence, he relates one such proof in the letter itself:

> It is absolutely true, both that we must believe that there is a God because it is so taught in the Holy Scriptures, and, on the other hand, that we must believe the Holy Scriptures because they come from God . . . Nevertheless, we could hardly offer this argument to those without faith, for they might suppose that we were committing the fallacy that logicians call circular reasoning. (p. 3)

They certainly might. Of course, this is precisely what people have accused Descartes of doing in his own proof for God's existence, a proof which seems to be a triple circle. On the basis of the *cogito* argument he establishes the " general principle that everything which we conceive very clearly and very distinctly is wholly true." (p. 35) He then uses this principle to prove the existence of God. (e.g., p. 46; cf. the summary on p. 53) Next

he uses the fact of God's existence to prove that clear and distinct ideas must be true. (p. 62) Having now established that principle again, he uses it again to prove the existence of God. (p. 65) And, having done so, he finds that he can now "infer as a consequence that everything which I conceive clearly and distinctly is necessarily true." (p. 70) This circularity is, in fact, reflected in the chapter headings: the third meditation is entitled "Of God: That He Exists"; the fourth, "Of the True and the False" (devoted to proving the truth of clear and distinct ideas); and the fifth, "Of the Essence of Material Things, and, Once More, of God: That He Exists."

The periodic attempts to rescue Descartes from the charge of circularity, usually by drawing distinctions of one sort or another to show that the circularity is merely apparent, not vicious, have done little to alter the belief that the arugment is fundamentally circular. Probably the best known of these is the claim that when Descartes derives the certitude of clear and distinct ideas from the existence of God it is not to be regarded as a required deduction, which would make the argument circular, but only as a confirmation, which would not. However, Descartes explicitly precludes this. Upon completing the third and final lap of the circle, he says of the knowledge of God that "the certainty of all other things depends upon this so absolutely that, without this knowledge, it is impossible ever to be able to know anything perfectly." (p. 69) The importance of this statement is indicated by the fact that he repeats it two pages later: "And thus I recognize very clearly that the certainty and truth of all knowledge depends solely on the knowledge of the true God, so that before I knew him I could not know any other thing perfectly." (p. 71) Also in the synopsis of this, the fifth meditation, he says: "I show how it is true that even the certainty of geometrical demonstrations themselves depends on the knowledge of God." (p. 15)

The fact that a work written by a brilliant mathematician and logician, which is modeled after geometrical deduction, and whose opening page contains a warning against circular argu-

ments, should contain a glaring triple circle in the main course of its argument is not in itself proof of any insincerity on the part of Descartes, but it certainly admits the possibility. In any case, since the function of the knowledge of God is to assure the truth of clear and distinct ideas, whereas this truth was already presupposed in arriving at this knowledge; the knowledge of God, like that of the immortality of the soul, turns out to be an inessential part of the overall position of the *Meditations*—whether Descartes realized this or not. If this is true, it would seem that, though Descartes may be sincere in his efforts to demonstrate God and immortality, he seems to have been insincere in telling the theologians that these were the *primary* aims of the *Meditations*. Since the importance of the knowledge of God is to assure the truth of clear and distinct ideas, certitude would appear to be the primary aim and knowledge of God a subordinate one.

Certainly this is the impression given by the opening paragraph of the *Meditations*, which suggests that its chief aim is to achieve "firm and constant knowledge in the sciences." In fact, he wrote to Mersenne that the *Meditations* is actually a presentation of his physics but that he would not like this generally known, as the opposition of these principles to the Aristotelian ones would prejudice people against him. He hopes his principles will penetrate insensibly, so that people will recognize their truth before realizing the consequences to which they lead.[8] An example of how Descartes hoped to achieve this may be seen from the ensuing pages of the first meditation.

He raises the question of what can be known with certainty. The only thing certain in sense perception, he argues, is that images are present to him. Whether they resemble, or even are caused by things external to him cannot be determined, for he might be asleep. (pp. 18-9) He therefore turns from sensation to imagination: is there anything certainly true in these images, or might they all be pure fabrication? The ultimate elements, at least, of these images cannot be fabricated but are rather

[8] Adam and Tannery edition, vol. III, pp. 297-8.

