

universal be substance? Either of all or of none of the particulars falling under it. However, we have just seen (9-12) that the universal cannot be the substance of all of the particulars falling under it because the substance of a thing belongs to it alone and to nothing else. In reply to this Aristotle's opponent (call him the Platonist) proposes that the universal might be the substance of only one of the particulars falling under it. This, Aristotle replies, is impossible because if the particular were the substance of one member of the class of objects falling under it, that member would have to be identical with the rest of the members of the class. For the universal would be no less the substance of the other members of the class, and those things whose substance and essence are one are themselves one. So the assumption that, as is proper to substance, the universal is the substance of one thing alone yields the absurd conclusion that, since the universal is that which naturally belongs to many, the particulars falling under a universal are identical. Therefore, as was said, the universal must be the substance of either all or none of the particulars falling under it. And since, by 9-12 the universal cannot be the substance of all the particulars falling under it, it is the substance of none of them.

Michael Woods has pointed out a problem with this interpretation which casts doubt on its correctness.⁴ The difficulty lies in 12-15 and can be made clear if we set out the argument in the following way. Suppose a, b, and c are all the particulars falling under the universal F. Then the argument is,

- (1) Let F be the substance of a
- (2) Those things whose substance is one are themselves one
Therefore, a, b and c are identical.

The conclusion clearly follows from (1) and (2) only with the help of the further premise

- (3) F is the substance of b and c.

Now, Ross understands (1) to mean

- (1') F is the substance of a, and of nothing else.

So understood, (1) contradicts (3). Since (3) is a necessary premiss for the argument, Ross's interpretation of (1) makes Aristotle's premisses inconsistent. Or in other words, the Platonist asserts (1) (i.e. (1')) to meet the first objection (9-12), but Aristotle simply ignores this and compels him to accept (3) without argument.

It is clear that the argument is valid only if F is being assumed to be the substance of every member of its extension — a, b, and c. So (3) must be retained. If Aristotle's premisses are to be made consistent, then, (1) cannot be taken to mean (1'). Ross interpreted (1) to mean (1') because he thought that the argument is intended to refute the suggestion expressed in the words 'but if it is to be <the substance> of one thing' (ἐνός δ' εἰ ἕσται), where this is the Platonist's attempt to meet the condition laid down by Aristotle in 10 that substance is private to that object of which it is the substance. Hence, if we do not take 'but if it is to be <the substance> of one thing' as the proposition Aristotle is trying to refute, (1) need not be understood as in (1'), that is, it need not be taken to

⁴ Problems in *Metaphysics* Z, Ch. 13 p. cit. pp. 171-2.

AN ARGUMENT IN METAPHYSICS Z 13

In *Metaphysics* Z 13 Aristotle argues that no universal can be substance. Prima facie, this appears to rule out the possibility that any universal can be substance, species as well as genera. Nevertheless, many commentators have denied that this chapter intends to rule out the possibility that any universal can be substantial. Aristotle, it is thought, cannot wish to deny that any universal can be substance because he believes that some universals are substances, viz. species.

So Aristotle is denying only that genera as opposed to species can be substance.¹ In this paper I will argue that in Z 13 Aristotle does intend to deny that any universal can be substance. I shall proceed as follows. First I shall examine the argument in 1038^b8-15 and suggest two possible interpretations. On either interpretation the argument contends that no universal — including species — can be substantial. Next I consider and reject the interpretation of the argument according to which it is intended to rule out genera as substances but allows that species can be substances. Finally, I shall briefly consider and reject Michael Woods's interpretation of the chapter.

At 1038^b8-15 Aristotle presents the following argument:

For it seems to be impossible that anything predicated universally be substance. For, first of all, the substance of each thing is private to it, does not belong to anything else, but the universal is common. For that is called universal which naturally belongs to many things. Of what will this be substance? Either of all or of none, but it cannot be of all. But if it is to be <the substance> of one thing the rest will be identical with this. For those things whose substance and essence are one are themselves one.²

At first sight, Ross's interpretation³ of the argument seems quite plausible. It goes: The universal cannot be substance because the substance of a thing belongs to it alone and to nothing else, whereas the universal is precisely that which belongs to many things. This seems quite straightforward, but the rest of the argument raises problems. According to Ross it should be read: Of what will the

¹ Michael Woods, 'Problems in *Metaphysics* Z, Chapter 13', in J. Moravcsik (ed.), *Aristotle* (New York, 1967), p. 216; R. Albritton, 'Forms of Particular Substances in Aristotle's *Metaphysics*', *Journal of Philosophy*, 54 (1957), 705; J. Moreau, 'Sein und Wesen in der Philosophie des Aristoteles', in Fritz-Peter Hager (ed.), *Metaphysik und Theologie des Aristoteles* (Darmstadt, 1969), p. 231; C. Werner, *Aristotele et l'idéalisme platonicien* (Paris, 1910), p. 66 n. 1, and *La Philosophie grecque* (Paris, 1972), p. 118; R. D. Hicks, *Aristotle: De Anima* (Cambridge, 1907), p. 187; N. Hartmann, 'Aristoteles und das Problem der Begriffs', in *Kleinere Schriften* ii (Berlin, 1957), 106, and 'Zur Lehre vom Eidos bei Platon und Aristoteles', *ibid.* 137; Chung-Hwan Chen, *Sophia* (New York, 1976), p. 576 n. 22; cf. P. Gohlke, *Die Lehre von der Abstraktion bei Plato und Aristoteles* (Halle, n.d.), p. 96; C. Arpe, *Das τί ἦν εἶναι*

