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The Unity of General and Special Metaphysics: Aristotle's Conception of Metaphysics

If one tries to get clearer about Aristotle's conception of metaphysics, one naturally turns to the treatise that by its very title promises to give us an account of Aristotle's metaphysics. Unfortunately, the title itself does not provide us with any clue. "Metaphysics" is not an Aristotelian term. It only gains some currency in late antiquity. Thus, the commentary on Isaiah attributed to St. Basil (164) speaks of those things, higher than the objects of the theory of nature, "which some call metaphysical." The earliest catalog of Aristotle's writings, the one preserved in Diogenes Laertius, does not yet contain the title "Metaphysics." Hence, it is clear that our title is the title later editors gave to the treatise. It is first attested in Nicolaus of Damascus' compendium of Aristotle's philosophy, i.e., in the first century B.C. But even these editors presumably did not mean to suggest any particular conception of the discipline by chosing this title. Probably, they were at a loss regarding a proper title for the treatise and just named it after its position in the corpus of Aristotelian writings, namely, as coming after the physical writings. It would also be a mistake to assume that the title indirectly expresses a certain conception of the discipline metaphysics by referring to its "natural" place in the order of Aristotelian writings. The place is anything but "natural." The order of the corpus follows the Academic, and then Stoic, division of philosophy into logic, physics, and ethics. And though there were subdivisions of this scheme in Hellenistic times, none made provision for a discipline metaphysics, whether called by that or another name. Not as if Hellenistic philosophers did not do any metaphyics, but they did not regard it as a separate discipline. Sometimes physics was divided into physics, more properly speaking, and theology. And since there is no natural place for the *Metaphysics* in Aristotle's corpus, a position after the physical writings must have seemed least disturbing, especially since Aristotle himself in the *Metaphysics* at times had identified the subject of the treatise as theology. Moreover, the treatise clearly belonged with the theoretical treatises, rather than with

the *Organon* or the ethical writings, and hence had to come before or after the physical writings. But the basic order of the corpus is clearly didactic: we start with logic, proceed to a doctrine of the sensible world, on the basis of this move on to a doctrine of the intelligible reality underlying the sensible world, and, finally, in the spirit of Hellenistic philosophy, move to ethics as the ultimate end of all philosophical endeavor. In late antiquity it will become natural to identify the intelligible with the supra-sensible and to think of the move from the physical writings to the metaphysical treatises as the move from the doctrine of the sensible world to the doctrine of the supra-sensible world. And now the term "metaphysical" is easily understood to refer to the doctrine of supra-sensible entities, God, the ideas, the umoved movers, and or angels. But there is not sufficient reason to believe that this was what the Hellenistic editors of our text had in mind. If there is a question about why they chose the title "Ta meta ta physika," it is why did they not call the treatise "theology" or, at least, "first philosophy"? The answer to this must be that in Hellenistic philosophy one did not have much use for the notion of a first philosophy, and that the treatise did not fit the conception of theology one had, just as it does not fit our conception of theology. But that the matter is more complex we can see from the fact that Nicolaus of Damascus (p. 74 Dossaart-Lulofs) still identifies the subject of the *Metaphysics* as theology and calls it the "first science." Once we come to late antiquity, the situation has changed radically. Given the dominance of Platonism with its two-world view, its identification of the realm of forms with the Divine, and its doctrine of the ascent from the physical to the metaphysical, it became easy to see the *Metaphysics* as a theological treatise (cf. Asclepius in Met. p. 1, 18–2, 3). But this way of looking at things hardly fits into the first century B.C. Hence, we do not have sufficient reason to suppose that the title "Metaphysics" originally referred to anything more than the position of our treatise in the corpus.

To get a notion of Aristotle's conception of metaphysics, then, we cannot rely on the title, but have to turn to the treatise itself. Unfortunately, the treatise, too, does not owe its present form to Aristotle. There is good reason to believe that the treatise, as Aristotle left it, was composed only of books A, B, Γ, E, Z, H, θ, I, Λ, M, N, and that α, Δ, and K were added later. But even this underlying treatise turns out not to be of one piece. The evidence for this is abundant and well known. It will suffice here to recall that, e.g., the beginning of *Metaphysics* Z suggests a certain program in the course of which we shall deal with separate substances and the claim of ideas and mathematicals to be substances. But though we get these discussions in *Met.* Λ and *Met.* M-N, respectively, it is fairly clear that these books were not written in one piece with the beginning of *Met.* Z. They, rather, seem to be revised versions of treatises Aristotle incorporated to temporarily fulfill the need of a discussion of this sort. Once we realize this, it is also clear that to determine Aristotle's conception of metaphysics,

we cannot look just at what we take to be the original treatise to see what kind of project he is carrying out. For the project never seems to have been completed. Thus, the only avenue that is left to us seems to be the following: we have to go by Aristotle's explicit remarks about the project he is engaged in, see to what extent this project actually is carried out, and extrapolate on what the finished project would have looked like.

