

Substance in Aristotle's *Metaphysics*

Aristotle's ontology is very generous.¹ It contains objects like trees and lions. But it also contains qualities, like colors, and quantities, like sizes, and all the kinds of items Aristotle distinguishes according to his so-called categories. But, of course, Aristotle does not assume that objects, qualities, quantities, and the rest exist side by side, separately from each other. He thinks that qualities and quantities exist only as the qualities and quantities of objects, that there are qualities and quantities only insofar as there are objects that are thus qualified or quantified.

In taking this view Aristotle is making some rather substantial assumptions. He assumes that the existence of properties² does not just amount to the existence of objects that have these properties, but, rather, that the existence of objects that have properties presupposes the existence both of objects and of properties. Moreover, Aristotle makes a clear distinction between objects and properties, and he regards this distinction as basic, i.e., he regards objects and the different kinds of properties as basic ingredients of the world that cannot be reduced to each other. His predecessors had had a tendency to blur the distinction, e.g., by treating qualities as somehow substantial and as thus constituting objects, or by treating objects as insubstantial and as constituted, in some way or another, by qualities. Furthermore, Aristotle assumes that, though both objects and properties are basic and irreducible to each other, there, nevertheless, is an ontological dependence between them, that the existence of properties has to be understood in terms of the existence of objects, rather than the other way round. All these assumptions would need a good deal of discussion. In particular, it would be important to discuss the question whether it was not Aristotle who first took the notion of an object sufficiently seriously and who, as a result of this, was able to make the clear distinction between objects and properties, which now seems so trivial to us that we have difficulty understanding how some of the Presocratics and some of the Hippocratic doctors, but also even later many

Hellenistic philosophers and physicians, could try to reconstruct the world from properties like, e.g., warmth and cold, dryness and wetness. What the following remarks will be concerned with, though, are not these assumptions, but the way Aristotle tries to work them out in his theory. In particular, I shall try to show how Aristotle's notion of a substance underwent a considerable change when Aristotle, in the *Metaphysics*, tried to get clearer about the way in which properties ontologically depend on objects.

The first time, at least in the extant corpus, that Aristotle approaches this problem is in the *Categories*. There Aristotle distinguishes between objects and properties and explains how properties depend for their being on particular objects as their ultimate subjects. He calls objects "ousiai", i.e., by the term Plato had used to refer to the forms, because only they truly exist or because they exist in their own right and everything else that exists depends for its existence on them. In calling objects "ousiai," Aristotle claims for objects the central place in ontology that Plato had claimed for forms. Moreover, he can refer to them this way because he takes the view that objects exist in their own right and that all other things, i.e., the properties, depend for their being on these objects. Traditionally "ousia" has been rendered by "substance." The reason for this is that, on the view Aristotle puts forth in the *Categories*, properties depend for their being on objects in that objects are their ultimate subjects, they are what ultimately underlies everything else. Indeed, objects in the *Categories* are characterized by the very fact that they are the ultimate subjects which underlie everything, whereas there is nothing that underlies them as their subject. It is because of this characterization that the rendering "substance" seems appropriate.

The *Categories* are also very specific about the sense in which substances are the underlying subjects (hypokeimena). According to the *Categories*, something has something as its subject if it is predicated of it. It can be predicated of it as its subject in either of two ways: if it is in it, or inheres in it, as its subject, or if it is predicated of it as its subject in a narrow technical sense of "predication." The two ways roughly correspond to essential and accidental predication. Thus, something has something as its underlying subject if it is truly predicated of it. Now the argument of the *Categories* is that for any item in our ontology we can ask what its subject is. If it does not have a subject in either of the two ways, it itself is a particular object. If it does have a subject, either this subject is a particular object or it is not. If it is not, we can in turn ask of that subject what its subject is; and either this further subject is a particular object, or it is not. And so on, until ultimately we arrive at a subject that in turn has no further subject and thus is a particular object. So it is argued that any series of subjects, from whichever item in the ontology we start, ends with a particular object. It is in this sense that particular objects are the ultimate underlying subjects in the *Categories*.