² εἶκοι γὰρ ἀδύνατον εἶναι οὐσίαν εἶναι

δτιῶν τῶν καθόλου λεγομένων· πρώτων μὲν

γὰρ οὐσία ἐκάστου ἢ ἰδίας ἐκάστῳ, ἢ οὐχ

διάρχει ἅλλω, τὸ δὲ καθόλου κοινῶν· τοῦτο

γὰρ λέγεται καθόλου ὁ πλείωων διάρχειν,

πέφυκεν· τίως οὖν οὐσία τοῦτ' ἔσται; ἢ γὰρ

πάντων ἢ οὐδενός, πάντων δ' οὐχ οἶόν τε·

ἐνός δ' εἰ ἔσται, καὶ ἄλλα τοῦτ' ἔσται· ὧν

γὰρ μία ἡ οὐσία καὶ τὸ τί ἦν εἶναι ἐν, καὶ ἀβρῶ

ἐν.

Many of my translations in this paper are

based on W. D. Ross's translation of the

Metaphysics.

³ Aristotle's *Metaphysics*, ii (Oxford,

1924), 210.

contradict (3). It is possible, I think, that 1038^b12-15 should be understood as an argument which is independent of 9-12, and in such a way that 'but if it is to be <the substance> of one thing' is not taken to be a countermove to 9-12 on the part of the Platonist. Rather, the argument might be understood in the following way: Of what will F be the substance? ('Of what will this be substance?') Either of a, b, and c or none of them. ('Either of all or of none.') But F cannot be the substance of a, b, and c. ('But it cannot be of all.') (And now the basis for this last statement is not the previous argument in 9-12, but the argument which follows, viz.: For if F is the substance of even one of them, say a, then b and c will be identical with a.⁵ ('But if it is to be <the substance> of one thing, the rest will be identical with this.') For those things whose substance and essence are one are themselves one. Therefore, since F is the substance either of all or of none of the particulars falling under it, and it cannot be the substance of all, it is the substance of none.

Thus understood, it is clear why (1) must not be taken to mean (1'), and why 'those things whose substance and essence are one are themselves one' presupposes that every member of the extension of F has F as its substance. For it is precisely the view that a universal is the substance of every member of its extension that Aristotle is arguing against. He gives the alternatives 'Either of all or of none,' asserts 'but it cannot be of all,' and then proceeds to give his argument why it is not possible. So no problem arises if we take the argument to be directed against 'of all' (πᾶντων) rather than 'of one' (ἑνός).⁶

However, the argument can also be understood differently. This alternative interpretation is suggested by the argument in 1038^b16-23 which seems to me to be exactly parallel to the one we are considering. It runs,

So the universal cannot be substance in the way that essence is, but can it belong to this, as animal belongs to man and horse? Therefore it is clear that it is a kind of definition of it. Nor does it matter if it is not a definition of everything in the substance: none the less this will be the substance of something, as man of the man in which it occurs, so that the same thing will result again; for it will be the substance of that, such as the animal, in which alone it occurs.

Although I cannot justify it here, I construe the argument as follows. Suppose that the universal can be substance as belonging to essence in the way in which the genus animal belongs to the species man and horse. Therefore it is clear that it (e.g. the genus animal) is a kind of definition of the essence (e.g. the species man). It does not matter if animal is not the definition of everything in the substance man;⁷ nevertheless animal will be the substance of

⁵ L. Robin seems to suggest something like this, in *La Théorie platonicienne des Idées et des Nombres d'après Aristote* (Paris, 1908), p. 36. Also cf. G. Grote, *Aristotle*, ii (London, 1872), 342-3.

⁶ Although H. F. Cherniss (*Aristotle's Criticism of Plato and the Academy* (New York, 1962), p. 318 n. 220) construes the premiss 'those things whose substance and essence are one are themselves one' (14) as providing a ground, not for the conclusion that b and c are identical with a (13-14), but for saying that F must be the substance of all of a, b, and c or none of them (12-13),

'it is hard not to take 11.14-15 (ὡν γὰρ μὴ . . .) as providing a reason for what is asserted immediately before, especially as it is readily intelligible as a reason for it' (Michael Woods, 'Problems in *Metaphysics* Z, Chapter 13', op cit., p. 219). And that premiss is used for the same conclusion in at least two other places in the *Metaphysics* (999b21-2, 1040b17). See below.

⁷ On the use of this example in the argument see Cherniss, *ACPA*, op. cit., p. 320 n. 223. It is also possible, however, that Aristotle is using the term 'man' and 'horse' in 18 to refer to the souls of a man

something, as man is the substance of the man in which it occurs in the first argument, i.e. 1038^b8-15. So that the same thing will result again. For the genus animal will be the substance of that, such as the individual animal, in which alone it occurs.