"simple and universal concepts which are true and existent . . . such as corporeal nature in general and its extension," (p. 20) from the mixture of which, as with the mixture of colors, all images are formed. Corporeal nature and its extension, the only such concept Descartes mentions, includes shape, quantity (size and number), place, time, etc. All these categories have one thing in common: they are measurable and thus reducible to number. This is true even of shape, thanks to Descartes' analytical geometry. It is because number thus turns out to be a fundamental constitutive concept of our experience,

> that physics, astronomy, medicine, and all the other sciences which follow from the consideration of composite entities are very dubious and uncertain; whereas arithmetic, geometry, and the other sciences of this nature, which treat only of very simple and general things without concerning themselves as to whether they occur in nature or not, contain some element of certainty and sureness. (p. 20)

The clear implication of this is that if any certainty is to be achieved in the sciences, the Aristotelian sciences must be replaced by mathematical sciences, since the common denominator of all our experience is number.

Similarly, in the second meditation, Descartes proposes to observe the operations of the mind by melting a piece of wax and inquiring how we know the wax is the same. (p. 30) It cannot be by our senses, for all its sensible qualities have now changed. Neither can it be by our imagination, for, although we may imagine a great many of the wax's possible transformations, "I conceive it capable of undergoing an infinity of similar changes, and I could not compass this infinity in my imagination." Therefore the understanding alone conceives the essential nature of the wax: "its perception of it is clear and distinct . . . as I attend . . . to the things which are in it and of which it is composed." (p. 31) The essence of the wax is thus its elemental composition, i.e., its material nature or corporeal extension. "And what I have said here about the wax can be applied to all other things which are external to me." (p. 33) So here, elaborating the implications of the earlier passage, we are told

that the essence of everything in the sensible world is its corporeal extension. In the earlier passage this argument was used to discredit the formal sciences; here, by implication, the doctrine of forms itself is swept away. Contrary to Aristotle's teaching, the essence of the wax does not lie in its form: " a body which a little while ago appeared to my senses under these forms . . . now makes itself felt under others." (p. 30)

In another letter to Mersenne, the year the *Meditations* was published, Descartes wrote:

> I have decided to . . . fight with their own weapons the people who confound Aristotle with the Bible and abuse the authority of the church in order to vent their passions—I mean the people who had Galileo condemned. They would have my views condemned likewise if they had the power; but if there is ever any question of that, I am confident I can show that none of the tenets of their philosophy accords with the Faith so well as my doctrines.[9]

Descartes' aim was to oppose the principles of Aristotle, while maintaining that his own principles do not violate religious dogma. But this could not be done openly, as the people whose views he attacks in the above letter dominated the intellectual life of France, including the Sorbonne. That is why, as we have seen, Descartes had to smuggle the principles of his physics surreptitiously into discussions of epistemology, which happens with a regularity that bears out his claim to Mersenne that they are the principal purpose of the *Meditations*. I think it is fair to suggest that Descartes was insincere in giving the theologians the impression that the *Meditations* was primarily a theological work, although this does not mean that the theological aspect of the *Meditations* is itself necessarily insincere. Descartes might, after all, have been sincere in his religious statements, although knowing them to be less central to his work than he would like the theologians—whose support he needed—to believe.

It is possible, of course, that some further insincerity may have been occasioned by the need to disguise his anti-Aristotel-

[9] *Descartes' Philosophical Letters*, edited and translated by Anthony Kenny (Oxford UP, 1970), p. 98.

ianism. Descartes had said that the conclusions which followed from his experiment with the wax applied to all external things, but his illustration of these conclusions by means of something relatively formless like wax makes it easy not to notice that what is at stake here is the doctrine of forms. Had he chosen the human body as an example and, after rearranging its parts, asked whether the same body remains, he could scarcely have replied, "no one denies it, no one judges otherwise." (p. 30) As he himself states in the synopsis of this same meditation, "the human body becomes a different entity from the mere fact that the shape of some of its parts has been changed." (p. 14) But this is contradicted by what he demonstrates in the meditation itself: with regard to all external things (i.e., bodies), they remain the same as long as their constituent matter remains the same. Descartes may have contradicted this deliberately, in the hope of covering his tracks by paying lip service to the hallowed principle his argument implicitly denies; or he may have done so inadvertently, as a result of the lingering effects of his Thomist training. We can best pursue this question by examining the theological portions of the *Meditations*.

III

Clear and Distinct Ideas

The tension between the theological and rationalist dimensions of the *Meditations* is probably most evident in Descartes' effort to prove the indubitability of clear and distinct ideas in the face of the hypothesis of an all powerful, evil deity. As the embodiment of his skeptical method, Descartes supposes the existence of a God who is all powerful and intent on deceiving him. Only if some conviction can prevail against this radical hypothesis is certitude possible. The struggle thus emerges as one between the omnipotence of a God and the certitude of reason. Is there anything, given the evil deity, not open to doubt?