Unfortunately, it turns out that Aristotle, on the face of it, does not even seem to have a clear conception of his project himself. Different parts of the *Ur-Metaphysik* seem to be written with different conceptions in mind. The most striking example of this is the following: the first lines of *Met.* Γ (1003^a 21ff.) introduce the discipline as a science that considers being qua being quite generally and set it off from the particular sciences, which single out a particular part of being, particular kinds of beings, as their subject of study. And the rest of *Met.* Γ, in particular *Met.* Γ 2, tries to show how there could be such a universal, and yet unified, discipline. *Met.* E 1, on the other hand, introduces a discipline that is concerned with a particular subject matter, namely, with the kinds of beings that come first in the order of being. Hence, Aristotle calls the science "first philosophy" (1026^a 24). And, assuming for the moment that there might be divine beings prior to natural objects, he also calls the discipline "theology" (1026^a 19). Thus, we seem to have two radically different conceptions of the enterprise of the *Metaphysics*. According to one, we deal with what traditionally has been called "metaphysica generalis," a general study of being as such, of all there is insofar as it is, according to the other with metaphysica specialis, a study of a special kind of beings, supra-sensible beings.

Much modern scholarship has been devoted to the question how these two notions might be related. And yet agreement seems to be so far out of reach that, given the present state of the art, it might seem hopeless to make another attempt to arrive at a generally acceptable interpretation. If I, nevertheless, make the attempt, it is not because I think that I have a radically new answer, but because it seems to me that basically the correct answer was given by Patzig in his "Theologie und Ontologie in der 'Metaphysik' des Aristoteles" (an English version of which appeared in: J. Barnes, M. Schofield, R. Sorabji, eds.: "Articles in Aristotle," vol. III) in 1960, but this interpretation has not won the acceptance it deserves. This is in part owing to the fact that Patzig's view needs to be revised and elaborated in various respects.

Any interpretation has to start from the fact that it is clear from Aristotle's own remarks that Aristotle himself does not see a conflict between the two notions. Though E 1 introduces, in addition to physics and mathematics, a theoretical science of separate, unchanging substances as the object of our study, he, right from the beginning of the chapter, also talks as if he were still concerned with the universal discipline introduced in *Met.* Γ which studies being as such, and not just a particular kind of being (1025^b 9–10). And toward the end of

Chapter 1, he faces the issue squarely by pointing out that there is a problem of whether first philosophy is universal or particular. But, obviously, for Aristotle this is not much of a problem. For, hardly having raised it, he settles it by the succinct remark: "it is universal in this way because it is first" (1026^a 30–31). This is all Aristotle cares to say about the matter.

How are we going to interpret this remark? We cannot follow Natorp who tried to deal with our problem in a manner fashionable in the late nineteenth century, namely, by excising from the text all references to the theological interpretation of the *Metaphysics* as later interpolations. This would not leave us with a coherent text for E 1. The remark at the end of Chapter 1 also excludes the possibility suggested by Jaeger (*Aristoteles* pp. 226ff.) that the two views reflect different stages in Aristotle's development. It also seems to rule out the attempt, suggested, e.g., by Merlan, to make the apparent conflict disappear by interpreting the phrase "being qua being" to refer to God's being, rather than to being in general. For the final remark of E 1 does assume that the study of being qua being as such is general or universal, and tries to explain how it could be so, given that it has a particular subject-matter. The problem raised in 1026^e 23 would not be a problem and would not need the answer it receives in the last sentence of the chapter, if the study of being qua being were not as such universal, but already in itself concerned with a particular kind of being. For we can hardly attribute to Aristotle the much later view that God is just being.