The language which Aristotle uses in 1038^b16-23 suggests another way of understanding 1038^b8-15. The language I am referring to is 'as man is substance of the man in which it occurs' and 'in which alone it occurs', and it exemplifies the point which Aristotle makes at 1038^b9-10: 'For, first of all, the substance of each thing is private to it, does not belong to anything else. . . . I take the conception underlying these formulations to be that if F is the substance of anything, then necessarily it is the substance of *one* thing, i.e. of something that is one in number. This is just the force of the premiss: those things whose substance and essence are one are themselves one. Thus I take the last line of the argument in 1038^b16-23 — 'For it (viz. the genus animal) will be the substance of that, such as the animal, in which alone it occurs' — to be saying that if the genus animal is substance, then, since any substance is the substance of *one* thing, the genus animal must be the substance of the single animal to which it belongs, i.e. all animals are identical. Now I take 'as man is substance of the man in which it occurs, so that the same thing will result again' in 22-3 to refer back to 1038^b8-15. Just as here in 16-23 if animal is substance it must be the substance of a single animal and so all animals are identical, so there in 8-15 the hypothesis that man is substance entails that it is the substance of a single man and hence all men are identical.

The way in which this may clarify 1038^b8-15 is that it explains the line: 'But if it is to be the substance of one, the rest will be identical with this' in 13. In both Ross's and my own interpretation above, 'one' in this line was taken to refer to one of the members of the extension of the universal. What I am now suggesting is that the line need not be taken in this way but rather as pointing out what has just been said to be a requirement of substance: 'the substance of each thing is private to it, does not belong to anything else.' That is, it is saying that if a universal such as man is substance, then if it is to be the substance of *one* thing, as it *must* be if it is substance, then all men will be this single man.

On either of the proposed interpretations the argument is intended by Aristotle to show that *no* universal can be substance. And this is what Aristotle repeatedly says. 'For it seems to be impossible that *anything* predicated universally be substance. (1038^b8-9). 'Nothing universal is substance' (1038^b35). 'Nothing common is substance' (1040^b23). 'Nothing predicated universally is substance' (1041^a4; cf. 1003^a7-9, 1042^a21, 1060^b21, 1087^a2, 1087^a12). And in I 2, in what is clearly a reference back to Z 13, he says: 'If, then, no universal can be substance, as has been said in our discussion of substance and being . . . (1053^b16-18; cf. 999^a17-23, 1001^a19-24).

So in chapter 13 of Book Z, as a result of the argument just gone through, Aristotle explicitly claims that no universal is substance. Further, in I 2 Aristotle refers back to Z 13 as having established that no universal is substance. Nowhere in this chapter does Aristotle divide universals into different types and argue that

and a horse (cf. 1043^a36-b4, 1033^a29,

b17-18, 1035^a46-9, b1-3, 1036^a16-17,

1037^a7-8, *De Caelo* 278^a13-15, *De Gen. et*

Corr. 321^b19-22), which he certainly does consider to be essences (1017^b14-16, 21-3,

1035^b14-16, 1037^a22-9, 1043^b2-4, *De*

Anima 412^b10-17).

substance and essence are one are themselves one', 'those things' is taken to refer to species and 'substance' to a genus, then no sense of 'one' can be specified such that the argument is one which Aristotle himself could have advanced.

Furthermore, other passages in the *Metaphysics* where the same argument is used count heavily against Albritton's interpretation and in favour of my own. Of these (cf. 1016^b8-11, 1018^a5-11, 1021^a11), the most important occurs in Z 16 (1040^b16-27):

But since the one is said just as being, and the substance of one thing is one, and those things whose substance is one in number are one in number, it is clear that neither the one nor being can be the substance of things, just as being an element or a principle cannot be. But we ask what, then, the principle is that we may reduce the thing to something more knowable. Being and the one would be substance rather than the principle or the element or the substance belongs to nothing but itself and to that which has it, of which it is substance. Again, that which is one cannot be in many places at the same time, but what is common occurs in many places at the same time; so it is clear that no universal occurs apart and separate from particulars.

In the statement *ἡ οὐσία ἢ τὸ εἶδος ἢ τὸ εἶνός μίαν, καὶ ὡς μίαν ἀριθμῶν ἐν ἀριθμῶν* ('... the substance of one thing is one, and those things whose substance is one in number are one in number...'; cf. *Physics* 227^b21-2, 228^a7-8, 11-13), *εἶδος* and *μίαν* in the first clause must be understood as having the same meaning as *μίαν* and *ἐν* in the second clause. So it says that (1) the substance of something one in number is itself one in number, and (2) those things whose substance is one in number are themselves one in number.

Now note the last argument ('Again, that which is one...'). 'That which is one' (*τὸ εἶν*) in 25 cannot mean 'that which is one in form' because there is nothing to prevent what is one in form from being in many places at the same time. It is what is one in number that cannot be at many places at the same time. And this means that it cannot belong to many *particulars* at the same time, as 27 (*τὰ καθ' ἑκάστω*) makes clear.¹² Now, 'common' (*κοινόν*) in 23 cannot mean anything different from what 'what is common' (*τὸ κοινόν*) in 25 means. And therefore 22-4 are saying the following: the one and being are not substance, since nothing which is *common* to *particulars*, i.e. no universal, can be substance. For substance belongs only to itself and to that particular of which it is the substance.