The fact that particular objects invariably are the ultimate subjects seems to

give them their status as *ousiai* in the following way. They must be assumed to exist in their own right, but everything else exists because it is involved in some truth about a particular object or because it is involved in some truth about something that is involved in some truth about a particular object, etc. It is in this way that properties depend on objects for their being.

When in the *Metaphysics* Aristotle tries to get clearer about the notion of substance, he starts his detailed discussion by first considering the suggestion he had followed in the *Categories*, namely, that substances are the ultimate subjects underlying everything else. But whereas in the *Categories* he had assumed that concrete particular objects play the role of ultimate subjects and hence of substances, Aristotle now clearly thinks that the assumption that substances are the ultimate subjects does not yet settle the question of what is going to count as a substance. For he now lists as candidates for substancehood that could play the role of ultimate subjects matter, form, and the composite of both (Z 3, 1029^a 2ff.).

The fact that Aristotle in *Met.* Z 3 is considering the suggestion he had followed in the *Categories*, namely, that substances are the ultimate subjects, is somewhat obscured by the fact that translations of the *Metaphysics* tend to render "hypokeimenon" by "substrate," rather than by "subject." But it should be clear from the characterization of the hypokeimenon in 1028^b 36ff. that Aristotle is talking here about subjects of predication, and it should be clear from 1029^a 8ff. that Aristotle is considering the notion of the *Categories* of substances as the ultimate subjects of predications.

Given that, we have to wonder why Aristotle now is considering matter, form, and the composite of both as possible ultimate subjects of predication. For none of these is identical with the particular objects of the *Categories*. This goes without saying for matter and form. But it also seems to be true for the composite of matter and form. It is true that traditionally the composite has been identified with the concrete, particular object. But the concrete, particular object, as we are familiar with it, actually is a composite not just of matter and form, but also of a large number of accidents; it is an object of a certain size, weight, color, and the like, i.e., a complex of entities. Hence, one should not assume without further argument that the composite of matter and form is to be identified without qualification with the concrete particular.

The reason why Aristotle now is considering matter, form, and the composite, rather than the concrete, particular object, as possible ultimate subjects of predication seems to be the following. Aristotle had assumed in the *Categories*, and still does assume in the *Metaphysics*, that a statement like "Socrates is healthy" introduces two entities, Socrates and health. But he now asks the question that he had not faced in the *Categories*: what is the subject of health, if health is an entity distinct from its subject, what in the bundle or cluster of entities that constitutes Socrates is the thing itself as opposed to the properties like

health which it underlies? That this is what Aristotle has in mind is borne out by the way he argues in 1029^a 10ff. that matter is the most straightforward candidate for the title of the ultimate subject. For he argues that if we strip a particular object of all of its properties, nothing but matter will be left. So obviously he is looking for that element in a concrete particular object which underlies its properties, rather than for the concrete particular object itself.

Given this approach, it is easy to see why the composite of matter and form would be an ideal candidate for the title of the ultimate subject of all non-substantial entities. It is just that part in a bundle of entities which is a concrete object which is opposed to the non-substantial properties of the object, and since all non-substantial entities are predicated (or introduced by predicates) of objects, the composites will be the ultimate subjects of everything else in the ontology.

It is somewhat more difficult to see how matter could be the ultimate subject. 1029^a 20–23 suggests that all predicates can be construed as being directly predicates of some matter. But we have to keep in mind that the notion of a primary or ultimate subject (1029^a 1ff.) does not imply as such that the ultimate subjects are themselves directly the subjects of everything else. And, in fact, 1029^a 23–24 suggests that matter is the ultimate subject by being the subject of the substance in question which, in turn, is the subject of the non-substantial entities. All this raises considerable problems which I shall leave aside, though, since Aristotle himself here does not pursue the issue further because he thinks that matter for certain other reasons is not a good candidate for substancehood anyway.

Most puzzling, in any case, is his suggestion that there is a way in which substantial forms might be construed as the ultimate subjects and, hence, as the real things as opposed to mere properties of things. Bonitz thought that this suggestion was a mere slip on Aristotle's part, but it is clear from the introductory chapter of H (H 1042 1^a 28ff.) that it is Aristotle's considered view that in some way the form is the ultimate subject and hence substance. The view is puzzling in various ways. To start with, Aristotle does not tell us how statements are to be construed in such a way that it is forms that turn out to be the ultimate subjects.