"Without doubt I existed if I was convinced, or even if I

thought anything." (p. 25) It is indubitable, then, that if one thinks, one is. The basis for this certitude is later seen to be "the clear and distinct perception of what I affirm. . . . And therefore it seems to me that I can already establish as a general principle that everything which we conceive very clearly and very distinctly is wholly true." (p. 35) But what is it about clear and distinct ideas that makes them immune to a God's omnipotence?

> Every time that this idea of the supreme power of a God, as previously conceived, occurs to me, I am constrained to admit that it is easy for him, if he wishes it, to bring it about that I am wrong even in those matters which I believe I perceive with the greatest possible obviousness. And on the other hand, every time I turn to the things I think I conceive very clearly, I am so convinced by them that I am spontaneously led to proclaim: "Let him deceive me who can; he will never be able to bring it about that I am nothing while I think I am something, or, it being true that I now am, that it will some day be true that I have never been, or that two and three joined together make more or less than five, or similar things in which I recognize a manifest contradiction and which I see clearly could not be otherwise than as I conceive them." (p. 36)

It is clear from this that the certitude of clear and distinct ideas, including the *cogito*, lies in the fact that their denial involves "a manifest contradiction." It is also clear, however, that the certitude of clear and distinct ideas does not circumvent the omnipotent deceiver hypothesis after all. On the hypothesis of an omnipotent God *nothing* is certain: there is no justification for withholding even the law of non-contradiction from his omnipotence—as is evident from its inclusion in the contrasting half of the dilemma—and I may be wrong about even what seems most obvious, most clear and distinct. On the other hand, according to the doctrine of clear and distinct ideas, some things *are* certain: I am sure that even an omnipotent God cannot deceive me on matters whose denial implies a manifest contradiction.

The doctrines are thus wholly incompatible—one making certitude possible, the other making it impossible—and there

seems to be no way of resolving the dilemma without simply rejecting one of the premisses. It is clear which hypothesis—an omnipotent God or the indubitability of logical laws—has more force for Descartes. The law of non-contradiction is equivalent to clarity and distinctness, whereas the omnipotent God was first introduced only as an "old opinion," (p. 21) which is, after all, precisely the sort of thing that Descartes had resolved to set aside at the outset. And here the omnipotent deity is called merely an "idea" which "occurs to me," whereas the opposing ideas are perceived "with the greatest possible obviousness," are conceived "very clearly," and are depicted as indubitable. Unlike the law of non-contradiction, the hypothesis of an omnipotent God is, at least at this point, far from indubitable. It was tacitly weakened in establishing the *cogito* argument and is here sacrificed in favor of the rationalist premiss: Descartes resolves the present dilemma by reminding us that we do not yet know whether God even exists. He does not express any similar reservations about the laws of logic, and when the time comes to prove the existence of God these laws are, of course, already presupposed.

The dilemma was set up in such a way that it could be resolved only by rejecting one premiss in favor of the other. Had the theological premiss been preferred, the result could only have been skepticism. If reason is not autonomous, there is no way out of the uncertainty posed by the omnipotence of God; even our existence cannot be demonstrated if a contradiction might be made true. By their condemnation of Galileo, the theologians showed that they would not accept the autonomy of reason: reason must be in the service of faith and must demonstrate only what faith first affirms. Accordingly, this is the position from which, Descartes assured the theologians, the *Meditations* was written: to demonstrate by reason the truths of faith. (p. 3) What the *Meditations* actually shows, however, is the contrary: if reason is not allowed autonomy, if we cannot absolutely trust its fundamental principles against the possibility of deception, then the logical outcome must be rational skepticism, not rational theology.

Here again we see that the theological considerations of the *Meditations* are not as central to Descartes' purposes as he suggested to the theologians, and further, that reason must be given precedence over them if skepticism is to be avoided. But while this may diminish the relative importance of the theology of the *Meditations*, it does not, once again, demonstrate its insincerity. For this question, let us turn to his more explicit theology, the proofs for the existence of God.

IV

The Existence of God

There are three (perhaps more) fundamental reasons why one might question the sincerity of Descartes' proofs for the existence of God. The first is the aforementioned circularity, which seems to render the establishment of God's existence superfluous to Descartes' system, rather than an essential part of it. It might be concluded from this that this section was arbitrarily grafted onto the work, and springs, therefore, not from any philosophical necessity but from the political necessity of gratifying the theologians. This interpretation cannot be conclusively demonstrated, but it is certainly possible.

