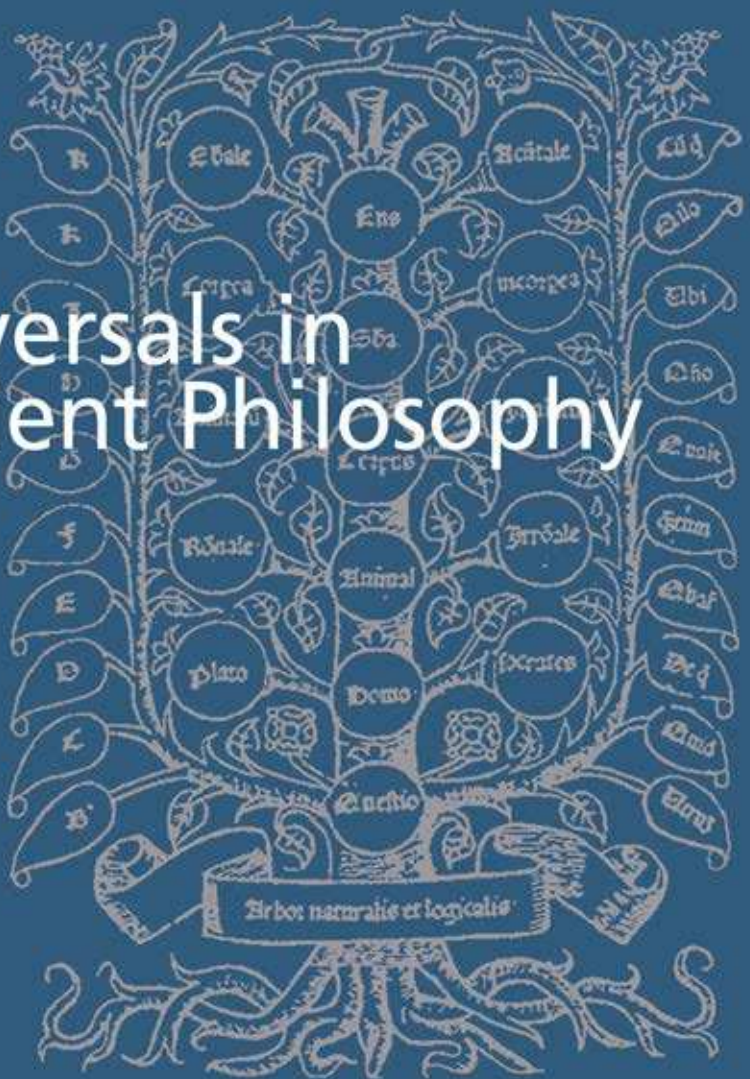
Universals in Ancient Philosophy



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SEMINARI E CONVEGNI

Universals in Ancient Philosophy

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Universals in Aristotle's *Metaphysics*

1. *An overview of the argument*

The question which I shall try to answer in this paper is very simple: is there any room for universal entities in Aristotle's *Metaphysics*? Just like the question, also my answer will be straightforward: yes, Aristotle admits of universals in his late ontology. Roughly speaking, Aristotle's realism about universals comes down to the view that while the ordinary objects of our everyday experience are particulars, their forms are universals. Forms are universals because they are repeatable entities, i.e. entities that can exist as one and the same in different particulars: all individuals belonging to the same species have the same form, which exists as one and the same in different parcels of matter. Thus, although Aristotle denies that there are universal independent *objects*, he also insists that one of the *ontological constituents* of particular objects, i.e. their form, is universal. Since my defence of this interpretation will take us through some lengthy analysis of textual evidence and some detailed discussion of other interpretative proposals, it is probably better if I present the main line of my argument right from the start and indicate the crucial distinctions it hinges upon. This will also help me to show how my defence of the view that forms are universal differs from other, well-charted routes to the same conclusion.

In the *Metaphysics*, the problem of universals chiefly concerns the existence of substantial universals, i.e. of universals in the category of substance. As is well known, in the *Categories* Aristotle admits of two different types of universal, that is, substantial and accidental universals[1]. Substantial universals are the kinds to which particular material objects belong, i.e. the species and genera of particular material objects such as, for instance, the species *man* and the genus *animal*. Thus, the instances of substantial universals are the particular objects of our eve-

[1] Cf. Aristotle, *Cat*., 2, 1a20-22 and 1a29-b3.

ryday experience such as human beings, horses, trees etc. Accidental universals, by contrast, are universal properties such as *paleness*, *hotness* etc. According to Aristotle, the instances of accidental universals are not particular objects themselves but rather property-instances existing in and distinct from the particular objects: the instance of the universal property *paleness* is not, say, Socrates but rather a particular instance of paleness existing in Socrates – Socrates' paleness as opposed, for instance, to Plato's[2]. In the *Metaphysics*, Aristotle completely disregards the problem of the ontological status of accidental universals. It is not clear whether he does so because he no longer believes in the existence of accidental universals or simply because he is not interested in discussing their status. Be that as it may, what is clear is that the question as to whether there are any universal entities is discussed within the more general issue of substantiality: if there are universals, they must be substances in some sense or other. Thus, it is in the so-called central books of the *Metaphysics*, the books that deal with the notion of substance, that we find Aristotle's final answer to the problem of universals.

The readers of the *Categories* might think that species and genera are good candidates for being substantial universals also within the framework of the *Metaphysics*. After all, in the *Categories* Aristotle describes species and genera as «secondary substances» (as opposed to their particular instances, which are «primary substances»)[3] and never denies in the *Metaphysics* that particular objects belong to species and genera. Thus – the suggestion goes – the species and genera of particular objects are the substantial universals we are looking for. Of course, part of the point of characterizing species and genera as secondary substances is to insist that they depend for their existence on their particular instances, that is, on the particular objects that are their members. This, however, is perfectly compatible with species and genera being substantial universals. For all universals, according to Aristotle, depend upon their particular instances for their existence. However attractive this view may seem, it is not Aristotle's view in the *Meta-*

[2] I follow here the traditional interpretation (as presented for instance in Ackrill 1963), according to which «the things that *are in* something else but are not *said of* something else» (Arist., *Cat*., 2, 1a23-29) are particular property-instances. For a different view, according to which such things are not particulars, but universals of minimal generality see Owen 1965; Frede M. 1987a.