Perhaps he thinks that statements about objects can be regarded as statements about forms insofar as they are either statements primarily about the form and only secondarily, derivatively, about the object, anyway, or insofar as they are statements about the form as it is embodied in matter. Thus, the truth that Socrates is an animal would be a truth about the form straightforwardly, whereas the truth that Socrates is healthy would be a truth about the form to the effect that the form constitutes a composite that is healthy.

But such a construal seems to be highly artificial, and, hence, we must assume either that Aristotle was driven to it because he had other reasons to think that forms are substances, but nevertheless wanted to retain the *Categories'* no-

tion of a substance as an ultimate subject, or that there is a way of looking at the matter which makes it intuitively plausible to regard forms as the ultimate subjects. The following seems to me to be such a way of looking at things.

It is characteristic of ZHΘ that Aristotle tends to, or in fact does, restrict substances to natural objects (Z 7, 1032^a 19; Z 8, 1034^a 4; Z 17, 1041^b 28–30; H 3, 1043^b 21–22). It is not entirely clear whether this is supposed to restrict substances to animate things, but these certainly are paradigms of natural objects. So let us first consider them. In their case the form is the soul. Let us regard this soul as the organization of an object, or its disposition to behave or to lead the kind of life characteristic of that kind of object. The organization of the object is such as to have a good chance to survive changes in the environment, or such that the object has a good chance to keep functioning for some time and so to stay in existence. This will involve the thing's changing, e.g., its place to take in food or to evade an enemy, or its temperature in case of an inflammation. It also involves exchange of the matter so disposed.

So what has to stay the same as long as a particular animate object exists is just that organization or disposition to behave in a way characteristic of the kind. There always has also to be some matter that is thus organized, but it does not have to be the same matter. Similarly, there always have to be all sorts of properties, a certain temperature, weight, size, shape. In fact, the properties will ordinarily come within rather narrow ranges. For if we heat up an animate object, there will be a point at which it can no longer adjust to the change and the characteristic disposition will be destroyed. But though the object must always have a certain weight, size, temperature, and though it has to have these within certain narrow limits, there is no weight, size, temperature, etc. which it has to have all the time. If we, then, analyze an ordinary physical object into matter, form, and properties, the only item in the case of animate objects that has to stay the same as long as we can talk about the same thing is, on this account, the form. And this may give some plausibility to the assumption that it is really the form which is the thing we are talking about when we at different times say different things about an object.

As an example of an artifact let us consider Theseus' ship—let us call it *Theoris*—which is repaired again and again until all the original planks have been replaced by new ones. But a craftsman has kept the old planks. He now fits them together according to the original plan so that we have a second ship built according to the same specifications as the other ship. Still, it is clear that it is the ship with the new planks which is the old ship, i.e., *Theoris I*, and that it is the ship with the old planks which is the new ship, i.e., *Theoris II*, though its planks and its plan are identical with the planks and the plan of the original ship, whereas the other ship has new planks.

Our theory will try to explain this in the following way: *Theoris I*, the ship with the new planks, is identical with the original ship because there was one

disposition which was first the disposition of the original planks, then the disposition of a slightly different set of planks, and, finally, in a history that could be traced back step by step, the disposition of the set of new planks. The disposition of *Theoris II*, on the other hand, though it is a disposition of the original set of planks, and though the ship is built according to the same specifications, does not have that history and hence is not the disposition of the original ship.

It will be objected that, if the two ships are faithfully built according to the same specifications, they will have just one and the same disposition. There will be over a period of time some one thing, namely the *Theoris I*, which has that disposition and there will be, for an overlapping period of time, another thing, namely *Theoris II*, which has the very same disposition. But according to our theory, though it is true that as long as each ship is in existence there is always something which is thus disposed, namely the material, it is *not* necessary that that which is thus disposed be the same throughout the time of the ship's existence. Hence, the identity of what is thus disposed is not a sufficient condition for the identity of the ship; neither is it a necessary condition, as we can see from the case of the old ship with the new planks. And since we want to analyze the ship into a disposition and what is thus disposed, and since one of the two factors is to account for the identity of the ship, it has to be the disposition. And, hence, we have to distinguish the disposition of the two ships, though their specification may be exactly the same.