The explanation I want to offer for the final remark of E 1 is the following: (i) theology deals with beings of a certain kind, namely, separate substances. But in doing so, it also deals with a particular kind or way of being, a way of being peculiar to divine substances. (ii) It turns out that this way of being is the one in terms of which all other ways of being have to be explained, i.e., it turns out that a study of being as such resolves itself in three steps into a study of how all the different ways of being that characterize the different kinds of beings ultimately have to be explained in terms of the way of being that is characteristic of divine substances. (iii) Since theology studies this focal way or sense of being, it also provides the natural point to discuss how all other ways of being depend on this primary way of being, especially since this primacy would seem to reflect the very nature of divine substances. In developing this explanation, theology does carry out at least the substantial core of the program of general metaphysics and to that extent can be identified with general metaphysics. This is one way in which theology, because of the primacy of its objects, will be universal. For, in taking into account the primacy of the being of its objects, it will also deal with the ways of being that are dependent on it. (iv] But general metaphysics involves more than this kind of ontology. It also discusses certain universal principles, like the principle of non-contradiction, and certain notions of universal applicability like the notions of unity and identity. Again, this can be explained in terms of the primacy of theology. For though these principles and notions are

universal, the first time they will be used in the hierarchy of sciences is in theology, and so it will fall to the theologian to introduce them in an appropriate manner. This will be all the more fitting, since ontology will, e.g., involve the distinction of various kinds of unity and identity; not only will some of these kinds be the ones needed by the theologian, but the theologian will be the one most competent to elucidate them. Thus, it turns out to be true in various ways that theology, because of its primacy, will be universal. (v) Admittedly, this will have the result that theology, or general metaphysics, has less internal unity than we might have expected. But Aristotle himself seems to envisage this result. Theology, or general metaphysics, will actually consist of a series of studies which have only generic unity. Only one of these studies will amount to theology in a narrow sense. But given the position of theology in the narrower sense in the hierarchy of theoretical sciences, which is, after all, owing to the nature of its subject-matter itself, it is embedded in a whole series of studies which, taken together, constitute general metaphysics.

Thus, let us try to understand how it is that theology is not concerned only with a particular kind of beings, but with a particular way of being, peculiar to its objects, and how it addresses itself to this way of being. By distinguishing a kind of beings and a way of being I mean to make a distinction of the following sort. Horses are a kind of beings, and camels are a different kind of beings, but neither horses nor camels have a distinctive way of being, peculiar to them; they both have the way of being of natural substances, as opposed to, e.g., numbers which have the way of magnitudes, or qualities which have a yet different way of being. The way magnitudes can be said to be is different from the way qualities or natural substances can be said to be. The claim, then, is that the way separate substances can be said to be is peculiar to separate substances. One reason why one has such difficulties with the identification of theology with general metaphysics is that one thinks of theology as just like other particular sciences, like astronomy or zoology, which deal with the nature of a particular kind of beings, but which could not be thought of as concerning themselves with the very way of being their objects have. For in the relevant sense, animals do not have a way of being peculiar to themselves; their way of being is the way of being of natural substances quite generally, and thus the zoologist presupposes, but does not concern himself with, a notion of a natural substance and what it is to be for such a substance. Similarly, the astronomer does not concern himself with the way of being the objects of astronomy have. They have the being of magnitudes, let us say, but it is not his concern to determine this way of being. For it is shared by the objects of many other disciplines. It would be a mistake, though, to think that it is true without qualification that particular disciplines are like that. It, rather, seems to be the case that we have to distinguish between the three particular theoretical sciences Aristotle distinguishes, namely, theology, physics, and mathematics, and the diverse particular sciences that consti-

tute these three theoretical sciences by forming hierarchically ordered groups of disciplines. Once we make this distinction, it is clear that not just theology, but also physics and mathematics, i.e., all three of Aristotle's theoretical sciences, do concern themselves not just with a particular kind of beings, but also with a particular way of being peculiar to their objects. Though physics deals only with a particular part of reality, namely, natural substances, its objects do have a distinctive way of being, namely, the way of natural substances. And physics, as we can see from Aristotle's *Physics*, does address itself to this particular way of being by asking the question what it is to be a natural substance, i.e., by asking what it is to have a nature in the sense that distinguishes natural substances, whether there is such a thing as a nature, and what is involved in assuming natural substances to have such a nature. Even in the *Metaphysics* (Z 11, 1037[a] 14–16) Aristotle tells us that in a way the, as we would say "metaphysical," inquiry into sensible substance is part of physics or second philosophy. And in E 1 he is quite explicit that were it not for the assumed fact that there are substances prior to natural substances, metaphysics would be part of physics and hence physics would be first philosophy (1026[a] 27–29). Obviously, Aristotle is of a divided mind concerning the natural place of a theory of the way of being of natural substances. And this accounts for the strangely metaphysical character of Aristotle's treatise called "Physics." But there is no doubt that he does assume that the objects of physics do have a distinctive way of being, peculiar to them, and that the science of physics at least presupposes a theory of this way of being, if it does not itself involve it. For physics as an axiomatic science would have as one of its principles an assumption of what it is to be for a natural substance and of the existence of such things.

