Laval théologique et philosophique

Descartes's Strategy for the Grounding of Physics in the *Meditations*

Frederick P. Van De Pitte

Volume 53, Number 3, octobre 1997

Actes du colloque international Descartes

URI: https://id.erudit.org/iderudit/401113ar
DOI: https://doi.org/10.7202/401113ar

See table of contents

Publisher(s)

Faculté de philosophie, Université Laval

ISSN

0023-9054 (print)
1703-8804 (digital)

Explore this journal

Cite this article

Van De Pitte, F. P. (1997). Descartes's Strategy for the Grounding of Physics in the *Meditations*. *Laval théologique et philosophique*, *53*(3), 561–574. https://doi.org/10.7202/401113ar

Laval Théologique et Philosophique, 53, 3 (octobre 1997) : 561-574

DESCARTES'S STRATEGY FOR THE GROUNDING OF PHYSICS IN THE *MEDITATIONS*

Frederick P. VAN DE PITTE

RÉSUMÉ : On accuse souvent Descartes d'être négligent dans les détails d'un exposé, et de manquer aussi de précision dans l'aspect formel de son raisonnement. Mais c'est là essentiellement notre problème, bien plutôt que le sien. Il n'est pas difficile de trouver des exemples de ce qu'on pourrait considérer comme des simplifications outrées, qui procèdent en réalité d'un excès de subtilité. Ainsi, une intuition qui n'est pas explicitée par Descartes est la reconnaissance du soi comme une substance. Or, il se trouve bien d'autres subtilités cartésiennes semblables que nous tentons ici de faire ressortir.

SUMMARY : Descartes is often accused of being careless in the details of his exposition, and also of being less than accurate in his formal reasoning. But this is essentially our problem, rather than his. It is not difficult to find examples of what we may see as oversimplification, but which is at most excessive subtlety. An insight that is not made explicit, for one, is the recognition of the self as a substance. And there are many similar Cartesian subtleties which we try here to bring out.

It should be readily agreed that what Descartes is doing in the *Meditations* involves an epistemological problem to which he gives a metaphysical solution. But the manner in which he provides this synthesis is both extremely interesting and often misunderstood. For example, Descartes is often accused of being careless in the details of his exposition, and also of being less than accurate in his formal reasoning. But this is essentially *our* problem, rather than his. Certainly part of the problem has to do with our lack of experience with meditation in Descartes's sense. The process is self-reflexive, profound, and cumulative. A great deal of information is brought together in order to determine its relevance and ultimate significance for a particular concern. But it is not a formal process leading to formal conclusions. Thus Descartes does not always make explicit the insights which his reflections make obvious.

A second aspect of the problem is that Descartes has very great respect for his readers, both with regard to their training and their capacity to follow an argument. Therefore, he does not always provide details for them in the way that he would have to do for many readers of our era. It is not difficult to find examples of what we may see as oversimplification, but which is at most excessive subtlety. An insight that is not made explicit is the recognition of the self as a substance. Descartes does point out in Meditation II that everything learned about the wax teaches us something about the self. Thus the sensory, imaginative and intellectual process by which the nature of the wax is revealed is equally effective in disclosing the properties of the mind performing these operations. And just as the wax is established to be a substance which persists through time, losing and acquiring properties, so the mind is displayed as an enduring substance as it examines, accumulates data, and draws the necessary conclusions. Moreover, the state of awareness itself continuously demonstrates the existence as well as the nature of this substance. But it is in the Synopsis, rather than in Meditation II, that the mind is referred to as a "pure substance."

Similarly, an example in which Descartes neglects to offer us the formal relations which provide the necessary connections in his presentation is to be found in his insistence that imperfection can only be known through perfection. We must recall that in scholastic logic, the "E" (or universal negative) proposition completely excludes one class of entities from another, *e.g.*, "No reptile is a mammal." The very meaning of the proposition requires that both subject and predicate terms be fully distributed : each must refer to every member of its referent class. In order to be absolutely certain that not a single member of the subject class belongs to the predicate class, each term must be fully defined and completely understood. Descartes is simply treating his observation as an "E" propositions "No Descartes is a perfect entity."[1] If he knows that he is not perfect (*i.e.*, that he is incomplete, or has unfulfilled potential) then he clearly must antecedently know — as an enabling condition — what a perfect entity is (or more simply, what "perfection" means). This is a firm logical position, and not the mere psychological assertion of which Descartes is sometimes accused. In this way, doubt (the most immediate and obvious form of incompleteness), which plays such a forceful role in linking the first two *Meditations* together, is able to bind the third in with them to form a necessary progression. This permits the reader to be carried directly into the search for an adequate source of this conception of perfection. The fact that we have this conception is as yet a mere fact requiring explanation, and the search for its source takes place within, and continues, the investigation of our nature as mental entities.