A second reason stems from the language and style of the first, and main, proof, which is remarkably uncartesian. Descartes has been insisting on clarity, lucidity, and simplicity. To avoid error it is of the utmost importance that we move slowly and transparently, avoiding any terms that have not been clearly explained and understood, as is done in mathematics. (cf. p. 13) On the basis of these principles Descartes rejected Aristotle's definition of man as "rational animal," for he "would have to determine what an 'animal' is and what is meant by 'rational'." (p. 25) Of course, it was convenient for Descartes to be able to dismiss Aristotle in so uncontroversial a manner, but there can be no doubt of the importance to him of the principles of clarity and simplicity. Yet as soon as we come to the main proof for the existence of God, these principles of clarity and distinctness are abandoned. Instead we are deluged with

the whole apparatus of technical scholasticism, without a single explanation. Whereas before he found "rational animal" too opaque for his method, he now uncritically employs such terms as "substance," "objective reality," "actual reality," "formal reality," "participation by representation," "degrees of being," "degrees of perfection," "modes," "accidents," "formal causality," "eminent causality," "material truth," "material falsity," etc., without definition, let alone inquiry as to whether they signify anything real. Far from being clear and distinct, the proof is obscure and confusing, despite the fact that it is essentially rather simple and could easily have been stated in clear terms. The style and language of the proof seem so out of character with the general procedure of the *Meditations*, that it is easy to believe that it is not part of the fabric of the whole, and was written from a different position than the rest of the work.

The third reason is the fact that elsewhere in the *Meditations* Descartes denies some of the essential premisses on which the proof is based. Put briefly and simply, the argument is to the effect that if my concept of God (infinite substance) cannot have been synthesized by me from its constituent elements (caused eminently), it must derive from nothing less than infinite substance itself, as the latter's image (caused formally), and thus infinite substance (God) must exist. The minor premiss is that we cannot synthesize the concept "infinite substance" from its components, and the conclusion is said to follow. Obviously it is the minor premiss that requires the most scrutiny, as it is much less evident than the major. The reason we cannot synthesize the idea of infinite substance is that, although we can derive the idea of "substance" from ourselves, since we are substances, we cannot derive that of "infinite" from ourselves, since we are wholly finite. (p. 45) Clearly, then, if there were something infinite in our nature, we could synthesize the concept of "infinite substance" and the argument would collapse. And, as a matter of fact, in the very next meditation Descartes tells us that there is something infinite

in our nature, our will, and that " this is what principally indicates to me that I am made in the image and likeness of God." (pp. 56-7) If the infinity of our will is thus an image of God, it is also capable of furnishing us with the notion of infinity with which the idea of God can be constructed, and the proof collapses.

Suppose that we do not agree with Descartes that the will is infinite, can we derive the idea of infinity by negating that of finitude, i.e., by thinking away the limits of something finite and thus extending it indefinitely? Descartes denies this, claiming that the idea of the infinite is prior to that of the finite:

> For how would it be possible for me to know that I doubt and that I desire—that is, that I lack something and am not all perfect—if I did not have in myself any idea of a being more perfect than my own, by comparison with which I might recognize the defects of my own nature? (pp. 45-6)

Yet, after here maintaining that we cannot arrive at the idea of God by extending our idea of finite substance, he tells Hobbes that we attain the idea of God's infinite intellect, not because it is in us as the formal effect of God but that " it is by extending [our idea of our finite intellect] indefinitely that we form the idea of the intellectual activity of God; similarly also with God's other attributes." [10] It seems, then, that we do formulate the idea of infinite substance by extending that of finite substance, after all. What then of Descartes' question: how could we be aware of our finitude at all if we did not first have an idea of infinity with which to compare it? Descartes removes this difficulty on the next page:

> Is it not even a most certain and infallible proof of the imperfection of my knowledge that it can grow little by little and increase by degrees? (p. 47)

Thus it seems that we can know that we are finite by noticing that we are improvable, for which we do not require the concept of infinity but only of some higher finite state. Furthermore,

[10] *Objections,* III, reply to Objection X.

it seems, by extending this finite idea of ourselves indefinitely we can arrive at the conception of infinity, and once again the proof collapses.

Descartes thus denies in short order two of the fundamental premisses of his proof: that we are in no way infinite, and that the idea of infinity is necessarily prior to that of finitude. Does this give us any reason to suppose that the proof was insincere, or rather, since philosophers tend to contradict themselves on occasion, might it not be simpler to suppose that Descartes simply failed to see these inconsistencies? Given the un-Cartesian method and language of the proof, the fact that the circle renders it otiose in any case, the extraordinary analytical mind that Descartes possessed, and the insincerity he seems to have displayed in his letter to the theologians, I think one can at least say that the suggestion that this proof may be insincere should be regarded as a serious possibility. This would not be to suggest that Descartes necessarily did not believe in God but only that this theological element is not intrinsic to his philosophy and was deliberately imposed onto it from without.