If we look at objects in this way, it is natural to look at the form as the centerpiece of the cluster of entities that constitute the concrete object. And so it is no longer counterintuitive to regard all truths about an object as ultimately truths about its form. They in some sense just reveal the particular way a form is realized.

But the claim that forms are the ultimate subjects is puzzling in yet another way. Traditionally it has been assumed that forms are universal. But it is of the very nature of ultimate subjects that they cannot be predicated and, hence, cannot be universal. Therefore, if substantial forms are the ultimate subjects, they must be particular. A moment's reflection, though, shows that this is a view that Aristotle is committed to anyway. For in *Z* 13 he argues at length that no universal can be a substance. But since he also wants forms to be substances, he has to deny that forms are universal. And, in fact, we do find him claiming that the form of a particular object is peculiar to that object, just as its matter is; Socrates' form, i.e., his soul, is different from Plato's form, i.e., Plato's soul (*Met.* Δ 1, 1071^a 24–29). We even find Aristotle claiming that the form is a particular this (a tode ti; 8, 1017^b 25; *H I*, 1042^a 29; Δ 7, 1049^a 28–29; *De gen. et corr.* 318^b 32). And, of course, he has to claim that a form is a particular this, if he wants forms to be substances, since he assumes that a substance has to be a particular this. It was for this reason that Aristotle rejected the claim of matter to be substance; matter is only potentially a particular this.

But though Aristotle clearly is committed to the view that forms are particular and no less clearly actually espouses the view that they are particular, we have to ask how he can assume that they are particular. For it would seem that all things of the same kind have the same form or are the same in form. But the answer to this is that things of the same kind have the same form only in the sense that for things of the same kind the specification of their form is exactly the same (1071^a 29). It is a basic nontrivial fact about the world that things come with forms that are exactly alike, and not just sufficiently similar to class them together in one kind. The reality of kinds amounts to no more than this: that the specification of the form of particular objects turns out to be exactly the same for a variety of objects. But for this to be true, there is no need for a universal form or a universal kind, either a species or a genus. And, in fact, the import of Z 13 seems to be that there are no substantial genera or species in the ontology of the *Metaphysics*. As universals they cannot be substances, and since they do not fall under any of the other categories either, they do not have any status in the ontology. Sometimes it seems to be thought that substantial genera and species could be regarded as qualities. But this cannot be Aristotle's view. For on Aristotle's view qualities are those things we refer to when we say what something is like. But even in the *Metaphysics* Aristotle takes the view that in referring to the species or the genus of something we say what it is, rather than what it is like.

Substantial forms, then, as ultimate subjects and as substances are particular. But we may still ask how they manage to be particular, given that their specification, down to the smallest detail, is exactly the same for all things of the same kind. To answer this question, though, we have to get clearer about what it is that is asked. If the question is how do we manage to distinguish particular forms at one time, the answer is simple: they differ from each other by being realized in different matter (cf. 1034^a 6–8; 1016^b 33) and by being the ultimate subjects of different properties. If the question is how do we reidentify a particular form at a later point in time, the answer is: it can be identified through time by its continuous history of being realized now in this and now in that matter, of now being the subject of these and then being the subject of those properties. But if it should be demanded that there be something about the form in and by itself which distinguishes it from other forms of the same kind, the answer is that there is no such distinguishing mark and that there is no need for one. It just is not the case that individuals are the individuals they are by virtue of some intrinsic essential distinguishing mark.

It turns out, then, that Aristotle in the search for what it is that is underlying the non-substantial properties of objects considers the form of an object as a serious candidate.

But it also seems to be the candidate he actually settles on. And so we have to see why he gives form preference over the two other candidates, matter and

the composite. As we have already seen, Aristotle thinks that matter does not satisfy certain other conditions substances have to fulfill; it is, e.g., not actually, but only potentially a particular thing, and thus only potentially a substance. The composite, on the other hand, cannot be ruled out on the same grounds. And, in fact, Aristotle accepts its claim to be substance, but insists that it is substance only derivatively, that forms are the primary substances (1032^b 1ff.; cf. 1037^a 5; 1037^a 28; 1037^b 1).