Two things are at risk here. First of all, because we are seeking the source of a concept, we are inclined to look upon the investigation as epistemological in nature. It is not. It is the ground or cause of the concept that is sought, and this is a metaphysical issue. Secondly, the unwary reader may be strongly tempted to ignore the details of Descartes's presentation because the ultimate answer seems to be known in

1. It would perhaps be more technically correct to say that Descartes is recognizing his own case to be an instance of the more general propositions "No incomplete thing is a perfect entity."

advance. The very title of Meditation III ("Of God : that He exists") already suggests that we are engaged in proving the existence of God, and thus that Descartes is very likely setting up this curious apparatus merely to facilitate that proof. In effect, nothing less than God himself *could* be the source of such a conception. But it would be a mistake to focus immediately on God. At this point we are still caught up in the nature of the human mind and how it is possible for such an entity to grasp perfection at all. In order to follow Descartes's presentation successfully, we must recognize that, while he follows a metaphysical quest (the *ordo essendi*), he must proceed according to the evidence available to him (the *ordo cognoscendi*). He must follow efficient causality, seeking the grounds in human nature for the effects experienced in reflection. One might say that Meditation III should bear the subtitle : "A consideration of the implications of our cognitive nature." This is the spirit in which we must approach the doctrine of "innate ideas."

The aptness of this seemingly strange terminology is made quite clear by an example which Descartes provides.[2] We have a natural tendency to believe that we perceive mathematical figures and relations through the senses. But, when pressed, we are careful to acknowledge that in fact the objects we observe, or the drawings which we consider, are not precisely accurate as examples of geometrical figures. When examined closely, the angles are not quite right, planes are rough surfaces, and lines are irregular and undulating. Therefore, to say that we perceive straight lines, for example, or even that we abstract "straight line" from many such perceptions, would be an absurdity. It would be very much like saying that we isolate the common element in viewing a variety of corkscrews : their straightness. On the contrary, the mind must virtually invent, and then impose "straightness" on the lines observed in sense experience, and thus we are a long way from having even the raw materials for constructing a more complex figure, such as a triangle. As Descartes expresses the matter :

> Therefore, when as a child we first see a triangular figure represented on paper, it is not possible for this figure to teach us how a real triangle ought to be conceived as geometricians consider it, for the true triangle is contained in this figure merely as the figure of Mercury is contained in an unwrought block of wood.[3]

The figure of Mercury is only there if the skill of the artist is brought to bear on the wood to make it appear ; and the idea of a triangle is only there if the powers of the mind are employed to formulate it. Data which are not inherently significant may have significance imposed upon them by an inventive or creative mind. The data merely serve as the stimulus, or the occasion, for such activity. Here we have the first step in recognizing why ideas cannot simply be reduced to an empirical source of data.

---

2. *Reply to Objections V* [*Œuvres de Descartes* (AT), ed. C. Adam and P. Tannery, revised ed., 12 vols., Paris, Vrin, 1964-1976 ; AT VII, 181 ; *The Philosophical Writings of Descartes* (CSM), ed. J.G. Cottingham, R. Stoothoff and D. Murdoch, 3 vols., Cambridge, Cambridge University Press, 1985-1991, CSM II, 262.

3. *Ibid.*

This much is obviously Descartes's position. But it may not be equally obvious that what we see very clearly in the examples which he gives of "the self," "God," and mathematical entities, can be understood to apply to all the ideas of sensory experience, as well. Certainly the example just considered makes it clear that mathematical ideas may be understood to be occasioned by sensory data in the same way that other experiential ideas are.[4] But just as mathematical ideas must be carefully fashioned, so the significance of any sensory experience is properly understood only after a similar exhaustive scrutiny and transformation.[5] The new idea — now clear and distinct, because it is recast into fully understood elements in necessary relations — is called innate, not because it is born with the mind in some occult sense, but because it arises or is born within the mind as a result of the mind's own inherent abilities. The terminology is perfectly sound.

These are the essential details of Descartes's doctrine of innate ideas. But this is to focus on the epistemological process more appropriate to the *Regulae*. Our concern is rather with the powers of the mind which make this process possible. To recognize precisely how this doctrine is introduced, we will require more technical details. For example, in order to see the full force of innate ideas in the demonstration that God exists, we must bring in another important distinction discussed in Meditation III : that concerning objective and formal reality.[6] Simply stated, "formal reality" is the set of properties which constitutes the object itself being considered, as that entity actually exists.[7] "Objective reality," in contrast, is the content of our idea of the object : that set of properties and determinations which constitutes the content of the idea so that it is the idea of this particular entity. The primary point which Descartes makes by means of this distinction is that there cannot be any property in the idea (when it is clearly and distinctly conceived) that is not grounded in some actual property of the object. This is very much like saying that a photograph, or a mirror image, could not contain anything unless it were there to be photographed or reflected. This is an interesting and useful notion, based upon a distinction already available in the scholastic tradition.[8] But in using it, Descartes is at the same time setting up a more important distinction.