The situation in the case of mathematics is less clear. But, again, it seems that mathematical entities not only are a separate kind of entities, but also have their separate way of being, peculiar to them, namely, the being of magnitudes. Moreover, mathematics, as Aristotle conceives of it, does have a place at which the mathematician naturally would address himself to the peculiar kind of being mathematical entities have, or at which he would at least presuppose an answer to this question, namely, in general mathematics, a subdiscipline of mathematics Aristotle refers to in E 1 (1026[a] 27). General mathematics deal with the nature and the properties of magnitudes in general, or as such, and thus at least presupposes a notion of what it is to be for a magnitude and that there are such entities with this kind of being. Thus, theology is unlike the particular sciences that fall under physics or mathematics, in that it is concerned with beings which have a way of being peculiar to them and in that it somehow has to address itself to this way of being by at least making an assumption about the nature of its objects and their existence, but it does not differ in this respect from physics or mathematics as a whole. This matter will need closer consideration at a later point. For the moment it suffices to recognize (i) that theology deals with beings

that qua beings differ from all other beings and (ii) that theology somehow has to address itself to their peculiar way of being, if only to assume what it is to be for this kind of being and to assume that there are beings that have this peculiar way of being.

Now, this way of being, peculiar to divine substances, I want to suggest, is the focal way or sense of being in terms of which all other ways of being have to be explained. This explanation comes in three steps. The reasons why Aristotle thinks that all other ways of being presuppose, and have to be explained in terms of, the being of substances are well known and do not have to be rehearsed here. Aristotle thinks, e.g., that the being of qualities can be understood only in terms of the being of substances that are qualified in some way or other. But it would be a mistake to assume, as it often is, that Aristotle thinks that his task has been completed by showing how the various ways of being depend on the way of being of substances. For as soon as we start to pursue the question what is it to be for a substance, it turns out that this question has a single answer as little as the question of what it is to be for a being does. Even in the case of sensible, perishable substances, it has at least three answers, one for matter, one for substantial forms, and one for the composite of matter and form. What is more, these three ways of being a substance stand in a certain relation of priority and posteriority to each other. The being of a substance primarily belongs to the substantial form, only secondarily to the concrete physical substance in virtue of its having a substantial form, and in a third way to matter, insofar as it potentially is a composite substance. Thus, the focal way of being a substance, for sensible substances, turns out to be the being a substance of substantial forms. And since the ways of being of the entities in all the other categories depend on the way of being of sensible substances, the way of being of substantial forms turns out to be the focus for all non-substantial entities. Thus, in a second step, all ways of being are shown to be dependent on the way of being of substantial forms.

But there are not just sensible, perishable substances. Aristotle at times distinguishes as many as three different kinds of substances: sensible, perishable substances; the imperishable heavenly bodies; and immaterial, nonperceptible substances (cf. Λ 6, 1071^b 2ff.) And these are not just different kinds of substances in the sense in which horses and donkeys are different kinds of substances. They differ from each other qua substances. This is most easily seen if we just distinguish between sensible and nonsensible substances, as Aristotle himself sometimes does. The substantiality of sensible substances has to be explained in terms of the substantiality of their substantial forms, whereas nonsensible substances are just substantial forms. What is more, the substantial forms of sensible substances do not have the same way of being as the substantial forms that are separate substances. The substantial forms of sensible substances, in order to be at all, have to be realized in a composite substance that has various non-substantial characteristics, size, weight, shape, color, etc. Separate substances, on the other

hand, exist without matter and without accidents. The unmoved mover, e.g., and quite generally divine substances, are such separate forms.

One may ask, though, what reason we have to believe that this difference in the way of being of substantial forms is relevant for Aristotle's account of what it is to be a substance and, hence, of what it is to be a being.