[3] Cf. Arist., *Cat*., 5, 2a11-19.

physics. In a couple of passages in Book Z, Aristotle explicitly says that species and genera are not substances and sharply distinguishes them from the form of particular objects, which is, instead, a substantial principle[4]. The reason why species and genera are no longer regarded as substances, not even as secondary substances, is that they are just particular objects taken generally or universally. Species and genera, in other words, are nothing but generalizations from particular objects: the species *man* is nothing but a particular man taken generally or universally. This suggests that, in the *Metaphysics*, species and genera are not extra-mental entities of some sort but rather concepts by which we think of particular objects in general or universally.

From a larger perspective, Aristotle's motivations for not considering species and genera as good candidates for being substantial universals have to do with the notion of *explanation*. Among other things, species and genera were introduced in the *Categories* to explain the essential properties and the typical behaviour of particular objects. Particular objects – Aristotle suggests in the *Categories* – have the essential properties they do and behave in the way they do because they belong to certain kinds. It is because he is a human being and an animal that Socrates has certain essential properties and a certain typical behaviour. In the *Metaphysics*, however, Aristotle profoundly revises his understanding of the nature of particular objects. In the new framework, particular substances are no longer regarded as primitive and unanalysable wholes, but rather as composites of two fundamental constituents, matter and form. This change of perspective also affects the way in which we should explain their essential properties and their typical behaviour. If particular objects are composites of matter and form we can no longer say that they have certain essential properties and behave in a certain typical way because they belong to a certain kind. For also their belonging to a certain kind can no longer be regarded as a primitive fact: particular objects belong to certain kinds because they have a certain form, which endows a certain parcel of matter with all the functions characteristic of the kinds particular objects belong to. Thus, in the final analysis, particular objects have the essential properties they do and behave in the way they do because they possess a characteristic form and not because they belong to a certain kind. If this is true, species and genera can be dispensed with altogether: their services are no longer required.

[4] Cf. Arist., *Met*., Z 10, 1035b27-31 and Z 11, 1037a5-10.

In the light of the foregoing considerations, the crucial question for any interpreter of the *Metaphysics* becomes the following: are Aristotle's forms particular or universal? If forms are particular, Aristotle can explain all facts he needs to explain about material objects without having recourse to universals; if forms are universal, by contrast, forms simply replace species and genera in the role of substantial universals the *Categories* assigned to them. It is important to make it clear that by 'particular' I mean primitively or underivatively particular: if the form of a particular object is particular in virtue of something else, for instance in virtue of being the form of a particular object or in virtue of existing in a given parcel of matter, then it is not particular, but rather universal: if something is made particular by something else, it is universal in itself and not particular.

To appreciate how difficult it is to settle the question of whether forms are particular or universal, suffice it to recall that in the central books of the *Metaphysics* Aristotle seems to be committed to three different claims, which form an inconsistent set:

C1) Form is substance
C2) Form is universal
C3) No universal is substance.

No one seriously calls C1) into question. In several passages Aristotle describes form as the substance of sensible material objects[5] and in some of them he goes as far as to call it «primary substance»[6]. C3) is the claim Aristotle explicitly argues for in *Met*. Z 13. C2) is not expressed in so many words by Aristotle but is strongly suggested by much of what he says in his analysis of substance. Predictably, supporters of particular forms accept C3) as it stands and try to show that Aristotle is not really committed to C2). Typically, they insist that other pieces of evidence suggest that forms are particular and so the texts that seem to support C2) can in fact be explained away. Supporters of universal forms, by contrast, holds on to C2) and devote their efforts to showing that the conclusion of the argument in *Met*. Z 13, i.e. that no universal is substance, does not concern forms, but other kinds of universal, i.e. species and genera. If, despite appearances to the contrary, the argu-

[5] Cf. Arist., *Met*., Z 7, 1032b1-2; Z 10, 1035b15-17 and 1035b32; Z 17, 1041b7-9 and b27-28.

[6] Cf. Arist., *Met*., Z 7, 1032b1-2; Z 11, 1037a28-29.

ment in *Met*. Z 13 only establishes that *some* universals are not substances, Aristotle's forms can be both universals and substances, after all.

Although many arguments have been advanced by both parties in the controversy, my view is that the decisive text is *Met*., Z 8, 1034a5-8. In this passage, Aristotle explicitly says that two different human beings, Socrates and Callias, have the same form and differ on account of the different parcels of matter in which their common form exists. Hence, an individual human being has two metaphysical constituents: a common or universal constituent, form, which is responsible for the essential properties an individual human being shares with all other human beings, and a particular constituent, matter, which is responsible for the individuation of the particular human being. Socrates and Callias are clearly just examples and Aristotle's account in *Met*. Z 8 easily extends from the case of human beings to all other kinds of sensible substance. The conclusion, therefore, must be that forms are universal and are made particular by the different parcels of matter in which they happen to exist.

Given my general understanding of the nature of Aristotelian forms, I must explain away *Met*. Z 13's argument to the effect that no universal is substance: how can forms be substantial universals, if Aristotle insists so much that no universal can possibly be substance? In the vast literature on Aristotle's *Metaphysics* we find two main strategies to deal with this difficulty. Some scholars contend that *Met*. Z 13's arguments do not concern forms but only species and genera because forms are not universal in the same sense as species and genera. Forms are not particular; however, they are not universal in exactly the same sense as species and genera, either. Some other scholars, by contrast, believe that forms are universal in exactly the same sense as species and genera. Therefore, their strategy to deal with *Met*. Z 13 is different: they insist that Aristotle's claim in the chapter should not be read as it sounds, but should rather be considerably weakened. What Aristotle means is not that no universal is substance but rather that no universal is the substance of the things of which it is predicated. Thus interpreted, this claim rules it out that species and genera be the substance of particular material objects, for species and genera *are* predicated of particular material objects. The claim, however, does not prevent forms from being the substance of particular material objects, because forms are *not* predicated of particular material objects.