---

4. For a discussion of the empirical roots of mathematics, see "The Relation between Mathematics and the Doctrine of Eternal Truths in the Development of Descartes's Epistemology," *René Descartes's Critical Assessments*, 4 vols., ed. G.J.D. Moyal, London/New York, Routledge, 1991 ; vol. I, p. 397-412, esp. p. 399f.

5. See "Descartes's Innate Ideas," *Kant-Studien*, 76 (1985), p. 363-384.

6. AT VII, 40f. ; CSM II, 28f. Throughout the following discussion it is important to keep in mind that the term "reality" is derived from "*res*" (thing). It therefore refers here to "thingness," essence, or quiddity. Confusion will result if it is casually employed (as we currently do) as a synonym for "actuality." Existence is *not* implied by "reality."

7. Descartes uses the phrase "actual or formal reality" several times. See, *e.g.*, Meditation III (AT VII, 41, twice ; CSM II, 28). Note that the phrase would be redundant if "actual" and "real" were synonyms.

8. This distinction is incorporated into the general discussion of "*Realitas*" offered by Rudolf GOCLENIUS in his *Lexicon Philosophicum* (Frankfurt, 1613 ; reprint ed., Hildesheim, Georg Olms, 1964), p. 990-992. (The entry is to be found under "*Res*," which begins on p. 983). It should be noted, however, that while the objective-formal distinction was familiar, it was used in a variety of different ways. See Wilhelm RISSE, *Die Logik der Neuzeit*, 2 vols., Stuttgart-Bad Cannstatt : F. Fromman Verlag (Günther Holzboog), 1964-1970 ; Vol. I, Index (*e.g.*, *conceptus formalis* and *conceptus objectivus*).

In order to appreciate the cleverness of what Descartes is attempting to achieve here, it is important to recall the Aristotelian-scholastic doctrine of form. For Descartes (and for his contemporaries), the term "idea" still carried its original Greek significance : *i.e.*, it still meant "form."[9] And, of course, scholastic epistemology was strongly committed to the doctrine of form as the basis for knowledge. While different theories had emerged (especially during the 16th century) concerning how the form in the object — the "substantial" form — was communicated to the mind, there was a general acceptance of the position that knowledge is possible only because the form in the object and the form in the mind are the same form. Because the substantial form was understood to determine the kind of entity the object is in its actual existence, the presence of the same form in the mind would guarantee genuine knowledge of the object. Thus the form played an essential dual role : metaphysically it determined the object as existing ; epistemologically it was grasped by the mind as the intelligible aspect of the object. In effect, Descartes rejected the metaphysical aspect of this doctrine,[10] while retaining the epistemological role of form as idea or concept.

His use of the objective-formal distinction is therefore designed to provide a familiar basis for the acceptance of his epistemology as legitimate, even though it involved an important revision of the scholastic position. The precise nature of his revision can perhaps most accurately be displayed by placing this discussion in the context of the notorious scholastic dictum : "Nothing is in the intellect which was not previously in the senses."[11] It is generally understood that Descartes rejected this position as part of his repudiation of traditional epistemology.[12] It is extremely interesting, therefore, to recognize that the argument in Meditation III is carefully calculated to provide a justification or foundation for this principle, but only after it has been clarified and restricted to its proper application. It would be quite easy to overlook what Descartes is doing, because it seems clear that the objective-formal distinction is essentially epistemological in nature. In fact, however, it serves a dual role in his argument, and its second function is to introduce the metaphysical distinction : matter and form. These two sets of distinctions are used by him in unison to provide the justification for his new epistemology, and thus to lay the foundations for his new physics.

---

9. See GOCLENIUS, *Lexicon Philosophicum*, p. 208. The entry reads in part : "*Generatim idea est forma seu exemplar rei* [...]. *Speciatim, seu peculiariter est forma, seu ratio rei, in mente divina, aeterna & imutabilis, quam intuens simile quid efficit.*" We cannot ignore Descartes's technical use of the term "idea" once we realize that it does not occur in the body of the *Meditations* until Meditation III.

10. See, *e.g.*, Letter to De Launay, 22 July 1641 (AT III, 420 ; CSM III, 188).

11. "*Nihil est in intellectu, quod non prius fuerit in sensu.*" This principle is attributed to Aristotle, but there is no evidence that he did in fact advocate it. The first actual occurrence may have been in the work of Thomas Aquinas. For a discussion of the point (and later developments) see Werner Schüssler, "*Nisi ipse intellectus.* Zu einem angeblichen Philosophoumenon Leibnizens," *Archiv für Begriffsgeschichte*, XXXIV (1991), p. 314-325.

12. This misunderstanding began with Gassendi in his *Fifth Set of Objections* (AT VII, 267 ; CSM II, 186), and continues to the present. See Cottingham's note to Gassendi's text (CSM II, 186, n. 3).