There are two passages in *Met.* Z which suggest that Aristotle himself thinks that the difference is relevant. In *Met.* Z 11 (1037^{a} 11ff.) he tells us "whether . . . we have to look for a different kind of substance (i.e., immaterial substance), like numbers or something of this sort, we will have to see later. For it is because of this that we try to get clear also about sensible substances. For in a way it is the task of physics and second philosophy to consider sensible substances." Aristotle here clearly assumes that separate substances and physical substances differ qua substances, and that in a way we in *Met.* Z only discuss physical substance to get clearer about separate substance. We find a similar thought in Z 3, 1029^{b} 3ff. There we are told that we will start with a consideration of sensible substances that are generally agreed to be substances. Thus, it is said, we shall proceed from what is better known to us to what is better known by nature, i.e., from what we are familiar with to what in the order of nature and hence scientific knowledge is prior such that ultimately what we are familiar with has to be explained in terms of it. Since both remarks are made in the context of a discussion of the question "what is substance?," these texts seem to suggest the following: (i) our discussion of the substantiality of sensible substances is preliminary to a discussion of the substantiality of nonsensible substances; (ii) nonsensible substances qua substances are prior to sensible substances; and thus (iii) we shall achieve a full understanding of the substantiality of sensible substances only when we have understood the substantiality of nonsensible substances.

Though Aristotle, unfortunately, does not explain this relation, one can still vaguely see what he must have in mind. Before we try to get clearer about this, though, it is important to distinguish two kinds of priority and dependence. It will be readily granted that, according to Aristotle, all other beings depend for their being on the being of separate substances, in particular the prime mover. And, hence, Patzig, e.g., originally thought that the relevant kind of dependence consisted in the fact that a complete account of the being of anything will have to make reference to the unmoved mover. But it seems that the kind of dependence we need for our account is not primarily this quasi-causal dependence, but a different kind of dependence. The kind of dependence we need for our account, rather, is of the following kind: sensible substances are dependent on separate substances qua substances, and this in the sense that their way of being a substance, and hence their way of being, has to be explained in terms of the way separate substances are substances.

But how could this be? Aristotle in *Met.* Λ not only assumes that the first un-

moved mover is the primary being, but also that it is the primary intelligible object (1072[a] 26ff.), thus giving rise to the medieval debate whether it is God or being that is the first object of the intellect, and hence the primary subject of metaphysics. Aristotle seems to assume not only that ultimately everything depends on God for its being, but also that ultimately nothing is intelligible unless it is understood in its dependence on God. And this in various ways. It is not just that everything depends on God as its first cause. There is also the notion, reflected in Aristotle in various ways, that lower forms of being somehow imitate higher forms of being. Animals procreate; this is their way of sharing in the eternal. The heaven eternally rotates to imitate, as well as it can, the unchanging nature of the unmoved mover. This suggests a scale of perfection in which the less perfect is to be understood in terms of the more perfect and ultimately the unmoved mover, as if everything was like him in the limited way it could be. But the central books of the *Metaphysics* seem to rely on a much more precise notion, though this never comes out explicitly.

To understand what it is to be a substance, and hence what it is to be a being, one has to understand, as *Met.* Z argues, what it is to be a substantial form or essence. For even if we consider a composite physical substance and look for what it is independently of its ever changing characteristics, look for what it is that remains the same throughout its life-span, while its matter is changing, it seems that it is the form that provides the object with its identity. But from the thought that it is substantial forms that are the substances, there are two lines of argument leading to the conclusion that it is separate forms that qua substances are prior to everything else.

The forms of sensible substances and separate substances are both substantial forms and they are both actualities, i.e., the reality of the object they are is constituted by their reality. But whereas separate substances turn out to be substantial forms and actualities without qualification, the substantial forms of sensible objects have to be understood as substantial forms and actualities of a certain limited kind. Thus, to understand them properly one first of all has to understand what it is to be a substantial form and an actuality without qualification, and then to understand the qualifications with which the substantial forms of sensible substances are substantial forms and actualities.

The forms of sensible substances involve potentiality in two ways, and hence are not pure actualities, though it is of the essence of a form to be an actuality. They need matter to be realized in, and thus are the forms of objects subject to change. But, what is more, when we turn to the paradigms of sensible substances, living beings, it turns out that their forms themselves essentially contain an element of potentiality. When Aristotle in *De anima* II, 1 defines the soul as the "first actuality" of a certain kind of body, this very language reflects the fact that the soul in a way is constituted by the various abilities to exercise the life-functions characteristic of the kind of living being in question, but that not all

these life-functions are exercised all the time. What is more, some of the abilities that characterize the soul, like virtue or knowledge, are only acquired. Thus, the forms of sensible substances are not pure actualities; they in part are constituted by unrealized possibilities and in that sense are not fully real. The form that is the unmoved mover, on the other hand, is pure actuality. It neither needs matter to be realized nor does it involve any abilities that might or might not be realized or exercised. The unmoved mover is just eternally thinking the same thought. Thus, separate substances, in particular the unmoved mover, are pure actualities, and thus forms, and thus substances, and thus beings in a paradigmatic way in that they are perfectly real.