This passage, then, provides strong evidence against Albritton's interpretation of 1038^b8-15. For it gives an argument against the suggestion that universals are substance which is exactly parallel to that passage. 1040^b23-4 argues that no universal can be substance 'since nothing common is substance; for substance belongs to nothing but itself and that which has it, of which it is substance.' At 1038^b9-12 Aristotle argues that no universal can be substance on the grounds: 'For, first of all, the substance of each thing is private to it, does not belong to anything else, but the universal is common.' At 1040^b17 Aristotle says that a universal cannot be substance on the grounds that 'those things whose substance is one in number are one in number.' At 1038^b14-15 Aristotle argues that no universal can be substance on the grounds that 'those things whose substance and essence are one are themselves one.' There can be no doubt that the arguments in 1040^b16-27 are the same arguments as those in 1038^b8-15.¹³ And so, since we know that 1040^b16-27 is arguing that no universal in relation to particulars

¹² Cf. Ps.-Alexander, 366, 30-1.

¹³ This is confirmed by 1053^b16-21.

can be substance, 1038^b8-15 too is arguing for the conclusion that no universal in relation to particulars can be substance.

Another passage which shows the sense of the premiss in question is 999^b20-3: 'Besides these, whether the substance of all things is one, such as of all men? But that is odd; for all things whose substance is one are one. But is it many and diverse? That too is unreasonable.' The force of the argument is evidently that if all individual men have the same substance, then they will be identical with one another, since all things whose substance is one are themselves one. Here, that which is hypothesized to be the substance is a species and not a genus, and those things of which it is hypothesized to be the substance are individual men, not species.

Furthermore, the solution to the aporia seems to require individual substantial forms. As Albritton says, 'Why "many and diverse"? Why not many and the same in universal formula, like your form and mine in Λ ? The dilemma seems to invite the question. May we not conclude that Aristotle, though he omits to say so, has escaped by this route, a theory of particular forms?'¹⁴ However, Albritton proceeds to argue that this conclusion cannot in fact be drawn because there is an alternative solution to the dilemma. 'One might distinguish, as Aristotle does, ways of being one, and argue that things whose substance is one need not be one in every way, but only in that of their substance. But the universal form of man is *not* one in number. It is only one in form. And men are one in form. The one form of man *may*, therefore, be their substance.'¹⁵

If Albritton were right, then the initial argument in 999^b20-3 could not be used to support my interpretation of Z 13, 1038^b8-15, but, on the contrary, might raise doubts about that interpretation. I take him to be saying that Aristotle's response to the aporia in 999^b20-3 might have been this: the difficulty is not resolved by positing individual substantial forms. Rather, the initial argument is ambiguous, and is rendered harmless once it is disambiguated. The argument is,

- (1) Those things whose substance is one are $\sigma\sigma\sigma$.
 - (2) The substance of men is the species man.
- Therefore, all men are one.

The sense of the argument depends on what is meant by 'one'. If 'one' means 'one in number', then the conclusion is absurd. But on this reading, the first premiss is false since it presupposes that the substance of, say, men is one in number. But the substance of men is the species man, and this is not one in number but only one in form. So on this reading the argument can be rejected since it rests on a false premiss. On the other hand, if 'one' means 'one in form', then the first premiss is true, but also the conclusion is true, not absurd. So on this reading the argument does nothing towards showing the falsity of the second premiss.

Even on Albritton's interpretation, the argument would deal with species and individuals rather than genera and species. However, if his account were accepted, it might be thought that 1038^b8-15 should be understood in the same way. And since, on Albritton's account, 999^b20-3 does not aim to refute the view that species are substances, this might lead to a position similar to that of Michael

¹⁴ 'Forms of Particular Substances in Aristotle's *Metaphysics*', op. cit., p. 705.

¹⁵ *Ibid.*

one side of an aporia. Thus, for example, the second argument against the thesis that the principles of things are one in form only is (999^b26-7): 'And how will there be knowledge if there is not a one over many?' And it is certain that Aristotle does not accept this argument for making the principles of things one in number (1040^b27-30, 1086^b5-7; *An. Post.* 77^a5-9, 85^b18-22).¹⁸

In order to justify the ascription of the argument in question to Aristotle we must see what his solution to the aporia is. I have quoted his arguments against the suggestion that the principles of things are one in form. Aristotle next discusses the suggestion that the principles are one in number (999^b27-1000^a4):

But if each of the principles is one in number, and it is not as with perceptible things where there are different principles for different things (e.g. since this syllable is the same in form, these principles are also the same in form; for these will be different in number) — but if it is not like this but the principles of things are one in number, there will not be anything else besides the elements; for the one in number does not differ from the particular . . . Just as, if the elements of sound were limited in number, all letters would necessarily be just as many as the elements, since there would not be two or more letters the same in form.