This proof is followed by a shorter one:

> . . . the whole duration of my life can be divided into an infinite number of parts, no one of which is in any way dependent upon the others; and so it does not follow from the fact that I have existed a short while before that I should exist now, unless at this very moment some cause produces and creates me, as it were, anew or, more properly conserves me. (pp. 48-9)

The term "conserves" is repeated in each of the next two sentences.

What is demonstrated here is that not only myself, but the state of all things (as the subsequent paragraph explains), must be conserved from one moment to another. Thus far, it turns out in fact to be an argument for Descartes' famous and historic principle of the conservation of motion—that the sum total of motion in the universe in any given direction (mass times velocity) is constant at all times—which was corrected by Leibniz and Newton to the principle of conservation of

force ($\frac{mv^2}{2}$). For Descartes believed that motion was the essential principle of corporeal substance, as may be seen from *Principles of Philosophy*, part II, XXIII, which is entitled: "That all the variety in matter, or all the diversity of its forms, depends on motion." In the *Meditations*, as well, Descartes suggests that all we can clearly conceive of corporeal substances may be reduced to quantity and motion. (e.g., pp. 20, 43, 80) Given the identification of substances as species of motion, the conservation of substances, which Descartes here asserts, is implicitly an argument for the conservation of motion, a cornerstone of Descartes' physics. The further claim, that this (or any) natural law entails the existence of God as its executor, is arguable and would certainly be rejected by Descartes' intended audience, the atheists, who are perfectly willing to recognize natural laws without recognizing God.

A brief third proof follows this. One cannot have been wholly caused by one's parents, "there being no relation between the bodily activity by which I have been accustomed to believe I was engendered and the production of a thinking substance." (p. 50) Obviously this will be cogent, if at all, only if corporeal and thinking substances are independent; this is the doctrine of dualism, which will be examined in the next section.

The final proof is a version of Anselm's "ontological" proof, presented in the fifth meditation. Stated as simply as possible, it is that we conceive of God as having all possible perfections; and, since existence is a perfection, we conceive of God as necessarily existing; therefore, since "it follows that existence is inseparable from him," God exists. (pp. 65-7)

The ontological proof has always been difficult to grasp and, consequently, highly controversial. I do not wish to become involved in the complexities of this controversy, but, leaving aside any question of the merits of the proof, I should like to call attention to Descartes' handling of one of the problems surrounding it. The argument was not highly regarded in Descartes' time, as a result of the criticism by Thomas Aquinas. Aquinas's most convincing attack was the claim that it made

an illicit transition from the realm of thought to the realm of being: while possibly we may have to *conceive* of God as existing (by definition), it does not follow from this that he *actually* exists: our thought imposes no necessity on things. In modern terms, there is no assurance that our concepts do not denote null classes. Descartes' way of stating the proof makes this objection particularly obvious: "From the fact alone that I cannot conceive God except as existing, it follows that existence is inseparable from him, and consequently that he does, in truth, exist." (p. 67) Having thus laid the proof open to the objection in question, he counters the objection in the next sentence:

> Not that my thought can bring about this result or that it imposes any necessity upon things; on the contrary, the necessity which is in the thing itself—that is, the necessity of the existence of God—determines me to have this thought.

Regardless of the merits or defects of Aquinas's objection, it is clear that Descartes' reply does nothing to meet it. All Descartes does here is to *assume* the point that Aquinas's objection demands that he prove, namely, that our concept of God's necessary existence is not arbitrary but reflects the actual existence of God. In short, his reply begs the question and should convince no one, especially those atheists who refuse to accept circular arguments. He does not further discuss this difficulty but devotes the remainder of his discussion to an analogy between the ontological argument and the necessary truths of mathematics, in which he ignores the decisive difference that, in the case of geometrical figures, conceptual existence is sufficient for their reality ("whether they occur in nature or not"—p. 20), whereas this is precisely not the case with God.

Leaving aside for the moment the proof based on dualism, it seems clear that, in each case, Descartes' proofs for the existence of God are accompanied by their own refutations, or, at least, are mitigated sufficiently to destroy their cogency. Whether Descartes was aware of this and did it deliberately, or whether it was inadvertent, is, of course, another question.