But, there is another line of argument which suggests that separate substances are paradigmatic as substances. Perhaps the most important characteristic of substances is that they exist in their own right, that they do not depend for their existence on something else, or, as Aristotle puts it, are separate. Now this requirement notoriously admits of various interpretations. But it seems that, on any plausible interpretation of it, it is only separate forms that satisfy this requirement straightforwardly. They do not in any sense need matter, or nonsubstantial characteristics, i.e., qualities, quantities, places, etc., or anything else to be realized. The forms of sensible substances are separate, too, but only qualifiedly so, namely, separate in account; the account of a form is self-contained in that it does not involve a reference to any other item in the ontology. Still, a material form needs some matter, and the composite substance needs nonessential properties, though these properties and their matter do not form part of the account of the form. The second most important condition of substances is that they should be particular or individual. This, again, is a requirement satisfied straightforwardly only by separate forms. The individuality of material forms, on the other hand, raises enormous problems, so much so that one may wonder *whether,* or even think that, as tradition indeed did, the forms of natural substances are universal. After all, the account of the form for all things of the same kind is exactly the same. Definition seems to be of the universal, and form or essence seems to be exactly what is given by a definition. To get particular forms at all we have to make up a complicated story about the way they are individuated by their history. Similarly, there is the notorious problem how the form of sensible substances, rather than the composite substances themselves or their matter, could come out as ultimate subjects of predication. Aristotle explicitly (Z 3, 1029^a 2–3) commits himself to the view that there is a way to construe the relation of being the subject of something in such a way that this comes out as true. But he also takes the view that the more natural way to construe the relation is such that it will be matter or the composite that comes out as ultimate subject. Thus, this requirement is met by the forms of sensible substances only by a somewhat artificial construction of the relation. Separate forms, on the other hand, are ultimate subjects of predication quite straightfor-

wardly. Hence, separate forms satisfy all three requirements of substancehood mentioned in Z 3 straightforwardly, whereas the forms of sensible substances meet them only in some indirect or qualified way.

Moreover, Aristotle characterizes the difference between the objects of the three theoretical sciences by saying that the objects of theology are separate and unchanging, the objects of physics separate and changing, the objects of mathematics nonseparate and unchanging. Given this characterization of separate forms, it would seem that the forms of natural substances somehow are an inferior kind of forms in yet another way. For they are separate only qualifiedly, namely, in account; and they are unchanging, but only qualifiedly. For though they do not come into being or pass away, they, unlike separate forms, do not exist eternally, but go in and out of existence instantaneously. And though they do not suffer change, they really are different at different times, as one can see in the case of human souls.

Moreover, only in the case of separate substances are the form and the essence straightforwardly identical. For though Aristotle thinks that forms and essences quite generally are identical, he at times also talks as if the specification of the essence of a sensible substance in addition to a reference to the form had to include a reference to the matter. Thus, there is much reason to think that one will understand what it is to be a form, and thus what it is to be a substance, only if one has understood how separate forms are substances, and then understand how material forms, by a weakening of the conditions, count as forms and substances. And if this should be so, then the focal way of being a substance, and hence of being a being, is the way in which separate forms, or divine substances, are substances. Thus, general metaphysics would have as its core a study of the way of being of divine substances.

But why would it follow from this that theology would be the natural place to study the various ways of being, their systematical connections and thus being qua being? There are at least two other possibilities. There could be a universal discipline prior to theology, physics, and mathematics that studies the various ways of being and hence being qua being. And there is the other possibility that we leave it to the three sciences to study the ways of being peculiar to their objects.

To take the last possibility first, it deserves to be pointed out that it is a real possibility, one Aristotle himself seems to consider. For in the passage in Z 11 we looked at earlier, he does suggest that first philosophy is primarily concerned with the substantiality of nonsensible substances, whereas the substantiality of sensible substances in a way is the concern of physics. And since the way of being of nonsubstantial items like qualities and quantities depends on the way of being of natural substances, since only they have accidents, the natural philosopher would take care of all that, too.