What we are explicitly offered in the objective-formal distinction is a tool by which the content of a given idea can be evaluated with respect to its source.[13] As we have seen, it is pointed out that the content of an idea must be grounded in something, and this something is present to the mind by representation.[14] Whatever is contained in the idea objectively is said to be contained in its ground formally (or actually). The effect of this analysis, therefore, is to distinguish between the content of the idea (its matter), and its form (*i.e.*, *its* formal reality). Thus we gradually become aware that the purpose for employing this distinction is not (as it might seem) merely to emphasize the identity of content in idea and object, *i.e.*, to stress the validity of the idea of representation. Rather, and more importantly, it is to provide a basis which requires that we seek out separately the ground or cause of each component. While it has epistemological implications, the point is essentially metaphysical. But the manner in which this metaphysical distinction is raised and employed is rather subtle, and the necessary elements are introduced so casually, that the reader who is less familiar with the scholastic tradition may fail to note the significance of the steps involved.[15]

Once we realize how important it is for Descartes's project, it will not be surprising that this brief discussion is very carefully worded, and very subtly structured. The phrasing employed here indicates that he has finally isolated the essential criterion permitting a demonstration that some of the things of which he has ideas within him actually exist outside him. He begins by pointing out that these ideas can be evaluated from different perspectives. On the one hand they may be considered simply as modes of thought, and in this respect there is "no inequality" among them, since they all seem to proceed from the mind in the same manner.[16] On the other hand, they can be considered as representing different entities, and in this sense they are quite diverse. This latter aspect immediately becomes the focus of the discussion, providing the basis for investigating the objective reality of each idea, and the source or cause from which this reality might be derived. Because this is a very interesting point in itself, the tangential issue raised by Descartes goes almost unnoticed as he proceeds :

> For even though this cause transfers none of its actual or formal reality into my idea, it is not therefore to be supposed that it must be less real, but [rather] the nature of the idea itself is such that of itself it requires no other formal reality than that which is borrowed from my thought, of which it is a mode.[17]

---

13. The discussion begins at AT VII, 40 ; CSM II, 27.

14. It must be understood that to represent does not simply mean to signify. It may also explicitly mean "to make the thing present." See GOCLENIUS, *Lexicon*, p. 981.

15. This important passage involves three paragraphs (AT VII, 40-42 ; CSM II, 27-29).

16. What this comment should suggest to us is that indeed all ideas as acts of the mind are of the same essential nature. While Descartes is concerned with the idea of God in these pages, the results of his discussion will be applicable to ideas in general.

17. AT VII, 41 ; CSM II, 27. A thoughtful reading of this passage will confirm that its significance requires not the usual translation ("that it [the cause] must be less real [...]"), but rather : "that it [the idea] must be less real [...]." This error stems from the original French translation, and is important because it obscures the precise point at which Descartes rejects substantial forms in their epistemological role, and asserts that the mind is competent to produce its own ideas or forms.

Both aspects of this statement are essential for Descartes's argument, and their combined force must be recognized. The external object is a genuine cause of the idea, but *not* of its formal reality. This formal reality flows from the mind alone. The passage can thus go on to conclude that it is only the objective reality of the idea which is derived from the actually existing object.

Even when it is explicitly pointed out, the introduction of the matter/form distinction is not obvious here ; once again Descartes was perhaps overly subtle. Nonetheless, the desired effect is achieved. Two clear statements emphasize the distinction between the matter, or content of the idea, and the form or actual reality of the idea as a mode of thought. The matter is said to be entirely dependent on the objects normally some entity perceived through the senses (in this context, explicitly a stone or heat). But the form is said to be entirely independent of the object, and grounded in the mind alone. The result of introducing this distinction, therefore, is that Descartes is able to support fully the scholastic dictum ("nothing is in the intellect [...]") with respect to the *content* of our ideas, while at the same time he reserves the form of our thought (*i.e.*, the idea in its formal reality) to the mind itself.[18] In effect, this eliminates the traditional role of substantial forms in epistemology, without severing the mind from its traditional dependence upon the senses for data. Descartes is simply asserting that if the senses provide the basic information, the mind is capable of formulating its own form or idea, as a mode of thought *about* the data presented.[19]

We have already seen how this conception of innate ideas is to be understood : The idea of the self gradually developed in Meditation II, or the powers of the self indefinitely extended to provide the idea of God in Meditation III. As mentioned earlier, the details of this process are not clearly presented here because Descartes's specific concern is metaphysical. Thus, as his presentation continues, the groundwork is laid for a recognition of the capacities of the mind in virtue of which this process is possible. Once again, Descartes proceeds by means of a familiar scholastic distinction : formal vs. eminent causality. The first use of these concepts occurs with reference to the examples mentioned above : Descartes mentions the production of a stone, or the introduction of heat into a subject not previously warm.[20] The transfer of heat provides a convincing physical example to support the assertion that a cause must antecedently have (formally) that which it passes on to its effect. But the stone is said to begin now to exist, after not previously existing, and thus the example is

18. It should not be difficult to recognize that Descartes's assertion (that the objective reality of each idea must be grounded in some actual entity) means precisely that our sensory awareness of the stone, or of heat, is a necessary condition for the possibility of our thought of such an object. By extension, this would be true for all our empirical ideas taken together. But this would provide only (or, indeed, less than) Hume's bundle of discrete impressions. The important elements for knowledge are order and intelligibility on the one hand, and necessity on the other. These structural components are contributed by the mind alone (as the form of each thought). More on this below.