V

Dualism of Body and Mind

The basis of Descartes' dualism is the following argument:

> it is sufficient that I can clearly and distinctly conceive one thing apart from another to be certain that the one is distinct or different from the other. . . . Since on the one hand I have a clear and distinct idea of myself in so far as I am only a thinking and not an extended being, and since on the other hand I have a distinct idea of body in so far as it is only an extended being which does not think, it is certain that this "I" is entirely distinct from my body and that it can exist without it. (p. 78)

We must ask, then, whether in fact the idea of body which Descartes has shown us is "an extended being which does not think" and whether the idea he has shown us of "thinking being" entirely excludes extension. If the answer to either of these questions is "no," Descartes' apparent dualism must become open to serious doubt. As a matter of fact, both questions turn out to have negative answers.

The negative answer to the first question may be seen in a remarkable and puzzling passage in the second meditation:

> For to possess the power to move itself, and also to feel or to think, I did not believe at all that these are attributes of corporeal nature; on the contrary, rather, I was astonished to see a few bodies possessing such abilities. (p. 26)

In other words, Descartes had believed that it was not in the nature of bodies to think and was astonished to find that, on the contrary, some bodies have this ability. What sort of bodies he has in mind is something of a puzzle, but it seems clear that he is here asserting that the nature of body does not exclude the ability to think. From the dualist position, that body and thought are irreducibly distinct, one could never say that body has the ability to think, or the attribute of thought, but only that bodies are conjoined with minds that have this ability. But Descartes can scarcely be saying here that he once thought no bodies were conjoined with minds and was astonished to dis-

cover otherwise; that would be incredible. In the light of his assertion here that some bodies think, the argument for dualism cannot, then, be maintained.

To take up the second question, whether the idea of a "thinking being" excludes the concept of corporeality, let us review precisely what Descartes means by this idea:

> What is a thinking being? It is a being which doubts, which understands, which affirms, which denies, which wills, which rejects, which imagines also, and which perceives. (p. 28)

But perception and imagination can hardly be entirely distinct from extension, since the images they present to us are extended, and even measurable, whether or not they represent real things. (cf. p. 29) This is obviously true of perception, and, as for imagination, "it is nothing else than a particular application of the faculty of knowledge to a body which is intimately present to it and which therefore exists." (pp. 71-2) The concept of thinking substance, therefore, far from excluding corporeal extension, is inseparable from it. Accordingly, Descartes now contradicts his earlier assertion that thinking includes imagination and perception and says instead that these faculties are not essential to a thinking being: it may be clearly and distinctly conceived without them, although not vice versa. (p. 78; also p. 73)

Can we really conceive of our thinking nature apart from any images whatever? It is hard to see how, and much that Descartes says goes explicitly against this; for example:

> Is there any one of these attributes which can be distinguished from my thinking or which can be said to be separable from my nature? . . . I am also certainly the same one who imagines; for . . . this power of imagining cannot fail to be real, and it is *part of my thinking*. Finally I am the same being which perceives—. . . it is certain that it seems to me that I see light, hear noises, and feel heat. This much cannot be false, and it is this, properly considered, which in my nature is called perceiving, and that, again speaking precisely, is *nothing else but thinking*. (p. 29; my emphasis)

But since Descartes may conceivably have changed his position between the second and sixth meditations, let us see what is his

present view of the relationship between thinking and the faculties of perception and imagination. Descartes explains it by an analogy: "These faculties are distinct from me as shapes, movements, and other modes or accidents of objects are distinct from the very objects that sustain them," (p. 78) But surely this is an odd analogy to make in support of dualism, since this terminology of Aristotle was meant *to do away with* the dualism of Plato. These things for Aristotle are logically distinguishable but actually inseparable and mutually interdependent: not only can modes not exist without substances, but substances, as individual things, must have accidental properties: what is accidental about such properties is not *whether* a substance possesses them but only which ones it possesses. From Descartes' analogy, therefore, it follows only that it is a matter of relative indifference *which* images or perceptions are present to thought, but it is necessary that *some* are, and that imagination and perception in general, which involve corporeality, are inseparable from thinking substance.

Descartes' claim that imagination and perception may be conceived as distinct from the mind, on which his dualism rests, is in fact contradicted not only by this analogy, by his earlier statements in the *Meditations*, and by his philosophy of mind in general, it is explicitly denied (and the position of the second meditation reaffirmed) in this very meditation. Descartes asks how mind and body differ and replies that it is because the body can be divided whereas the mind cannot.