Although these two strategies contain valuable intuitions to which I shall try to do justice in the present paper, I believe that both of them,

as they stand, are wrong. Against the first strategy, I shall argue that forms are universal in the same sense as species and genera, i.e. by existing identically in different things. Against the second strategy, by contrast, I shall argue that there is no textual justification for weakening Aristotle's claim in *Met*. Z 13 in the way some scholars invite us to do and that we instead have good reasons to take it as it stands. Although I agree with defenders of both strategies that *Met*. Z 13's arguments do not concern forms but only species and genera, my reason for believing so is different from those commonly suggested. In brief, my view is the following. Although Aristotle may occasionally describe forms as universal, forms are not the things he would typically refer to as «the universals». Forms, therefore, can hardly be the things he has in mind in *Met*. Z 13 when he argues that no universal is substance. It should not be forgotten that one of the objectives of the section in which *Met*. Z 13 belongs, i.e. *Met*. Z 13-16, is to demolish Plato's conception of substance. As Aristotle sees things, one of the main claims of Platonists consists in identifying substantiality with generality or universality. On this view, the substances of particular sensible objects and so the real and only substances are the kinds to which particular objects belong, the species and genera of particular objects. Aristotle's main contention in *Met*. Z 13-16, therefore, is that the things that Platonists regard as primary substances, i.e. species and genera, are not substances and in some sense do not exist at all. To put things slightly differently, my suggestion is that when Aristotle uses expressions such as «the universals», «the things that are universally predicated» or «the things that are said in common» in *Met*. Z 13-16, he wishes to refer to the universals *par excellence*, i.e. species and genera, the entities that within the philosophical tradition to which he himself somehow belongs are often identified with the substances of sensible things, regarded as the only real substances. Such entities, Aristotle wants to say, are not substances at all. Making this claim does not exclude that in the different conceptual framework of the *Metaphysics* – a hylomorphic framework – there may be entities, i.e. forms, which are universal. For forms are not the kind of things that Aristotle has in mind when he rejects the claim that universals are substances. Forms in fact are not the kinds to which individual objects belong, but rather internal principles conferring structure and organization upon individual objects. More particularly, while species and genera are posterior to particular objects, forms are prior to them by being their substantial principles. In order to see that species and genera are what Aristotle has typically in mind when he speaks of universals it is crucial to take a look at his

treatment of the question of universality outside the central books. In one of Book B's puzzles (Puzzle 12) as well as in the parallel text in *Met*. M 10, Aristotle raises the question as to whether the principles of substances are universal or particular. From the context it clearly emerges that the first horn of the *aporia* is nothing but the claim that the kinds to which particular sensible substances belong, i.e. species and genera, are their principles. And it is precisely this claim that Aristotle is evaluating in *Met*. Z when he discusses the issue of whether universals are substances. Aristotle believes that the claim that species and genera are the principles of particular sensible objects is completely untenable if species and genera are taken to be Platonic Forms. Ultimately, however, he comes to the conclusion that species and genera cannot be the substantial principles of particular objects even if they are not Platonic Forms, but rather Aristotelian, *Categories*-style universals[7].

My argument comes in four main steps. In Section 2, I shall examine Aristotle's treatment of the problem of universals in *Met*. B 6 and *Met*. M 10, where Aristotle raises the question as to whether the principles of substances are universal or particular. My main contention will be that the view Aristotle is considering in the first horn of the *aporia* is

[7] On presenting a general reconstruction of Aristotle's view on universals in the *Metaphysics*, it is incumbent upon me to acknowledge the many intellectual debts I have incurred when shaping my ideas. In presenting form as an ontological constituent of particular objects I have been strongly influenced by Loux 2006b; Loux 2009. I also agree with Loux 1991 concerning the fundamental reasons why Aristotle plays down the role of substantial kinds in the *Metaphysics*, although I suspect I am pushing Loux's line of argument to the extreme when I say that species and genera are not extra-mental entities. My insistence, on the contrary, on the explanatory criterion of substantiality is the result of my reconsideration of Frede M., Patzig 1988. I believe that any attempt to defend the universality of form should take into account their contention that Aristotle's claim that form is primary substance should be taken as it stands. Frede M. 1987a; Frede M. 1987b have contributed much to my understanding of what it means for a form to be particular or universal. I am also indebted to Michael Frede in many other ways that far exceed what is contained in his papers. I also wish to thank Mauro Mariani for the many occasions we had over the years to discuss Aristotle's doctrine of substance and Francesco Del Punta for thinking that *Met*. Z was worthwhile. Finally, my gratitude goes to all the students in Pisa and Munich who have attended my seminars on *Met*. Z over the last few years. Their questions and doubts have much contributed to making my views more understandable to both others and myself.

whether the substantial principles of substances are the kinds to which particular objects belong, i.e. species and genera. From Section 3 onwards, I shall turn to the central books of the *Metaphysics* and argue that Aristotle is still thinking of species and genera when he evaluates the substantiality of universals. My focus in Section 3 will be the way in which Aristotle's hylomorphic treatment of material objects affects his attitude towards the substantiality of species and genera. My analysis will centre, therefore, on the distinction between form, which is substance, and species and genera, which, instead, are not substances. In Section 4 I shall review some of the most popular arguments in favour of either the universality or the particularity of forms and suggest that many of them are not decisive. In the same context, I shall analyse Aristotle's discussion of individuation in *Met*. Z 8, which is, in my opinion, the only uncontroversial text in favour of the view that forms are universal. Finally, in Section 5 I shall present my general reading of the argument in *Met*. Z 13 that no universal is substance, and try to explain why it should be understood as an argument concerning species and genera, but not forms. In doing so, I shall also assess the merits and demerits of the most common strategies adopted to explain away the argument in *Met*. Z 13.

2. *An Aristotelian puzzle: universals and particulars in* Met. *Book B*

Alan Code has called attention to the connection between Aristotle's discussion of substance in *Met*. Z and the *aporiae* in *Met*. B[8]. As is known, Aristotle in Book B presents a series of puzzles or *aporiae* (fourteen, according to Ross's traditional numbering)[9]. Presumably, the puzzles are intended to give a general overview of the main philosophical problems that need to be addressed within a metaphysical investigation. Judging from the text of the *Metaphysics* as it has come down to us, Aristotle did not follow his agenda very closely[10]. Some problems were simply abandoned or not directly answered; others got entirely rephrased in a larger and more sophisticated context. This is due in part to the fact that, in *Met*. B, the puzzles are stated rather

[8] Cf. Code 1984.

[9] Cf. Ross 1924, 1, pp. 221-5.