19. The form worked out by the mind would thus reflect the essential nature of the object perceived *without* the transfer of any "intelligible species" or substantial form from the object into the mind. Perception could be explained mechanically ; significance could be worked out reflectively ; no occult entities or operations would be required.

20. AT VII, 41 ; CSM II, 28.

one of creative causality from God, which is clearly eminent.[21] God does not create physical objects as a result of physical powers which he possesses, but rather in virtue of much greater powers of a higher order. Once again, therefore, Descartes has introduced in a rather casual way terminology familiar to his scholastic readers. But in this case, as well, there is a gradual shift in the employment of terms which carries the reader into unexpected territory.

The next time these terms are brought into use, it is to deny that his mind could be the exclusive cause of any idea if its objective reality were so great that it could not be found either formally or eminently in himself.[22] Then they are employed to point out that, while the physical properties of which the ideas of corporeal things are made up could not be contained in him formally, they *could* be contained in him eminently.[23] The point is that, since he has recognized that he is a mental substance, and that he shares certain attributes with these things that he takes to be physical substances (such as duration and number), if he were to consider their properties merely in principle as "modes of a substance," then in this sense (as a substance having modes) he would seem to be able to contain them eminently. The point asserted, therefore, is that the mind might be able to recast data, or information, if it were to employ its reflective capacity to transfer the basic principles and structure from one concept to another. If the point is not sufficiently clear in Meditation III, then it can surely not be missed when we shift our attention to the *Replies to Objections I*.[24] There Descartes offers the well-known example of an individual who has the idea of a machine which is extremely intricate in nature. He recognizes that there could be various causes for the intricacy present in the idea. It could be that the individual had actually encountered such a machine, and that therefore the idea simply resembled the original : an example of formal causality. Or the individual might have an extensive knowledge of mechanics, or a high degree of intelligence, which would enable him to invent the idea without such previous experience. This would be eminent causality. Then he concludes : "But notice that all the intricacy which is to be found merely objectively in the idea must necessarily be found, either formally or eminently, in its cause, whatever that turns out to be."[25] This final phrase is significant because the combination of scholastic distinctions employed by Descartes is calculated to permit him to conclude that, while the perfections of God are clearly not in

21. The example is especially appropriate because the term "eminent" was used to mean "beyond all measure, beyond all degree," and it was thus asserted primarily of God. See GOCLENIUS, *Lexicon*, p. 146.

22. AT VII, 42 ; CSM II, 29.

23. *Ibid.*, p. 45 ; p. 31. They could not be contained in him formally, since (thus far) he understands himself to be only a mental substance having no physical properties.

24. AT VII, 103 ; CSM II, 76.

25. AT VII, 103 ; CSM II, 76. This example occurs in other contexts as well, *e.g.*, in the Synopsis (AT VII, 14 ; CSM II, 10-11) ; *Principles*, I, 17 (AT VIII, A, 11 ; CSM I, 198). This example helps us to recognize that Descartes's reference to eminent causality is not intended to apply exclusively to God as earlier commentators seem to have believed. While God is, of course, the ultimate eminent cause, intricate machines (and their ideas) are clearly a product of the human mind. Thus the issue of eminent causality is raised precisely for the purpose of discussing innate ideas as a reflective rational process of the human mind (as contrasted with a mere imaginative fabrication).

him formally — as ground of the objective reality of this idea — they are nonetheless contained in him eminently, in virtue of his reflective power of thought.[26]

Returning to Meditation III itself, it must be noted that this is one of the most remarkable examples of subtlety in the works of Descartes. Because the discussion has been placed within the framework provided by "the idea of God," it is possible for the reader to entirely miss the implications of what has been asserted. Added to the earlier position that the formal reality of ideas (as modes of thought) requires no other source than the mind itself, we are now informed that the content of ideas (their objective reality) can also be provided by the mind, through the exercise of its reflective and interpretive powers as an eminent cause.[27] Only the idea of God requires further discussion, as Descartes immediately points out in the following paragraph. Ultimately, as we have seen, Descartes finds that the mind can formulate even the idea of God, although he recognizes that the properties which come together in this idea do not seem to be able to come from himself *alone*. The mind is able to touch upon what it is unable fully to encompass.[28]