> Nor can the faculties of willing, *perceiving*, understanding, *and so forth* be any more properly called parts of the mind, for it is one and the same mind which as a complete unit wills, *perceives*, and understands, *and so forth*. (p. 86; my emphasis)

Even if imagination and perception were distinct from thinking, however, the concept of a thinking thing would still necessarily involve corporeality. In the first meditation Descartes argued that "corporeal nature in general and its extension" are "simple and universal concepts," (p. 20) i.e., innate contents of the *understanding*—and the understanding, certainly, can-

not possibly be distinct from thinking. Thus, too, in the third meditation he identifies "astronomical considerations" as "certain innate ideas," (p. 39) and in the fifth meditation he speaks of "an infinity of details concerning numbers, shapes, movements, and other similar things" as being, in effect, innate. (pp. 63-4) If, then, the principles of corporeality are inherent in our thinking nature, the argument for dualism vanishes.

Moreover, certain important passages seem inexplicable except on this assumption. In the third meditation Descartes inquires whether he could have derived the elements of corporeal nature from his nature as a thinking being: "since these are only particular modes of substance, and since I am myself a substance, it seems that they might be contained in my nature eminently." (p. 45) He says nothing to qualify this conclusion, as he easily might do by here applying the already established principle of clarity and distinctness that he later employs in his assertion of dualism. Yet the conclusion must clearly be unthinkable for his dualism. If, however, rather than being distinct, thinking substance involves in its very nature the elemental concepts of corporeal substance, there would be no difficulty; this seems the only way such eminent causality could, in fact, be explained.

After Descartes' *cogito* experiment, when he has established that he exists but not yet what he is, he reviews the opinions he has held until now (*antehac*):

> But either I did not stop to consider what this soul was or else, if I did, I imagined that it was something very rarefied and subtle, such as a wind, a flame, or a very much expanded air which was infused throughout my grosser components. (p. 26)

In other words, Descartes, who supposedly was throughout his life a devout Catholic, has been holding a materialistic view of the soul. The dualism of the *Meditations* is a disavowal of materialism, but we have seen that this dualism is by no means consistently adhered to. This materialistic conception of the soul, on the other hand, would certainly explain why thinking substance (the soul) would by nature involve the elemental concepts of corporeal substance (matter). It would also ex-

plain Descartes' apparently irrelevant suggestion, in the argument about sense perception, that lunacy (a mental phenomenon) has an entirely physical explanation, the action of black bile vapors on the brain (pp. 18-9); and that other strange remark, that the immortality of the soul can only be demonstrated from principles derived from physics. (p. 13) And it would account for the otherwise seemingly unaccountable language of the very proof itself of dualism, where Descartes treats as equivalent the expressions " a substance whose whole essence or nature is to think " and " a *body* which thinks." (p. 78; my emphasis) Could this latter description of the soul be the explanation of the puzzling statement we saw, where Descartes speaks of being astonished to discover bodies with the ability to think? Are these " bodies " souls, and was his astonishment connected with the discovery of the materialistic interpretation of the soul? In any case, it is worth noting that the reference to the astonishing bodies that think occurs in the same context as his report of his materialistic conception of the soul. (p. 26)

Descartes suggested that the pineal gland is the point of interaction between mind and body, and he has been much ridiculed for this, since it is obvious that a body cannot mediate between mind and body. But if mind itself is material, the problem does not arise.

In light of the above considerations it seems clear that there is a materialistic position in the *Meditations*, as well as a dualistic one, as Caton and Powell have argued also, and on different grounds. Here, too, the tension is attributable to the difference between the scientific and religious points of view, for the science of Descartes' day was often allied with materialism, whereas theology, of course, insisted on the immateriality of the soul.

VI

Conclusion

It is clear that there is a great deal of inconsistency in the *Meditations*. The question is, What explanatory hypothesis best accounts for it? On encountering contradiction in a text,

one is inclined initially to give the writer the benefit of the doubt and test the possibility that some subtle distinction is implicit, which, if discerned, would reconcile the apparent inconsistency. This is quite a common approach, for example, to the circularity of God and clear and distinct ideas in the *Meditations*. But, given the extensiveness and magnitude of the inconsistency of the *Meditations* in general, I doubt that a convincing resolution of the whole is possible along these lines: not only would it require a very large number of presuppositions, it would also require us to believe that, contrary to the methodology of clarity and distinctness, Descartes made an enormous number of subtle, obscure, and arbitrary distinctions, of which he gave no direct indication.

A second hypothesis is that he was simply not a very careful writer. This might explain why such contradictions might have gone unnoticed but would not explain why they arose at all: why should Descartes have found himself on both sides of every issue, why should a devout Catholic make not only pious statements but also contradictory statements with heretical implications? To answer this the carelessness thesis becomes the dual allegiance thesis: Descartes was so convinced a Catholic that, when his scientific principles led to conclusions contrary to his faith, he closed his eyes to the resultant contradictions rather than acknowledge the possibility that faith and reason might be at variance. Thus the dual allegiance thesis is a kind of variation on the insincerity thesis, with the difference that, according to the former, Descartes' primary aim was *self* deception rather than deception of the theologians.