[10] See the balanced assessment of the connections among the different parts of the *Metaphysics* in Ross 1924, 1, pp. xiii-xxiv.

crudely: very often the solution to a puzzle does not consist in taking one or the other of the alternatives Aristotle presents us with, but rather in rethinking the very terms of the problem as well as the conceptual tools by which satisfactory solutions can be reached. Nonetheless, B's puzzles bear good testimony to Aristotle's philosophical concerns. Puzzle 12, for instance, raises the question as to whether principles are universal or particular. According to Code, Aristotle provides a solution to Puzzle 12 in *Met*. Z. Roughly speaking, the solution is that sensible substances are particulars, while some of their principles, i.e. their forms, are not. Code's intuition about the connection between the discussion of substance in *Met*. Z and Puzzle 12 is fundamentally right, but needs to be elaborated on in two different directions. Firstly, Puzzle 12 must be analysed together with some other relevant texts such as the analogous puzzle raised in *Met*. M 10 and *Met*. B's Puzzle 6. Secondly, more attention must be paid to the extent to which *Met*. Z's discussion does not confine itself to choosing one of the alternatives which Puzzle 12 offers but rethinks the terms of the problem in a broader setting. In this Section, I shall try to do both things. The main conclusion of my analysis will be that the universals Aristotle is thinking of in Book B are *Categories*-style substantial universals, i.e. the species and genera to which particular substances belong. No mention is made, by contrast, of form as opposed to matter. Thus, it should come as no surprise that the introduction of the hylomorphic model in the central books significantly alters the way in which the puzzle should be understood and answered. I shall start my analysis with the meaning of Puzzle 12.

Puzzle 12, whether principles are universal or particular, is stated in *Met*., B 1, 996a9-10 and briefly discussed in *Met.,* B 6, 1003a5-17. The same difficulty is discussed in some more detail and solved in *Met*. M 10, where Aristotle explicitly refers back to the list of puzzles in *Met*. B[11]. There are two main questions we need to answer in order to understand Puzzle 12: What does Aristotle mean by 'principles' in this instance? What does it mean for principles to be universal or particular? The answer to the first question is easy. As Aristotle makes it clear in *Met.* M 10, the principles he has in mind are the principles of substances[12]. Thus, the puzzle raised in *Met.* B 1 and *Met.* M 10 can be more explicitly reformulated as the question whether the principles of

[11] Cf. Arist., *Met*., M 10, 1086b14-16.

[12] Cf. Arist., *Met*., M 10, 1086b19-20 and 1086b37-1087a4.

substances are universal or particular. Since form is clearly one of the principles of sensible substances, i.e. of the familiar objects of our everyday experience, one might think that the puzzle Aristotle is trying to solve directly concerns the ontological status of form. An answer to the puzzle, one would imagine, should clarify once and for all whether the forms of sensible substances are particular or universal. It is very unlikely, however, that Aristotle has forms in mind when he tackles the puzzle in B 1 and M 10. This point becomes evident if we look at the arguments Aristotle puts forward against both horns of the dilemma.

Let me start with the claim that the principles of substances are universal. In his discussion of Puzzle 12 in *Met.* B 6 Aristotle argues that the principles of substances cannot be universal because universals are not substances and the principles of substances must be substances[13]. The reason why universals are not substances is that they do not signify a «this something» (τόδε τι) but a «such» (τοιόνδε), while substances must be «this something»[14]. The same contrast is drawn in the *Categories*, where Aristotle observes that species and genera do not signify a «this something» (τόδε τι) but rather a «certain kind of thing»[15]. Admittedly, in the *Categories*, Aristotle characterizes species and genera by means of the expression ποιόν τι instead of the term τοιόνδε, which becomes rather standard in the *Metaphysics*. But we have all the reasons to think that he may have the same contrast in mind in both contexts: species and genera do not point to countably distinct objects but rather express what kind of thing particular objects are[16]. In all likelihood, therefore, when Aristotle argues in *Met*. B 6 that universals cannot be the principles of substances he is in fact arguing that species and genera cannot be the principles of the particular substances that fall under them. This suggestion is borne out by the way Aristotle continues his argument in *Met*. B 6. Universals are not «this something» but rather

[13] Cf. Arist., *Met*., B 6, 1003a7-8.

[14] Cf. Arist., *Met*., B 6, 1003a8-9.

[15] Cf. Arist., *Cat*., 5, 3b10-21 (esp. 3b15-16).

[16] I have argued for the equivalence of the τοιόνδε-τόδε τι and ποιόν-τόδε τι contrasts in Galluzzo 2004, pp. 29-32. For this equivalence see Arist., *Met*., Z 13, 1038b23-29, 1038b34-1039a3 and 1039a14-16 (I shall be discussing these texts in Section 5.2 below) and Aristotle's discussion of the Third Man Argument in Arist., *SE*, 22, 178b39-179a10. See also Arist., *GC,* A 3, 317b22 and 319a12 where the term τοιόνδε replaces the more standard ποιόν as a general label for the category of quality. For more on the contrast between «this something» and «such» see Kung 1981.

«such». If one were to maintain – Aristotle goes on – that universals signify a «this something» and something one, then Socrates would be many animals, i.e. himself, the man that is in him and the animal that is in him[17]. I am not interested here in the force of Aristotle's argument. What is relevant is rather that Aristotle's examples of universals are standard examples of species and genera. Thus, the view Aristotle is arguing against must be that the species and genera of particular sensible substances are their principles. One final piece of evidence in favour of my suggestion comes from another of the puzzles in *Met*. B. In Puzzle 6 Aristotle raises the question as to whether the principles of substances are the kinds to which substances belong or their material constituents[18]. Since kinds seem to be the universals Aristotle is thinking of in Puzzle 12 as well, to ask whether the principles of substances are universal is just another way of asking whether they are the kinds to which particular substances belong, i.e. species and genera.

It must be admitted that in the parallel argument in *Met*. M 10 there is no explicit mention of species and genera. Aristotle simply argues that, if the principles are universal, then (i) either the substances composed of them are universals or (ii) non-substances will be prior to substances[19]. Consequence (i) rests on the assumption that, if *x* is composed of *a*, *b*, *c*… and all of *a*, *b*, *c*… are universal, then *x* must be universal as well. (i) is unacceptable as a consequence because the hypothesis the argument moves from is that the substances of which we seek the principles are separate and to be separate is to be particular[20]. Consequence (ii) is a direct result of the conjunction of the claims that universals are not substances and that principles are prior to the things of which they are the principles[21]. (ii) is unacceptable because substances are primary things and so there can be nothing prior to them, let alone non-substances. Nowhere in the argument does Aristotle mention species and genera as examples of universals. However,

[17] Cf. Arist., *Met*., B 6, 1003a11-12.

[18] The puzzle in presented in Arist., *Met*., B 1, 995b27-29 and discussed in B 3, 998a20-b14.

[19] Cf. Arist., *Met*., M 10, 1086b37-1087a4.

[20] Cf. Arist., *Met*., M 10, 1086b16-19. For the different senses of separable/separate in Aristotle see Castelli, this volume. Clearly, in the *Met*. M 10 argument Aristotle is using separable in the sense of ontologically independent, which implies particularity.