Before Descartes goes on to complete his consideration of the idea of God, however, he has already recognized explicitly that all of our normal ideas of experience and reflection can be formulated by the mind. This is the point that must be emphasized. Certainly this assertion may be overlooked because of the rather casual manner in which it is presented. And it should be pointed out as well that if this extended passage is read as a deductive argument aimed exclusively at revealing the source of the idea of God, then the assertion might readily be seen as merely a residual observation. In such a context *only* the idea of God would be at issue. But Descartes is meditating, rather than laying out a formal proof, and thus he is justified in claiming the full significance of each revelation which emerges throughout the process. More importantly, this is the level of awareness and the degree of acuity which he feels entitled to expect in his readers.

---

26. Paul Mesnard recognized long ago the role of eminent causality in forming the ideas of physical entities. See "Les preuves cartésiennes de l'existence de Dieu dans les Méditations métaphysiques," *Cartesio, nel terzo centenario nel "Discorso del metodo"* (Milano, 1937), p. 603. But he was unable to see how this power is employed in forming the idea of God.

27. This does *not* mean that sensory data — the basis for all mental operations — can be set aside. It simply confirms that such data provide merely the occasional cause for the mind's interpretive process.

28. Jean-Marie Beyssade has written very insightfully about what he calls Descartes's "construction" of the idea of God, or — referring to Willis Doney's terminology — the eliciting or making explicit of the idea. (See "The Idea of God and the Proofs of His Existence," *The Cambridge Companion to Descartes*, ed. J. Cottingham, Cambridge, Cambridge University Press, 1992, p. 178 and 180). He recognizes clearly that the innate idea is simply the power or faculty for producing the idea (182). Beyssade is inaccurate — at least in phrasing — when he suggests that the idea attained is clear and distinct, but not complete. (As pointed out above, no idea can be clear and *distinct* unless it is complete). But he understands that the idea is not exhaustive. This presented no problems for Descartes's readers who were comfortable with the traditional view of God as Being itself, or pure act. Since in this Being all potency is actualized, God is simply that entity in which there is no unfulfilled potential. This is the governing schema, or as Beyssade calls it, the "filter principle" which permits completeness without a stipulation of the infinite array of detail implied. What is most excellent in Beyssade's presentation, however, is his recognition of the complementary roles of deduction in its ordinary sense and induction (or "lateral thinking," 188-190 and 195) in forming the idea of God. But it may still be helpful to point out that both of these processes are encompassed within meditation.

We are expected, therefore, to recognize the implications of his subtle suggestions. The simple reference to a generalized conception of substance and its modes, and thus to the underlying principles and structure apparent through the reflective analysis of data present to self-awareness, is to be understood as offering an example similar in character to the extraordinary invention of a wonderfully intricate machine. Obviously, then, Descartes's almost casual comment is intended to arouse in the reader an awareness of the act of creative genius required in the seemingly simple interpretation of the content of consciousness. While human nature is incapable of giving actual existence to entities in the way that God has, it is nonetheless capable of "creative" acts of discovery and invention, based on an understanding of the basic principles and structures of entities as these are revealed through experience and reflection. Eminent causality, therefore, is unveiled by Descartes as the ground or explanatory principle underlying our capacity to transcend the limits of our passive powers of perception, and to formulate ideas on the basis of what thought in some way places within our grasp.[29] This is the final thrust of Descartes's presentation in the closing paragraphs of Meditation III.[30]

The conclusions which Descartes draws at this point include the fact that he exists as a mental substance ; that he has within him the power to formulate the idea of a most perfect being — *i.e.*, God ; and that these two premises provide a very certain demonstration that God exists.[31] But he goes on to explain more clearly how this is so. He does this by considering one further issue : the precise manner in which this idea was received from God.[32] The idea provides none of the normal indications of an experiential origin ; nor has it been arbitrarily fabricated by him, since it is not within his power to change the idea in any way. It is for these reasons, then, that he concludes, as mentioned above : "The only remaining alternative is that it is innate in me, in the same manner as the idea of myself is innate in me" (*ibid.*). And, finally, he tells us precisely how this designation is to be understood.

Descartes calls this idea the mark (*nota*) placed in him by God in the act of creating him — as though it were an artist's identifying signature or symbol. Yet he is immediately careful to insist that this mark must not be thought of as distinguishable from the work itself. Rather, the creature itself, with its powers and potential, must be seen as the image and likeness of God. In turning his thoughts inward, therefore, he recognizes both himself as an intellectual entity having limited powers (but with indefinitely extended aspirations), and also (simultaneously) God as the infinite creator and providential sustainer of this self. For in the idea of God are all those perfections which extend beyond Descartes's powers, and which therefore he cannot compre-

29. Thus while the idea of God seemed at first to be a quite extraordinary conception, in fact all ideas should be understood to be equally remarkable. They are all equal as acts of the mind, and each transcends any mere set of data which might serve as its occasion.