The result of the assumption that the principles are one in number is that no-thing will exist besides the principles. And this is absurd. Now here it is very important to see exactly what hypothesis it is which leads to this result. It is not simply the hypothesis that the principles are one in number, but this plus the assumption that they are unique in their kind. This is explained by Aristotle with the analogy of syllables and letters. The consequence that nothing exists besides the principles does *not* follow if the principles are conceived to be one in number but in such a way that there are many individual principles which are the same in kind. In the same way there can be many 'A's which are one in number and the same in kind and in this way there is no difficulty in their constituting many 'BA's. Whereas if there is but one 'A', clearly not more than one 'A' can exist (cf. 1060^b29-30).

So both the hypothesis that the principles are one in kind only and the hypothesis that the principles are one in number only lead to unacceptable results.¹⁹

¹⁸ On Ross's account 999^b24-7 presents only one argument against the suggestion that the principles of things are one in form: 'The argument may be paraphrased thus: If a principle discovered by analysis of one thing can only be one in kind with a principle discovered by analysis of another thing, no two things will ever have a numerically identical principle; but if there is not this, if there is not a *ἓν ἐν τῷ πᾶσι* (Aristotle's *Metaphysics*, op. cit. i. 242). That this is not correct can be seen from the fact that Ross presupposes that things are one in number, whereas Aristotle says that this is ruled out by the hypothesis that the principles are one in form only. Furthermore, the conclusion that nothing is one in number is absurd, and is an absurdity distinct from the conclusion that knowledge will not be possible. Thus in M 10, the conclusion that all things are universals is con-

sidered absurd in itself (1086^b37-1087^a2, 21-4) and there it is certain that no epistemological considerations are in question.

Ernst Tugendhat does no better. He glosses 999 24-7: 'Sind die eidetischen ἀρχαὶ hingegeben ἐῶναι ἓν, so sind sie als ἀρχαὶ des Einzelnen selbst je einzelnen, aber untereinander gleich. Doch "wie ist dann ein Wissen möglich" fragt Aristoteles 999^b27 "wenn es nicht ein Eines über den Vielen (ἓν ἐν τῷ πᾶσι) gibt?" (TI KAT A TINON) (Freiburg, 1968), pp. 103-4). Like Ross, Tugendhat fails to see that there are two difficulties here, not one. Nor does Aristotle's hypothesis that the principles are one in form allow that they are one in number. What Aristotle says is that if the principles are one in form οὐδὲν ἕσται ἀποθῆναι ἓν.

¹⁹ Thus Joseph Owens (*The Doctrine of Being in the Aristotelian Metaphysics* (Toronto, 1963), p. 245) is mistaken in saying that the point of the aporia is that

Woods according to which 1038^b8-15 too is not meant to refute the view that species are substances, but merely 'forces the Platonist to formulate his position more carefully'.¹⁶ So Albritton's interpretation of 999^b20-3 must be refuted if my own interpretation of 1038^b8-15 is not to be thrown in doubt.

There is, in fact, sufficient evidence to show that Albritton's alternative escape from the dilemma of 999^b20-3 could not have been Aristotle's. In the first place, at 1040^b17 Aristotle tells us that 'the substance of one thing is one', and, as we have seen, the rest of the sentence shows that this means that the substance of something which is one in number is itself one in number (cf. 1016^b1-3, 8-9, 1052^a33-4). Hence, the substance of Socrates, who is one in number, must itself be one in number. Since the universal species man is not one in number, it cannot be the substance of Socrates or any other man. This position is in line with Aristotle's view that the principles of individuals must themselves be individuals (1071^a20-4, *Phys.* 195^b26). And an example of this assumption occurs in Z 14 (1039^a30-2): 'If then there is a man in himself who is a "this" and exists apart, those things from which he is composed, for example animal and two-footed, must also be "thises" and separable (χωριστά) and substances' (cf. 1040^a18-19). So while Albritton's alternative solution to the dilemma of 999^b20-3 may indeed be an alternative solution, it cannot be Aristotle's solution.

A further difficulty with Albritton's suggested escape from the dilemma of 999^b20-3 is that Aristotle argues against it in the immediately following passage (999^b24-6): 'Again, one might be puzzled about the principles for the following reason. If they are one in form, nothing will be one in number, not even the one itself and being itself. I take the argument to be that if the principles of things are one in form *only*, then nothing will be one in number. And since this is absurd, the principles of things cannot be one in form only. This interpretation is supported by 1086^b37-1087^a4. In both passages Aristotle is considering the same problem: are the principles of things universals (i.e. one in form only (cf. 1052^a29-36) or particulars (i.e. one in number only)? 999^b24-6 says that the consequence of the assumption that the principles are one in form only is that nothing will be one in number. In 1086^b37-1087^a4 Aristotle says: 'But if the principles are universal, either the substances composed from them will also be universal, or what is not substance will be prior to substance; for the universal is not substance, but the element or principle is universal, and the element or principle is prior to those things of which it is the principle or element'.¹⁷ The part of the sentence following the semicolon states the premisses justifying the second alternative conclusion of the hypothesis that the principles are universals (cf. 1038^b23-9, 1070^b2-4, 1088^b3-4, *Phys.* 189^a33-4), but it is the first alternative that is relevant here. It rests on the assumption that if the principles are universals, then that of which they are the principles must also be universals. And so, if all the principles are universals, then all the things of which they are the substance will also be universal, i.e. nothing will be one in number. Here, as in 999^b24-6, Aristotle treats this conclusion as evidently absurd.