[21] Cf. Arist., *Met*., M 10, 1087a1-4.

it is clearly species and genera that he must have in mind. In the final part of *Met*. M 9, a few lines before mentioning the *aporia* about universality and particularity, Aristotle restates his famous contention that Plato's Forms are separate universals, i.e. universals existing apart from the particulars of which they are predicated[22]. Aristotle also remarks that, on Plato's view, universals and particulars turn out to be of the same nature[23]: what he means is that, for instance, both particular men and the universal man, i.e. the Form of man, will be men – the former being sensible men, the latter a non-sensible man. Thus, it is clear that the universals Aristotle is thinking of in *Met*. M 10 are the species and genera of particular sensible substances, i.e. the universals that Plato takes to exist apart from particulars.

The general conclusion of my analysis of Aristotle's arguments against the view that the principles of substances are universal is that they concern the species and genera of sensible substances. In these arguments, no mention is made of form, i.e. of the ontological constituent that combines with matter to make up a particular sensible substance. Aristotle, in other words, is still reasoning from within a *Categories*-style framework where the fundamental opposition is between particular substances and their kinds rather than between matter and form. When advancing his argument against universal principles, Aristotle has chiefly Plato's understanding of species and genera in mind. However, at the beginning of *Met*. M 10, he remarks that the difficulty illustrated in the chapter concerns both those who believe in the existence of Forms and those who do not[24]. So, even if there is a special difficulty in taking Plato's species and genera as the principles of particular substances, there are general problems with the claim that species and genera, however understood, are principles. This line of argument will be taken up again and pushed to the extreme in *Met*. Z.

Likewise, no mention of form is made in Aristotle's argument addressing the other horn of the *aporia*, that is the claim that the principles of substances are particular. Indeed, there are some difficulties in understanding precisely which claim Aristotle is attacking in the argument. In *Met*. B 6 the claim that principles are particular is rejected on the grounds that the knowledge of each thing is universal[25].

[22] Cf. Arist., *Met*., M 9, 1086a32-b13.

[23] Cf. Arist., *Met*., M 9, 1086b10-11.

[24] Cf. Arist., *Met*., M 10, 1086b14-15.

[25] Cf. Arist., *Met*., B 6, 1003a14-15.

The assumption behind the argument must be that knowledge can be universal only by being about some universal object. Thus, Aristotle reasons that if principles are particular, they cannot be known[26]. For the only way for us to know particular principles is through universal principles. But if particular principles are known through some other principles, they are not principles after all, because universal principles, it turns out, will be prior to them[27]. And principles are things to which nothing is prior. Aristotle basically represents the same line of argument in *Met*. M 10[28]. Supporters of universal forms make much of this line of argument and so I shall come back to it in Section 4. As it stands, however, the argument from knowledge does not tell us anything about the meaning of the claim that the principles of substances are particular. Another argument in *Met*. M 10, however, comes to our rescue here. Aristotle observes that if the principles of substances are particular, then substances will be just of the same number as their elements[29]. Aristotle seems to have the following view in mind. Puzzle 6 in Book B concerns the question whether the principles of things are the kinds to which things belong or the material constituents of which things are made. We have seen that the view that principles are kinds is nothing but the view that principles are universal. It is natural to expect, therefore, that the view that principles are particular corresponds to the claim that the principles of things are their material constituents. This expectation is met by Aristotle's text. Both in his discussion of Puzzle 6 and in *Met*. M 10 Aristotle uses the example of speech[30]: on the view he is examining, for instance, the letters «A» and «B» are the particular principles of the syllable «BA» by being its material constituents. The example of the syllable further clarifies what Aristotle means by «particular». If the letters «A» and «B» are *particular* principles of the syllable «BA», then «B» and «A» are the unique instances of their kind: there cannot be more than one «A» and more than one «B». Particular principles, in other words, are here taken to be unique particulars, i.e. particulars that are one in number without being also one in kind. The result of this view is that, if there is a syllable «BA» composed of the letters «B» and «A» there cannot also be a

[26] Cf. Arist., *Met.*, B 6, 1003a13-14.

[27] Cf. Arist., *Met*., B 6, 1003a15-17.

[28] Cf. Arist., *Met*., M 10, 1086b32-37.

[29] Cf. Arist., *Met*., M 10, 1086b20-22.

[30] Cf. Arist., *Met*., B 3, 998a23-25, M 10, 1086b20-32 and 1087a7-10.

syllable «BI», because the letter «B» cannot occur twice. We may understand, therefore, why Aristotle says that if principles are particular, substances will be of about the same number as their elements: taking principles to be unique particulars dramatically restricts the number of substances we can compose out of them. It should also be remarked that, even if Aristotle accepted the view that all principles of a sensible substance are particular, he could not agree that such principles are particular in the sense of «particular» suggested by the puzzles. For Aristotle does not take particular principles to be unique particulars and allows, instead, for the existence of many particular things of the same kind[31]. Thus, the view Aristotle discusses in the second horn of Puzzle 12 and in *Met*. M 10 is an extreme form of materialism employing the term «particular» in an equally extreme sense.

If my analysis is correct, the hypothesis that principles are particular has nothing to do with forms or with the view that forms are particular. The very example of the syllable that Aristotle uses to explain the hypothesis should put us on guard against seeing any reference to form. In *Met*. Z 17, Aristotle argues at length that the principle that keeps the material constituents of a sensible substance together is not one more material constituent or a composite of material constituents[32]. What Aristotle means is that form is something different from the material constituents of a sensible object in that it is a non-material constituent that keeps together and gives structure to the material parts of a sensible object. Form, in other words, is the substantial principle that explains why certain material elements constitute a substance of a certain kind[33]. In order to make his point, Aristotle employs the example of a syllable in *Met*. Z 17: the syllable «BA» cannot be reduced to its material constituents, i.e. the letters «B» and «A»[34]; rather, it is also something more, namely the form or structure that the letters take. And such a form or structure is not one more material element added to the letters, nor something composed of material elements. The form of the syllable is the principle explaining why certain letters constitute a syllable: the form of the syllable «BA» is the principle explaining why «B» and «A» constitute the syllable «BA». Given Aristotle's argument in *Met*. Z 17 it is very unlikely that form should be what Aristotle has in

[31] Cf. Arist., *Met*., M 10, 1087a7-10.

[32] Cf. Arist., *Met*., Z 17, 1041b11-b28.

[33] Cf. Arist., *Met*., Z 17, 1041b25-28.

[34] Cf. Arist., *Met*., Z 17, 1041b11-28.

view in his discussion of the puzzles. For, even if form were particular, it would not be one of the material constituents of a sensible substance. In the puzzles, by contrast, Aristotle identifies the particular principles of a sensible substance with its material constituents.