30. See *Reply to Objections II* (AT VII, 133 ; CSM II, 96) where both of these points are forcefully made. It is *the power to formulate this idea* which demonstrates the existence of God.

31. It would be incorrect, therefore, to read Descartes as asserting that we are unable to formulate such an idea, and that consequently God must provide it directly.

32. AT VII, 51 ; CSM II, 35.

hend actually (contain formally), but which he can "in some way reach through thought"[33] (contain eminently). Reflective self-awareness thus plays a very interesting role in this presentation. It is not only the means by which the process proceeds ; it is also the source of the data with which the discussion is dealing, *i.e.*, through its own reflection the transcendent character of human nature in its mental aspect is displayed. Once again, therefore, we are reminded of the complex nature of meditation. By means of it, the revelation and extrapolation of our own powers permits us to recognize God.[34] And more specifically pertinent to the discussion at hand, the rational nature which grounds the demonstration of God's existence as its source is the very same nature which permits us to recognize the implications of that demonstration, and to work out the other "innate" implications of experience.[35] Meditation III, therefore, provides a careful display of how it is possible for us to employ our reflective powers to work out the essential significance of the various kinds of awareness which we may attain. Although we are not able to create eternal and necessary truths, we can at least discover and recognize them, and impose them on the merely particular and contingent data observed in nature. In brief, then, innate ideas are grounded in innate powers, which are the mark of the maker (or, more simply, which display the maker) within us.

The product of this process is the distinct idea (essence, nature, or form) of each entity which can be clearly conceived. Such ideas must be both complete and distinct *from* other conceptions. We must recognize how strictly Descartes understands each entity to be composed of a precise set of properties which stand in necessary relations to each other — while the whole set as a unit is distinct from other entities.[36] The point is clearly stated with respect to the nature of God,[37] and of course the nature of mathematical entities.[38] What this means, in effect, is that each entity, clearly and distinctly conceived, will comprise a necessary whole : an integrated unit composed of properties in necessary relations which together form a necessary configuration. An entity is not clearly and *distinctly* conceived until this criterion is met ; and the idea does not provide us with an eternal and immutable nature or form until it meets this criterion.[39] Because Descartes accepts the material world to be a single physical substance (indefinitely extended and indefinitely divisible), it should be apparent that in order to elaborate a doctrine of natural science (a physics) it would be necessary to establish principles both for discriminating, and then for relating, physical entities. Distinctness would play an essential role in this process.

---

33. "[...] *Omnes illas perfectiones, quas ego non comprehendere, sed quocunque modo attingere cogitatione possum* [...]" (AT VII, 52 ; CSM II, 35).

34. *Reply to Objections III* (AT VII, 188 ; CSM II, 132).

35. "Experience" is the appropriate term here, because it reminds us that reflection as well as sensory information is included by Descartes within its definition. See *Regulae*, XII (AT X, 422 ; CSM I, 46).

36. The relation between distinctness and completeness is explicitly emphasized in his discussion of mind and body, See, *e.g.*, *Reply to Objections I* (AT VII, 120-121 ; CSM II, 86). It should be noted that this insight is closely related to the logical point mentioned in note 7, above.

37. *Reply to Objections I* (AT VII, 119 ; CSM II, 85).

38. *E.g.*, the immutable nature of the triangle in Meditation V (AT VII, 64 ; CSM, II, 44-45).

39. Again, the definition provided by GOCLENIUS (note 9, above) is important to recall.

There are two points that must still be made. The first is to reverse our perspective, and to recall that the "mark of the maker" which we find within us is the insight which provides the whole thrust of Descartes's presentation. It must therefore be a profound and very forceful insight. This is a kind of analogy by which the gradual revelation of the powers inherent in human nature displays simultaneously the nature of God.[40] The reflective powers of the intellect illustrate an indefinite potential which suggests the infinite ; and the power to discover and impose intelligibility on what we can only perceive as inert physical data suggests the creative power of God. Yet it is precisely our finitude and our ultimate impotence which most clearly reveal God. Although we have incredible powers, we are nonetheless finite and have limited potential ; and this recognition, through stark contrast, reveals the infinite power and majesty of God as our creator and sustainer. In effect, we have not properly grasped our own nature until we have recognized the divine aspect within us which points beyond us. Thus, what we have called an analogy is clearly flawed in an essential sense. While we are created in the image and likeness of God, we are precisely not God, and we know him by negation.

Nonetheless, it is eminent causality which we share with God as our most remarkable characteristic, and it is by means of this trait that Descartes accounts for our innate ideas. Thus innate ideas are revealed as the sole effect which we are able to investigate through efficient causality, and which demonstrates the necessary existence of God. It is not the *having* of such ideas, but the *forming* of them that is essential for this purpose. But once this power is established, it accounts *a fortiori* for all lesser ideas, *i.e.*, all of them which can be brought to clarity and distinctness. In this sense the idea of God might be seen as a sort of Trojan Horse in Meditation III — with one serious reservation. There is nothing hidden in Descartes's presentation. It is we who have hidden (through neglect) his conception of innate ideas and its implications.