We are not yet justified in taking the argument in 999^b24-6 as expressing Aristotle's own view since it occurs in the statement of the arguments supporting

¹⁶ Problems in *Metaphysics* Z, Chapter 13', op. cit., p. 235.

¹⁷ Ross's text. Jaeger brackets ἡ καὶ αὖ ἐκ τοῦ ἓν οὐδὲν καθόλου and does not accept Ross's addition of ἡ after καθόλου

in 1087^a1. But even if he is right, that the resulting sentence, when left intact, expresses a view that Aristotle would assent to is shown by 1087^a21-2 (quoted below, p. 83).

Aristotle's own solution is not hard to divine. If the principles are one in number and form in such a way that there are many principles the same in form, none of the problems with the other views arises. The first problem with the view that the principles are one in form only was that as a result nothing can be one in number. Of course if the principles are one in number, this difficulty disappears. The second problem with this view was that it is hard to see how knowledge is possible 'if there is not a one over many.' I have already pointed out that Aristotle rejects this argument.²⁰ And finally the problem with the thesis that the principles are one in number vanishes if we allow that there may be many principles of the same form.

1002^b12-32 proves both that this is Aristotle's solution to the aporia and, if it needs proof, that the view that the principles are one in number in such a way as to be unique in kind is the Platonic theory of Forms. There, Aristotle explains that one reason why the Forms were posited was that, since sensible objects and the intermediates have only specific unity, if Forms were not posited there would be no definite number of principles. And he refers back to 999^b27-1000^a4 when he says (1002^b30-2): 'But if we posit the Forms and that they are one in number but not in form, we have mentioned the impossibilities that necessarily result' (cf. 1039^a33-b4, 9, 1040^a8-9, 26, *Top.* 143^b29-32). Again, the analogy of letters is used to explain what the situation will be if one does not accept, as of course Aristotle does not, the theory of Forms: there will be an unlimited number of principles of the same form (1002^b17-25).

Finally, M 10 states his solution to the aporia.²¹ Again using the analogy of

²⁰ the two types of unity seem incompatible in the same principles'. Significantly, he quotes 999^b24-1000^a4 but omits b28-31 where Aristotle points out precisely that the difficulty in the thesis that the principles are one in number arises just in case the principles are one in number *only* and not also one in form. Similarly, the thesis that the principles are one in form must be the thesis that the principles are one in form *only* since otherwise the conclusion that οὐθέν ἔσται ἀριθμῶν would too obviously fail to follow. And as I try to show below, Aristotle does accept this argument.

Owens also misdescribes the arguments of the aporia. On 999^b24-7 he says: 'If the unity in the principles sought by Wisdom is specific, nothing will be singular, not even the highest so-called genera, Being and the "one"'. But then there can be no scientific knowledge; for scientific knowledge requires a specific unity in singulars' (246). What Aristotle says is that if nothing is one in number, *καὶ τὸ ἐπίστασθαι πῶς ἔσται, εἰ μὴ τὴ ἔν ἐν ἐπιπάρτων*. Clearly it is the *ἐν ἐν ἐπιπάρτων* which is assumed must be *ἐν ἀριθμῶν* if there is to be knowledge. (He is assuming the Platonic view that the object of knowledge must be one in number. Cf. 1002^b12-17, 22-5, and Cherniss, *ACPA*, op. cit., pp. 221-2). He is not making the

point that each of *πάρτων* must be ο \approx ιο num. er.

Owens continues: 'On the other hand, if each of the principles is numerically one and so not an instance of a species, there will be nothing apart from it. A species in this case would be a principle *prior* to the first principles. No scientific knowledge of such individual principles would be possible' (ibid.). In fact, in the passage in question (999^b27-1000^a4) Aristotle neither says nor implies anything about species or knowledge. And of course it is not the thesis under examination - that the principles are one in number - which in 999^b24-1000^a4 is said to lead to the conclusion that knowledge is not possible but rather the first hypothesis that the principles are one in form.

²¹ Cf. *Physics* 187^b10-11: *πῶν δ' ἀριθμῶν οὐδὲν καὶ κατὰ πλήθος καὶ κατ' εἶδος ἀδύνατον εἶδέναι τὰ ἐκ τούτων* (cf. 996^a1, 1002^b17-19, 22-5, *Phys.* 189^a12-13). Aristotle's solution to the aporia is that although unlimited in number, the principles are not unlimited in kind.