Let me sum up the results of my analysis of Aristotle's discussion of the problem of universals outside the central books. For Aristotle the question as to whether the principles of substances are universal or particular has nothing to do with the ontological status of forms. The hypothesis that principles are universal is the claim that the principles of substances are the kinds to which substances belong. By contrast, the hypothesis that principles are particular is the view that the principles of sensible substances are the material constituents of which they are made up.

3. *Species and genera in* Metaphysics *Z*

3.1. *The general strategy of* Met. *Z*

One of the main claims I want to defend in this paper is that the question which Aristotle raises in *Met*. Z as to whether universals are substances is just a question as to whether species and genera are substances. My view, therefore, is that the meaning of «universals» in the context of *Met*. Z is roughly the same as in Books B and M. It is time for me to provide some evidence in favour of this general claim. I shall do so first by showing how the discussion of universals fits into the general strategy of *Met.* Z and then by indicating some of the reasons why Aristotle thinks that species and genera can no longer be regarded as substances, not even secondary ones. I shall postpone to Section 5 a detailed analysis of the argument in *Met*. Z 13 in favour of the claim that no universals are substances.

In *Met*. Z 3, 1028b33-36 Aristotle lists four candidates for the title of substance: the essence, the universal, the genus and the subject. To grasp why the universal and the genus figure in the list, it is important to understand what exactly the four items listed are candidates for. I agree with Burnyeat that the four items are candidates for being *the substance of* particular sensible objects[35]. As Aristotle makes clear in *Met*. Z 2, part of the project of *Met*. Z consists in answering the question as to what substances there are. Answering this question, however,

[35] Cf. Burneyat 2001, pp. 14 f.

is not as simple as it might seem at first sight. For some things are acknowledged as substances by virtually everyone, while the substantial character of some others is open to dispute. Thus, Aristotle's strategy is to start from some uncontroversial cases of substances in the hope that the analysis of such cases may be of help in deciding what other substances there are. The uncontroversial cases of substances which Aristotle investigates are material objects, that is, sensible substances[36]. Aristotle's hope is that an analysis of what it means to be a substance for a sensible substance will shed some light on what it means to be a substance in general and hence will help to make decisions over more controversial matters, such as the existence and nature of non-sensible substances[37]. As I see things, Aristotle gives a strongly *explanatory* twist to his investigation into the nature of sensible substances. To understand what it means for a sensible substance to be a substance amounts to understanding why sensible substances are substances or, alternatively, what makes them substantial entities. The four candidates in *Met*. Z 3 exemplify different ways in which one could try to construe an answer to this problem. For instance: one could say that sensible objects are substances because they have an essence, i.e. a certain explanatory principle that accounts for all their essential and necessary properties. Alternatively, the suggestion could be advanced that sensible objects are substances because they are instances of a certain universal or because they belong to a certain genus. Finally, the option is open of saying that a sensible object is a substance because there is something in the object that underlies all its properties, because, in other words, one of the constituents of the object plays the role of subject for all the object's properties. One simple way of summing up this strategy is to say that Aristotle is looking for the *substance of* sensible objects, i.e. for the principle that explains their substantial character. The four candidates exemplify different ways in which the substance of sensible objects could be thought of. It is important to recall that the four candidates have rather different destinies[38]. As Ar-

[36] Cf. Arist., *Met*., Z 2, 1028b8-13.

[37] Cf. Arist., *Met*., Z 2, 1028b13-15 and b27-32.

[38] As is known, *Met*. Z is built around the discussion of the four candidates: the subject is discussed in Z 3; the essence in Z 4-6 and Z 10-12; the universal and the genus are taken up in Z 13-16. In *Met*. Z 17, Aristotle makes a fresh start with respect to the list of four candidates by exploring the view that substance is some kind of cause or explanation. Z 7-9 somehow breaks the flow of Aristotle's treatment of es-

istotle explains in *Met*. Z 3, the subject leads to matter: for matter can be thought of as the ultimate subject of the properties of a sensible substance[39]. Since Aristotle believes that there are good and independent reasons for thinking that matter cannot be the substance of sensible objects, it seems that the subject too can hardly qualify as the substance of sensible objects[40]. Whether or not Aristotle thinks that substances must be subjects at least in some sense, to be a subject can hardly be the distinguishing mark of what counts as the substance of sensible objects[41]. Essence, by contrast, leads to form in that form is the essence of sensible substances. In the final analysis, Aristotle's verdict seems to be that form is the substance of sensible objects by being their essence[42]. Being an essence, therefore, is one of the distinguishing marks (perhaps *the* distinguishing mark) of what counts as the substance of sensible objects. The universal and the genus, by contrast, lead nowhere. For Aristotle argues in *Met*. Z 13-16 that universals are not substances.

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sence by introducing a self-contained discussion of generation. Many scholars believe (rightly, in my opinion) that the discussion of generation serves to shed more light on Aristotle's notion of form, although different scholars have put emphasis on different aspects of such a notion (see in particular: Burneyat 2001, pp. 29-38; Cerami 2003, but also Gill 1989, pp. 120-6; Halper 1989, pp. 89-97; Loux 1991, pp. 109-11 and pp. 164-8).

[39] Cf. Arist., *Met*., Z 3, 1029a10, a18-19 and a26-27.

[40] Cf. Arist., *Met*., Z 3, 1029a28-30.

[41] In Arist., *Met*., Z 3, 1029a9-11, Aristotle says that the characterization of substance in terms of an ultimate subject of predication is both insufficient and unclear. Aristotle's formulation leaves the issue open of whether the subject might be *one* of the criteria of substantiality, provided that it is accompanied by some other criterion (although I do not think that this is ultimately his view). This is the view defended for instance by Irwin 1988, who holds that substances are both subjects and essences. Nothing in *Met*. Z 3, however, suggests an interpretation as strong as the one by Frede M. 1987a; Frede M. 1987b, according to whom the subject criterion, when appropriately reinterpreted, remains Aristotle's favourite criterion of substantiality in *Met*. Z (the reinterpretation of the criterion which M. Frede advances hinges on the idea that the ultimate subject of a sensible object is the item that remains the same throughout all the changes a sensible object undergoes). My general opinion is that the explanatory criterion of substantiality, and not the subject criterion, is prominent in the central books of the *Metaphysics*.

[42] Cf. Arist., *Met*., Z 7, 1032b1-2; Z 10, 1035b14-16 and b32; Z 17, 1041a28 together with 1041b7-9 and b27-28; H 3, 1043a29-b2 (esp. 1043b1-2).