But the shortcomings of this approach are obvious, too. Perhaps the most

important difficulty with this approach would be that it would divide the account of being on three different subjects and thus would make it episodic, when in fact there is a continuous story to be told and when it is important for an understanding of the different parts of the story that they are just different parts of one account. It is for this reason that it would seem so much more attractive to give a continuous account of being as such, prior to the different accounts of the different kinds of beings, i.e., prior to theology, physics, and mathematics. And some remarks Aristotle makes might suggeest that this is the way he is inclined to deal with the problem. In E 1, 1025^b 10ff., e.g., he says that the different particular disciplines do not account for the essence and existence of their subject-matter, as if this was left to some prior discipline, i.e., general metaphysics. Since theology, physics, and mathematics are particular disciplines with a particular subject-matter, this might suggest that there is some discipline prior to all three of them which somehow accounts for their subject-matter. But the drawbacks of this approach are obvious, too. For there clearly is a sense in which it is the theologian who knows best about the way of being of divine substances, the physicist who knows best about the way of being of natural substances, and the mathematician who knows best about the way of being of magnitudes. If one insists that a full understanding of the way of being of magnitudes presupposes an understanding of the way of being of physical substances, and that this, in turn, presupposes an understanding of the way of being of separate substances, it will at least be true of the theologian that he knows best about the way of being of separate substances. For on the basis of what could somebody else know more about the way separate substances are? This could only be the case, if there were principles prior to separate substances in terms of which separate substances have to be understood, and these principles were the subject of some further discipline. But there are no principles prior to separate substances. Moreover, in the case of divine substances knowledge of them to a large extent, if not entirely, amounts to no more than a knowledge of their way of being. For assume that there is just one separate substance. In this case one might try to argue that whatever was true of it was true of it just in virtue of its being a separate substance, i.e., in virtue of its peculiar way of being. But even if there should be several separate substances, it still would be the case that much, if not most, of what is true of them would be true in virtue of their being separate substances. Thus, a study of the way of being of separate substances outside theology would, to a large extent, just reduplicate the study of the theologian. Moreover, as I suggested earlier, it would seem to be part of the essence of separate substances that all other ways of being depend on their way of being, just as it seems to be essential to natural substances that the way of being of accidents depend on their way of being.

It is for these reasons, I take it, that Aristotle decides, on the one hand, to

give a continuous account of being as such, but, on the other, to do this within the framework of "theology" or "first philosophy."

But it has to be kept in mind that, though this kind of ontology forms the core of general metaphysics, there is more to general metaphysics than this. The metaphysician, according to Aristotle, does consider certain principles and notions of universal applicability, like the principle of noncontradiction and the notions of unity and identity and their various forms. Why would it be the task of the theologian to consider these matters? There are two possible explanations. The first is that since these matters have to be discussed somewhere, and since they are most naturally discussed in the context of ontology, it will be the task of the theologian to deal with them, since it is his task to do ontology. But there is another possible explanation which ties this fact to Aristotle's claim that first philosophy is universal, because it is first. Since it is first, and since these principles and notions are universal, first philosophy will be the first place where they are used. Hence, it will be the task of the theologian to introduce them.

Now, the only way in which theology could accommodate a general study of being as such as part of itself is by lacking the kind of unity we might expect of an Aristotelian science on the basis of what Aristotle says in the *Posterior Analytics*. But we have to keep in mind that, as we noticed earlier, physics and mathematics, too, are one science only in the sense that there is one subject-matter that is studied by a series of systematically connected disciplines. Moreover, Aristotle in Γ 1003^{b} 22 explicitly warns us that the study of being will be one science only generically, that it will be constituted by a series of studies that specifically deal with the various kinds of being. Thus, there is no reason why theology, too, should not be one only generically, why it should not actually consist of a series of studies. There is one disanalogy, though. Theology would not have one subject-matter in quite the straightforward way in which physics and mathematics have one subject-matter. It not only deals with the primary kind of beings, and thus the primary way of being, but also with being in general. Yet, there is also a sense in which these are not really two different subject matters. For to say of the primary way of being that it is primary, is to say that all other ways of being depend on it. And thus Aristotle can say that theology, being first, also is universal.