²² Aristotle begins the chapter by stating that the aporia to be discussed has already been pointed out in B. A comparison of 999^b27-33 with 1086^b20-32 should suffice to show that 999^b24-1000^a4 is at least part of what he is referring to in B. (Cf.

syllables and letters, he repeats the argument that if the principles are one in number after the fashion of Platonic Forms, nothing will exist besides the principles (1086^b20-32). Whereas if the principles are universals, either the substances composed from them will be universals or non-substance will be prior to substance (1086^b37-1087^a4). He then states his own view, which by this time should be no surprise (1087^a4-10):

These all follow reasonably when they make the Ideas from elements and apart from the substances [and Ideas] having the same form they claim that there is a single separate entity. But if just as in the case of the elements of speech nothing prevents there being many a's and b's and no a itself or b itself apart from the many, as far as this goes there will be indefinitely many similar syllables.²²

Aristotle's solution to the aporia by itself constitutes strong evidence that substantial forms are individuals. But our ulterior motive for going through the aporia was to see if, from an examination of it, we could determine Aristotle's attitude to the argument in 999^b24-6 against the suggestion that the principles are one in form only. I think we can now see that the argument is his own. The argument assumes that if the principles were one in form only, i.e. universal, then that of which they are the principles could not be one in number, i.e. would be universals. Now the same premise is at work at 1086^b37-1087^a4 in the argument against the view that the principles are universals. And this argument must be Aristotle's own since it is the only argument advanced in M 10 against the suggestion that the principles are universals. But if the argument is his, then so are its premisses, and that premiss is explicitly stated near the end of the chapter in support of his position (1087^a21-2): 'If the principles must be universal, what is derived from them must also be universal.'

I conclude that Albritton's suggestion that the substance of men might be one only in that it is one in form cannot be correct. Rather, it is against precisely such a view that Aristotle argues in the *Metaphysics*.

Aristotle's solution to the aporia in 999^b24-1000^a4 supports the explanation given above of 999^b20-3. The alternatives presented in the former are: either the principles are one in form and are not one in number, or the principles are one in number and not one in form. It is the claim that the principles are both, in the manner explained, which solves the aporia. In 999^b20-3 again there are only two alternatives: either *ἡ οὐσία μὴ πάρτων* or it is *πολλὰ καὶ διαφορὰ*. And again the solution is the rejection of the tacit assumption that if substances are one in number, they cannot also be one in form.

Michael Woods has also attempted to avoid the conclusion that Z 13 is arguing that no universal is substance. He begins by saying,

Aristotle's answer to the question 'What is οὐσία?' is that what is οὐσία in the fullest sense is the εἶδος or τὸ ἦν εἶναι of something. . . . Thus Aristotle is presumably committed to holding

Robinson, *La Théorie platonicienne*, op. cit., p. 529 n. 478). There is no warrant for

Ross's claim that the question in 999^b24-1000^a4 is 'the same question' as that raised in Z 14 (*Aristotle's Metaphysics*, op. cit., i. 242). Nor, as he claims, is A 4 or 5 relevant since there the question is whether the principles are the same by analogy and this is distinct from the question whether they are the same in number or the same in form.
²² Syllables are used as analogues of substances, and the *σροχέα* of syllables as analogues of the principles of substances. The view expressed in this passage is presupposed in 1074^a31-3. Cf. 1071^a23, *De Caelo* 278^a18-20.

that the form of the species *man* is a substance. But this seems incompatible with the doctrine that nothing *καθόλου* can be substance: for *man* is surely predicated universally of Socrates, Callias, etc. How can the species *man* be an *οὐσία*, if any *οὐσία* has to belong *ὡς ἕσται* to that of which it is the *οὐσία*?²³

Woods's proposed solution to the problem is that Aristotle wishes to deny only that *τὰ καθόλου λεγόμενα* are substances, i.e. universals that are not species, while *τὰ καθόλου* which are not *τὰ καθόλου λεγόμενα* are substances, viz. species.

It seems clear that this distinction between *τὰ καθόλου* and *τὰ καθόλου λεγόμενα* is wholly illusory. First, Z 13 itself appears to contradict Woods's suggestion. Aristotle's second argument against the suggestion that the universal is substance is (1038^b 15-16): *ἐπι οὐσία λέγεται τὸ μὴ καθ' ὑποκειμένον, τὸ δὲ καθόλου καθ' ὑποκειμένον τῶν λέγεται αἰεί*. Woods says that this has 'to be regarded, on the view I am defending, as claiming, not that everything universal is said of *ὑποκειμένον* τῖ but that everything predicated universally is said of *ὑποκειμένον* τῖ'.²⁴ This is a feeble defence. Even if that is a possible reading of the sentence it is clearly highly unlikely. Secondly, Aristotle uses *τὸ καθόλου* and *τὸ καθόλου λεγόμενον* interchangeably even in chapter 13 in a way which would be inexplicable if Aristotle attached the fundamental importance to the distinction which Woods claims. Thus at 1038^b 6-9 we read: *δοκεῖ δὲ καὶ τὸ καθόλου αἰτίων τισιν εἶναι ἀλλοτῆτα, καὶ εἶναι ἀρχὴ τὸ καθόλου διὰ ἐπέλωμεν περὶ πάντων· εὐκοε γὰρ ἀδύνατον εἶναι οὐσίαν εἶναι οὐσίαν τῶν καθόλου λεγόμενων*. According to Woods, Aristotle says here, 'Let us discuss x' and then proceeds to discuss y. Similarly, when Aristotle denies that universals are substances he uses *τὸ καθόλου* and *τὸ καθόλου λεγόμενον* interchangeably (*τὸ καθόλου λεγόμενον* — 1038^b 8-9, 1041^a 4; *τὸ καθόλου* — 1003^a 8, 1042^a 21, 1053^b 16, 1062^b 21, 1087^a 2). Furthermore, Aristotle defines a universal as what can belong to, and therefore be predicated of, many particulars (99^b 34-1000^a 1; *De Int.* 17^a 38-40), expressly licenses such predications,²⁵ and makes them himself.²⁶