So, universals cannot be the substantial principles of sensible objects. That the investigation into the substance of sensible objects should be understood in an explanatory way seems to be confirmed by the fact that Book Z ends with a sophisticated discussion of the notion of substance as cause or explanation[43]. After discussing the four candidates presented in Z 3, in Z 17 Aristotle explores and endorses the view that the substance of sensible objects is the cause or explanation of their being. His final word seems to be that, by being the essence of sensible objects, form is what *explains* why sensible objects are substances and hence, in this respect, what accounts for their being[44].

Before going back to the genus and the universal, I wish to prevent one possible misunderstanding of the foregoing considerations. When I say that the four candidates in *Met*. Z 3 are candidates for being the substance of sensible objects, I do not wish to imply that Aristotle draws any significant distinction between the notion of 'substance' *tout court* and that of 'substance of'. Some interpreters make use of the distinction between the so-called mono-argumental sense of substance (*x* is a substance) and the bi-argumental sense (*x* is the substance of *y*) to play down some of the implications of Aristotle's claim in Z that form is primary substance. Form is primary substance – they say – not because it is a substance in its own right, a substance on a par with the sensible object of which it is the form, but rather because it is the substance of the sensible object, i.e. the principle that explains its substantiality. The result of this strategy is that the sensible object and its form turn out to be substances in two different senses: the object is a substance because it is an independent entity, while its form is a substance because it is an explanatory principle. Since being a substance and being the substance of something else are two different senses of «substance», to describe form as primary substance does not call into question the ontological primacy of sensible objects. Appealing as it might seem, I reject this strategy. On my reading, Aristotle's view is that if *x* is the substance of *y*, then for this very reason, i.e. because it explains the substantial character of *y*, *x* is also a substance in the same sense as *y*. Thus, if form is the substance of sensible objects, form is also a substance in the same sense as sensible objects are substances. What is more, there are good reasons to think that, if form is the substance of sensible objects, that

[43] Cf. Arist., *Met*., Z 17, 1041a6-10. But the causal or explanatory perspective is evident already in Arist., Z 13, 1038b6-8.

[44] Cf. Arist., *Met*., Z 17, 1041b7-9 and b25-28.

is, if it explains why sensible objects are substances, form is substance more than sensible objects are. By saying, therefore, that the four candidates in *Met*. Z 3 are candidates for being the substance of sensible objects I do not mean to introduce any distinction between two senses of «substance». All I mean is that we arrive at the four candidates by pressing a question of explanation, i.e. by asking what makes sensible objects substantial entities.

Let me go back now to the universal and the genus. If my reconstruction is correct, one suggestion which is considered in *Met*. Z 3 is that sensible objects are substantial entities either because they are instances of a certain universal or because they belong to a certain genus. It is not difficult to see that the suggestion is exactly the same as the one which Aristotle discusses in *Met*. B and M, namely that the principles of substances are universal. In both cases, the suggestion is that an object's belonging to a certain species or a certain genus explains all its fundamental properties and characteristics. The reader may be perplexed here, because in *Met*. Z 3 Aristotle does not talk of species and, what is worse, seems to *contrast* the universal with the genus: the universal and the genus are two different candidates for the role of substance. It may seem hard to see, therefore, how the suggestion in *Met*. Z 3 might be the same as the one advanced in *Met*. B and M. The difficulty, however, is merely terminological and dissolves if we look once again at the puzzles in Book B. Puzzle 6 is about whether the principles of substances are the kinds which substances belong to or their material constituents. Assuming for the sake of argument that kinds are principles, Aristotle further asks in Puzzle 7 whether principles should be identified with the lowest species or the highest genera[45]. Puzzle 7 brings to the fore a source of disagreement among supporters of kinds: some thought that the less general a kind is, the more substantial it is; others held that substantiality increases with generality. This disagreement is likely to be reflected in the list of four candidates in *Met*. Z 3: «the universal» stands for kinds of the lowest level, i.e. species, while «the genus» stands for higher-level kinds, ranging from low-level genera such as *animal* to the highest genera, such as *one* and *being*. It is clear, however, that both the universal and the genus are universals[46]. Their candidacies are jointly discussed and turned down

[45] Puzzle 7 is introduced in Arist., *Met*., B 1, 995b29-31 and discussed at B 3, 998b14-999a23.

[46] In Arist., *Met*., H 1, 1042a12-15, Aristotle remarks that in one way the genus

in *Met*. Z 13-16, the section on universals, where Aristotle discusses both species and genera and, among genera, both low-level genera and the highest-level ones. Moreover, in the sketchy summary of the achievements reached in *Met*. Z which Aristotle prefaces to Book H it is explicitly remarked that Plato's Forms are thought to be substances for the same reasons as the universal and the genus[47]. This suggests that Forms, the universal and the genus are grouped together as different sorts of universal entities. In conclusion, the claim that the universal and the genus are the substances of particular sensible objects is very akin – if not identical – to the claim that the principles of substances are the species and the genera to which they belong.

3.2. *Genera and species are not substances: the distinction between form and universal composite*

The analysis of Aristotle's list of candidates for the title of substance has lent some *prima facie* plausibility to the idea that the entities that Aristotle calls «universals» in *Met*. Z might be the species and genera of sensible substances. Of course, this suggestion must be tested against *Met*. Z 13, where Aristotle argues at length that universals are not substances. It is important to see, however, that the claim that species and genera are not substances is established by Aristotle well before *Met*. Z 13. In *Met*. Z 10, for instance, a chapter belonging to the section on essence and definition, Aristotle writes:

(A) 'Man' and 'horse', however, and the terms that are thus applied to individuals, but universally, are not substance but a certain composite of this form and

seems to be more substantial than its different species, and the universal more substantial than the particulars. On the basis of this text, one can reasonably conclude that when mentioning «the universal» and «the genus» in *Met*. Z 3 Aristotle is trying to lay stress on two different kinds of opposition, i.e. that between the universal and the particular and that between the genus and the species: the universal is taken to be substance in opposition to (i.e. to a higher degree than) particulars, while the genus is taken to be substance in opposition to (i.e. to a higher degree than) the species. This interpretation is in keeping with the one I have just suggested. It is true that the universals-particulars opposition does not exclude the genus, because particulars fall under genera as well as under species. But particulars fall directly under species and only indirectly under genera. Thus, it is not unlikely that «the universal» in *Met*. Z 3 should stand for the universals under which particulars fall directly, i.e. the species.