If this is correct, it also throws some light on the question whether Aristotelian metaphysics is a science. It has often been claimed that Aristotelian metaphysics is a dialectical enterprise, rather than a science in something like the sense of the *Posterior Analytics*. But it should be clear from what has been said that Aristotelian metaphysics, either as a whole, or at least in good part, is scientific. For otherwise, Aristotle could not in E 1 treat it as parallel to physics and mathematics. Moreover, it does seem that there is no reason why theology, at least in the narrower sense, should not be a science strictly speak-

ing. But one can also see how, given the suggested conception of Aristotle's metaphysics, a much larger part of first philosophy could be considered as being strictly scientific. Both physics and mathematics, in addition to studies of the various kinds of natural substances and mathematical entities, involve a universal discipline that deals with natural substances, and magnitudes respectively, as such. In the case of mathematics this is obvious, since Aristotle explicitly refers to universal or general mathematics. But this is hardly less clear in the case of physics. For our treatise called "Physics" is the dialectical counterpart to such a science of natural substances quite generally. Thus, we may assume that theology, too, involves a discipline that we may call general or universal theology which will deal with separate substances as such, and, in doing so, with the way of being peculiar to separate substances. And there is no reason why general theology should not be strictly scientific, too. Immediately following general theology we shall have an exposition of the various other ways of being and how they depend on the way of being of separate substances. There is no reason why this exposition should not take a strictly scientific form with, e.g., definitions of qualities, quantities, relations, etc., and theorems concerning them. Having dealt with whatever needs to be dealt with in a study of being as such, we would move on to special theology which, again in a scientific way, would deal with the various particular kinds of separate substances, in case there should be more than one. Thus, it would seem that, if not the whole, then at least a very substantial part of metaphysics is scientific. But what reason is there to think that any part of metaphysics will not be scientific? The view that Aristotelian metaphysics is essentially a dialectical enterprise rests primarily on an interpretation of *Met.* Γ, and in particular the way Aristotle deals with the principle of noncontradiction. Aristotle says that principles like this are the concern of the metaphysician, but also says that they do not admit of proof in the strict sense, to then embark on a nonscientific discussion of the principle, which is regarded as an actual piece of doing metaphysics. This is the only evidence T. Irwin, e.g., refers to in order to arrive at the conclusion that first philosophy is not demonstrative, that the questions discussed by first philosophy are beyond demonstration (Aristotle's Discovery of Metaphysics, Rev. of Nov. 31, 1977, 78, p. 218). But this inference seem to me to be radically mistaken. For consider the following: another concern of the metaphysician must be God, his essence and existence, since God is a first principle. Moreover, Aristotle is committed to the view that strictly speaking there is no proof of the essence and existence of God. There will be a real definition of him as an axiom of special theology. And on the basis of this, there will be a deduction of theological theorems. Now imagine that we only had a text in which Aristotle says that the theologian is concerned with the existence of God, but that his existence does not admit of any proof in the strict sense, and then proceeded to give the kind of a posteriori proofs on the basis of the existence of motion which he in fact does give in the *Physics* and in the

Metaphysics. We could not possibly infer from this that Aristotle thinks that theology is not a science; here, we clearly could not argue that the proof constituted a piece of actual Aristotelain theology, but obviously was not, and could not by Aristotle be thought to be, demonstrative. For we would know that the assumption of God's existence was just a starting-point for scientific theology from which it would then deduce whatever there was to be deduced. Or consider the existence of nature. As we can see from the *Physics,* Aristotle thinks that it cannot be proved, strictly speaking, that nature exists. Nevertheless, he tries to establish it dialectically. But nobody is tempted to infer from this that Aristotle thinks that physics is not a science; nobody is inclined to argue that the discussion of the first book of the *Physics* is a piece of actual Aristotelian physics, and that, hence, Aristotelian physics is dialectical. But if these inferences would be misguided, it is equally misguided to infer from *Met.* Γ, or the *Metaphysics* in general, that Aristotelian metaphysics is not a real science. It is demonstrative, but, as with all other sciences, one arrives at its starting-points dialectically. And just as all other writings of Aristotle's do not pretend to present us with an actual piece of Aristotelian science, but, rather, show some of the work involved in arriving at the proper scientific axioms, so the *Metaphysics,* including *Met.* Γ, show us how we might arrive at the principles of the theory of being as such. In one important respect, though, metaphysics differs from all other sciences. Since it is the first in the hierarchy of sciences, it will also be the first to make use of the principles that all sciences will rely on, like, e.g., the principle of non-contradiction. And, hence, it will also be the task of the metaphysician to arrive at these universal principles and to provide them with whatever backing may be appropriate. Thus, the metaphysician, more than any other scientist, will be engaged in dialectical reasoning. But this goes no way to show that metaphysics is not a demonstrative science.

Thus, it seems to me that a proper understanding of Aristotle's conception of metaphysics, and in particular his remark that first philosophy is universal because it is first, will restore metaphysics to its proper place, that of the first of the demonstrative sciences.