I wish to conclude by pointing out that in denying that any of Aristotle's substances are universals I do not mean to deny that some Aristotelian forms are universals. Some forms are universals but none of these universal forms are substantial. Only individual forms are substances. That Aristotle did draw this distinction between individual forms and universal non-substantial forms is shown by a passage in M 10. In that chapter, Aristotle is defending the view that the principles of substances (1086^b 20), which are *χωριστά* and one in number (1086^b 16-19), are themselves *χωριστά* and one in number (1087^a 7-25), but in such a way that there are many principles which are the same in kind (1087^a 7-10; cf. 99^b 28-31). It is clear that the principles whose individuality Aristotle is defending are forms. Prior to offering his defence, Aristotle develops aporiai which arise for the view that the principles are particulars and for the

²³ 'Problems in *Metaphysics* Z, Chapter 13', op. cit., p. 230.
²⁴ *Ibid.*, p. 230.
²⁵ 99^b 29-31, 998^b 15-16, 999^a 4-6, 15, 27, 29-30, 1087^a 21; E. N. 1135^a 29, 1147 36; *Top.* 103^b 29-30, 125^b 39; *An. Pr.* 43^a 25-32; *An. Post.* 73^a 30; *De Int.* 21^a 2-4-5; *Top.* 121^b 3-4, 11-14; *An. Post.* 83^a 24-5, 84; *De Int.* 20^b 34, 37-8, 21^a 18-20, 61; *Parva Nat.* 467^b 21-2.
²⁶ 1006^a 33, 619-20, 21-2, 29, 33-4.

view that the principles are universals. However, the aporiai for both positions present difficulties for the Platonic view that the principles of substances are universals separate from sensible substances, but also one in number and thus unique in their kind. So that after developing the aporiai Aristotle says (1087^a 4-7): 'These all follow reasonably when they make the Ideas from elements and apart from *the substances* [and Ideas] *having the same form* (*τὸ αὐτὸ εἶδος*),²⁷ and claim that there is a single separate entity.' Difficulties arise, Aristotle says, when apart from the substances having the same form, the Platonists separate a single form. Clearly 'the same form' (*τὸ αὐτὸ εἶδος*) here does not refer to a Platonic Form since it is explicitly distinguished from such a Form, but rather to the form which is shared by substances that are the same in kind (cf. 1071^a 12-13). And since it is common to many particular substances it is a universal (*De Part. Anim.* 644^a 27-8). It is also clear that Aristotle does not consider this universal form to be a substance, since two lines earlier he has said 'the universal is not substance' in support of the view, which is his own, that the principles of substances cannot be universals. So it should be evident that Aristotle clearly distinguishes this universal form which is not a substance from the substantial forms which are the principles of the substances which have that universal in common.²⁸

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There appears to be no reason to accept Ps-Alexander's reading *τὸ ἀνρθεῖδος*. Cf. Ross, *Aristotle's Metaphysics*, op. cit. ii, ad. loc.: Robin, *La Théorie platonicienne*, op. cit., p. 531 n. 480.
²⁷ Another passage where the difference between the universal form and the individual form emerges is 1074^a 31-5: 'For if there are many heavens as there are many men, the principle of each will be one in form but many in number. But those things which are many in number have matter (for one and the same definition is of many, but Socrates is one).' There is one definition of the universal, but the principles of individual men are themselves individuals. This is what Aristotle argues in A 5 (1070^a 20-1): *ἀρχὴ γὰρ τὸ καθ' ἑκάστων τῶν καθ' ἑκάστων*.
 I would like to thank Professor David Furley, Professor G. E. L. Owen, and Professor Michael Frede for having read and commented on earlier drafts of this paper.

Form, Substance and Universals: A Dilemma', *Phronesis*, 16 (1971), 174-6). Commenting on a passage from A 5 (1071^a 27-9; *καὶ τῶν <οὐσιῶν> ἐν ταῦτῳ εἶδει <τὰ αἴτια> ἔρεβρα, οὐκ εἶδει ἀλλ' ὄντι τῶν καθ' ἑκάστων ἀλλο, ἢ τε σὴ ἕλη καὶ τὸ εἶδος καὶ τὸ κῆσαν καὶ ἡ ἐμή, τῶ καθόλου δὲ λόγῳ ταῦτα*) Lesher says: 'Aristotle explicitly says here that the universal definition of each of our forms is the same . . . Thus Albritton cannot conclude from this that the form is not a universal. . . . The definition defines the universal form, but it doesn't follow that your form and mine are not numerically different. As Aristotle says (1016^b 36): *ὅσα ἀριθμῶ <ἐν> καὶ εἶδει ἐν, ὅσα δ' εἶδει οὐ πάντα ἀριθμῶ*. For example, your form and mine.
 I would like to thank Professor David Furley, Professor G. E. L. Owen, and Professor Michael Frede for having read and commented on earlier drafts of this paper.

James Lesher's contention that Aristotle's substantial forms are universals rests on his confusion of the universal form with the individual substantial form ('Aristotle on