For a number of reasons, the insincerity thesis seems to me more convincing than the dual allegiance one. At least since the trial of Anaxagoras, and especially since the Middle Ages, it has been well known that reason and faith are likely to come into conflict. This conflict was indeed a thematic problem in the scholastic philosophy in which Descartes was so thoroughly instructed. Given this awareness, and given the acuteness, penetration, and mathematical-logical genius that Descartes so often displays, I cannot believe he would so utterly fail to perceive

in his own thought contradictions of the proportions we have seen. Again, in his *Notes Directed Against a Certain Program*, he points out (in self defence) similar contradictions in the work of Regius, and accuses Regius of insincerity. That he should be so sensitive to these contradictions in the work of another, and ascribe them to insincerity, and yet be utterly oblivious of the same contradictions in his own work, is difficult to believe. It becomes even more difficult to believe when it is remembered that, as we have seen, he has written letters expressing the intention of waging a surreptitious battle against Aristotelianism. Finally, there is the fact that at least some of the contradictions we have seen were clearly insincere, such as in the letter to the theologians, with which we may compare the following passage from the *Principles of Philosophy* (part III, XLV):

> Far though I am from wishing that everything I write should be believed, I am going to suggest here some things that I consider to be utterly untrue. Thus I do not doubt that the world was created at the beginning with the same perfection it now has; that the sun, the moon and the stars were there from that time; that not only did the earth harbour the seeds of plants but the plants themselves covered a part of it; that Adam and Eve were not created as infants but already of a mature age.
>
> The Christian religion requires that we believe it so and natural reason persuades us entirely of this truth; for if we consider the whole power of God we have to assume that everything he has done has been perfect from the beginning. One would, nevertheless, know much better what nature Adam and the trees of Paradise had if one had examined how the child is formed in the belly of the mother and how plants grow from their seeds rather than if one had only considered them as they were when God created them.
>
> Thus we shall make the nature of everything there is in the world better understood than by just describing it as it is, or rather as we believe it to have been created, if we can imagine certain principles which are quite intelligible and quite simple. According to such principles we should be able to see that the stars and the earth and in short all this visible world could have been produced as though from a few seeds (although we know that it was not produced in this way). And since I think I have found such principles I shall now try to explain them.[11]

[11] Quoted by C. D. Darlington in *Darwin's Place in History* (Oxford: Blackwell, 1960), p. 94. I am grateful to Michael Ruse for calling this passage to my attention.

From this it seems clear, first of all, that Descartes was well aware of the conflict between the demands of faith and the needs of understanding, even within his own mind, and this alone creates difficulties for the dual allegiance view. Moreover, I think it rather doubtful that he was sincere in his protestations of disbelief in his own principles here. If in some places it seems obvious that Descartes was aware of and deliberately perpetrated such contradictions in order to make his work seem more pious than it is, it is reasonable to try to determine whether the other contradictions can be accounted for in the same way—as we have seen that they can.

I suspect the most effective obstacle to the insincerity thesis is the fact that we are relatively unafraid to express our beliefs and feel that there is something dishonorable in such fear. Thus to accuse Descartes of dissembling is to attack his character, whereas he seems to have been an honorable man. But it should be remembered that there are situations in which dissembling may not be dishonorable but rather prudent and even considerate. Even today it is common to express our more controversial views with caution; but suppose our very lives were at stake over our views. Suppose too that public morality was founded on a carefully sheltered set of dogmas, so that publication of arguments undermining such dogma might undermine morality as well—and this was certainly of concern to Descartes, as we saw at the beginning. In that case it would be hard to consider a covert presentation of such views as dishonorable.

It may be wondered what difference any of this makes. After all, it is Descartes' explicit statements that have influenced his successors, therefore they constitute the Cartesianism that is historically important, and whether he was sincere or not is of minor interest. But this is not quite accurate. For instance, several of his contemporaries and successors, such as Hobbes, Regius, and Leibniz doubted his sincerity [12] and responded to him accordingly. To see accurately his place in history, there-

[12] Cf. Caton (n. 7 above), pp. 355-6.

fore, one must see this side of him as well. And, of course, it is certainly of historical interest to decide whether he was long on sincerity but short on coherence, or vice versa. But, most important, if we wish to learn from (or against) Descartes, how we read him will determine what we learn.

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