The second point that must be made in closing involves the sense in which Meditation III provides the foundations of physics. Of course, in the strict sense it does not. Only Meditation IV gives us the truth of clear and distinct ideas. Only Meditations V and VI link these ideas by necessity to the external world and establish thereby the existence of our bodies.[41] But it is Meditation III which gives us a direct and lucid account (*i.e.*, a non-occult account) of clear and distinct ideas — and this is the essential condition for *scientia*. It permits Descartes to clear away earlier epistemological models with a casual remark. This process of reflection and concept for-

40. It is extremely important to recognize that it is not Descartes's existence, as such, which he employs to demonstrate the existence of God. That would be simply the repetition of a very old story. Rather, it is the existence of a very remarkable *nature* revealed in reflective self-awareness which requires God. This is why Descartes is so firmly committed to the doctrine of eternal truths (essences, natures, or forms). It is essential that God be acknowledged as the source of each nature *as well as* its existence. Thus the "mark of the maker" and its implications constitute the essential element in the Cartesian doctrine of analogy sought by Jean-Luc MARION, *Sur la théologie blanche de Descartes*, Paris, 1981. More must be said on this topic.

41. Briefly, in Meditation V mathematical entities and relations are found to be necessary and immutable. But without extended physical substance these modes of extension cannot either be or *even be conceived*. See "The Relation between Mathematics and the Doctrine of Eternal Truths...," (note 4, above), p. 406-407. Again, the mind is dependent upon the body for its basic information. Nonetheless, however, no *ideas* of these entities are revealed by the senses.

mation is so natural to the mind that it seems to be merely remembering what was previously known (Plato's "Recollection"), or noticing what was within him already (innate ideas in the occult sense : Melanchthon and others). We must however realize that this is not his acceptance, but rather his obviation of such theories. They are no longer required, and thus not tenable. A modern theory of concept formation is the first step toward a sound physics.

Surely, however, the point that was emphasized above, that clearly grasped concepts must provide the basis for distinguishing among *kinds* of entities, is the next step required. In Meditation VI we are provided the final stage of our metaphysical grasp of reality. We find that it is no longer necessary to be fearful of falsehood in sensory perception, as long as we are careful to interpret properly the significance of perceptions. In short, we have learned to recognize the criteria by means of which alone accurate judgments can be made. Essentially this requires the distinct grasp of mental reality, of physical reality, and of the relation between them in the human being. These criteria were both justified and illustrated in Meditation III. The primary basis for distinguishing the physical and the mental occurs not merely in Meditation II, but more systematically in Meditation III with the rejection of substantial forms in all merely physical entities. Their concepts contain only physical properties, with no admixture of occult elements. Thus it is inappropriate to blur the distinction between mind and matter. The clear illustration of this criterion in application is the concept of the idea itself. Earlier in Descartes's work there had been some ambiguity concerning his use of terms such as "figure," "species," and " idea."[42] But now the term "idea" is entirely reserved for the purely intelligible correlate of any figure or species which might be imprinted on the brain. The senses and imagination are linked to, and dependent upon the body ; but the clear and distinct idea belongs to the intellect alone. These very clear criteria for judgment force us to recognize in Meditation VI that it is only in this final stage of the *Meditations* that we can properly understand how clarity and especially distinctness (*i.e.*, distinctness *from*) are to be understood and applied — and how they guarantee the validity of sensory experience. Meditation III plays a major role in establishing these criteria.

Finally, the guarantee which is normally discussed in this context is the guarantee provided by a veracious God. It would be inappropriate to neglect Descartes's employment of this ultimate metaphysical safeguard. But it would be equally wrong, and it would make a mockery of Descartes's project in the *Meditations*, to suggest that God is his only guarantee. Unless Descartes had already provided a transparently sound epistemological theory, complemented by a metaphysical assurance that our purely human powers were capable of fulfilling its conditions, it would be at least irreverent and perhaps more properly blasphemous to maintain that God must guarantee our petty efforts. Descartes assures himself that he is innocent of such impropriety by accepting nothing less than necessary truth as his immanent criterion for truth. He is then justified in appealing to a transcendent guarantor. Both of these bases for sci-

42. See the recent work of Jean-Luc MARION on this topic : *Questions cartésiennes : Méthode et métaphysique*, Paris, 1991, p. 75f. An English version appears in the *Cambridge Companion to Descartes* (note 28, above) as "Cartesian metaphysics and the role of the simple natures," p. 115ff.

entific certainty are dependent upon the strategy employed by Descartes in Meditation III.