It is easy to see why Aristotle thinks that forms are prior to composites (1029^a 5ff.; 1037^b 3): they are presupposed by the composites. But this in itself is not yet sufficient to think that they are prior as substances. The reason for this would seem to be that Aristotle thinks that substances are not as such composite. There are substances that are pure forms as, e.g., the unmoved mover. And it is clear from Z 3, 1029^b 3ff. and Z 11, 1037^a 10ff. (cf. also Z 17, 1041^a 7ff.) that Aristotle thinks that the discussion of composite substances in Z H is only preliminary to the discussion of separate substances. We start by considering composite substances because they are better known to us, we are familiar with them, and they are generally agreed to be substances. But what is better known by nature are the pure forms. Aristotle's remarks suggest that we shall have a full understanding of what substances are only if we understand the way in which pure forms are substances. This, in turn, suggests that he thinks that there is a primary use of "substance" in which "substance" applies to forms. Particularly clear cases of substance in this first use of "substance" are pure forms or separate substances. It is for this reason that composite substances are substances only secondarily.

It would seem, then, that there are two main reasons why the concrete, particular substances of the *Categories* in the *Metaphysics* get replaced by substantial forms as the primary substances: (i) Aristotle now is concerned with the question what is the real subject in itself as opposed to its properties; (ii) Aristotle now not only has developed his own theory of forms, but also has come to assume separate substantial forms which, on his view, are paradigms of substances, but which are not substances in the same way as the composites or the concrete particular objects are.

That substantial forms in the *Metaphysics* play the role of primary substances which in the *Categories* has been played by particular objects is obscured by a line of interpretation that one finds, e.g., in Ross (Aristotle, p. 166; 172) and S. Mansion (Melanges Merlan, p. 76). According to this interpretation, the question what is to count as a substance is already settled at the beginning of *Met. Z*; what, on this interpretation, Aristotle is concerned with is Z 3ff., rather, is the further question "what is the essence or substance of substances?", and "the substantial form" is supposed to be an answer to this further question. But this way of looking at what Aristotle says in the *Metaphysics* cannot be right. For in Z 3 Aristotle seems to set out to answer the very question raised in Z 1, "what is substance?". There is no suggestion that this question has already been an-

swered in favor of particular objects, and that we are now considering the further question "what is the substance of particular substances?" It, rather, seems that Aristotle throughout *Z* is considering one and the same question "What do we mean by 'substance' when we distinguish substances from items in other categories?", and he seems to be considering various candidates for that one title. If, then, Aristotle in the last chapter of *Z* (1041^b 30), where he makes a fresh start at answering this question, again suggests that it is the nature or form of a thing which is the substance we are looking for, we have to assume that this is supposed to be his answer to the question of *Z*1: "What is substance?". When in *H* 1 he again outlines the problem, he clearly puts the matter in such a way that physical objects and the essences of objects, universals and ultimate subjects, were parallel candidates for the one title of substance (1042^a 3-15). Therefore, it should be clear that Aristotle now does mean to say that substantial forms, rather than particular objects, are substances in the primary sense.

On the theory of *Metaphysics*, then, substantial forms rather than concrete objects are the basic entities. Everything else that is depends on these substantial forms for its being and for its explanation. Hence substantial forms, being basic in this way, have a better claim to be called "ousiai" or "substances" than anything else does. Some of them are such that they are realized in objects with properties. But this is not true of substantial forms as such. For there are immaterial forms. Properties, on the other hand, cannot exist without a form that constitutes an object. Moreover, though certain kinds of forms do need properties for their realization, they do not need the particular properties they have. The form of a human being needs a body of a weight within certain limits, but it does not need that particular weight. No form needs that particular weight to be realized. But this particular weight depends for its existence on some form as its subject. In fact, it looks as if Aristotle in the *Metaphysics* thought that the properties, or accidental forms, of objects depended for their existence on the very objects they are the accidental forms of, as if Socrates' color depended on Socrates for its existence. However this may be, on the new theory it is forms that exist in their own right, whereas properties merely constitute the way forms of a certain kind are realized at some point of time in their existence.

Thus, a closer consideration of the way in which objects underlie the properties that depend on them for their being has led Aristotle in the *Metaphysics* to a revision of his doctrine of substance.