[47] Cf. Arist., *Met*., H 1, 1042a15-16.

this matter taken universally. And as regards the individual, Socrates contains already in him the ultimate matter, and similarly in all other cases (Arist., *Met*., Z 10, 1035b27-31, trans. Ross, slightly modified).

The same point is made in *Met*. Z 11:

(B) It is clear also that the soul is the primary substance and the body is matter, and man or animal is the composite of both taken universally; and 'Socrates' or 'Coriscus', if even the soul of Socrates may be called 'Socrates', has two meanings (for some mean by such a term the soul, and others mean the concrete thing), but if 'Socrates' or 'Coriscus' means simply this particular soul and this particular body, the individual is analogous to the universal in its composition (Arist., *Met*., Z 11, 1037a5-10, trans. Ross, slightly modified).

In (A) Aristotle explicitly says that terms like «man» and «horse», i.e. species-terms, do not stand for substances. From (B) it emerges that the same thing is true of «animal» and the like, i.e. genus-terms. Thus, Aristotle is saying that species and genera are not substances. Their not being substances, Aristotle implies in (A), is connected with their being a certain composite of matter and form taken universally. In brief, species and genera are not substances, but universal composites of matter and form[48]. In (B) universal composites are contrasted with the soul, i.e. the form of living beings, which is, instead, primary substance. Aristotle, therefore, sharply distinguishes form, which is substance, from species and genera, which are not[49]. Taken together, (A)

[48] Aristotle's text at 1035b29-30 reads as follows: σύνολόν τι ἐκ τουδί τοῦ λόγου καὶ τησδὶ τῆς ὕλης ὡς καθόλου, «a certain composite of this form and this matter, taken universally». I take «taken universally» (ὡς καθόλου) to modify the whole expression «a certain composite of this form and this matter», with the result that what is taken universally is the particular composite of matter and form. Thus, with Frede M., Patzig 1988, 1, pp. 56 f.; Frede M., Patzig 1988, 2, pp. 189-91, I reject the traditional interpretation (cf. Ross 1949, 2, p. 199), according to which «taken universally» only modifies «this matter» and it is only matter, therefore, that is taken universally (the assumption being, of course, that matter, unlike form, is in itself particular). I disagree with Frede M., Patzig 1988's further claim, however, that rejecting the traditional interpretation forces us to regard forms as particular.

[49] Some supporters of the view that forms are universals pay little or no attention to the distinction between form and species/genus. See, for instance: Modrak 1979; Modrak 1985; Woods 1967; Woods 1974-5; Woods 1991a; Woods 1991b.

and (B) raise two crucial questions: which motivations does Aristotle have for thinking that form is substance, while species and genera are not? What does it mean that species and genera are universal composites of matter and form?

I shall start with the first question. In the *Categories* Aristotle thinks that we need to posit substantial universals to explain the essential properties and the typical behaviour of particular sensible substances. Socrates and Coriscus are men as well as animals. On Aristotle's view they are what they are because they belong to natural kinds, that is, to the species *man* and to the genus *animal*. The species *man* and the genus *animal* are substantial entities of some sort. Moreover, they are universal entities because they are essentially predicated of all their members. Of course, Aristotle does not believe that species and genera exist apart from their members. He insists that species and genera depend for their existence on their particular members: the universal *man* and the universal *animal* exist only if there exist at least one human being and one animal. Therefore, Aristotle calls species and genera «secondary substances» to mark their existential dependence on their particular instances, which are, instead, «primary substances». Still, species and genera are real entities. They are the universals that express the essence or nature of particular sensible substances, what they essentially are.

There are good reasons to think that, in Books Z, H and Θ of the *Metaphysics*, Aristotle is no longer satisfied with this way of characterizing the essential properties and the typical behaviour of particular sensible substances. Aristotle's motivations are basically two: the first is that we can push the explanation one step further and so do away with species and genera; the second, related motivation is that an understanding of essence in terms of species and genera is too logical and abstract in character and must be replaced with a more physico-metaphysical model of explanation. Both motivations are closely linked with the emergence of the notion of form. Loux has insisted a good deal on the first motivation[50]. In the *Categories* Aristotle regards particular sensible objects as unanalysable wholes, that is, as things that cannot be analysed into metaphysical constituents. Clearly, even in the *Categories*, particular sensible objects are taken to have physical parts into which they can be divided, yet these do not count as metaphysical constituents – presumably because the nature of physical parts does not explain that of their corresponding wholes, but is rather explained

[50] Cf. Loux 1991, pp. 109-46.

by the nature of such wholes. Metaphysical constituents, by contrast, are supposed to explain the nature of the whole which they constitute. One consequence of the view that sensible objects are unanalysable is that a sensible object's membership in a natural kind is taken to be a primitive fact, which needs no further explanation: there is nothing that explains why sensible objects belong to the natural kinds they do. In the *Physics* and in the central books of the *Metaphysics* (but also in Book Λ) Aristotle gives a considerably different account of sensible objects. In the new setting, sensible objects are no longer regarded as unanalysable wholes, but rather as entities that can be analysed into two metaphysical constituents, i.e. matter and form. The new account of sensible objects also affects the way in which their membership in natural kinds should be understood. In the new framework, it is no longer true that a sensible substance's membership in a natural kind is a primitive fact, which cannot be further explained. For the required explanation is now available. In the *Metaphysics*, sensible objects belong to the natural kinds they do because they have a certain form. More particularly, sensible objects belong to the natural kinds they do because a certain form endows a certain parcel of matter with the structure, organisation, and functions characteristic of the natural kinds in question. The result of this new conception of sensible objects is that we no longer need to appeal to species and genera to account for their essential properties and their typical behaviour. For such properties and typical behaviour are fully explained by one of the ontological constituents of sensible objects, i.e. form: sensible objects have the essential properties they do and behave in the way they do because they have a certain kind of form. But if species and genera play no explanatory role, they can be dispensed with altogether. Species and genera are no longer taken as the substantial principles of sensible objects in that they are replaced by form in being what accounts for the essential properties of such objects.

This general picture can be further refined if we look at the second of Aristotle's motivations for denying species and genera any substantial character. In the *Categories* species and genera express, at different levels of generality, the essence of sensible objects by being good answers to the question as to what sensible objects are. If we ask of Socrates what he is, the right answer is that he is a man or an animal. The answer can be further spelt out by giving the *definition* of what being a man or an animal is. In the central books of the *Metaphysics*, Aristotle does not abandon this approach altogether since he never gives up the connection between essence and definition. He thinks, however, that

the approach of the *Categories* needs revision. The trouble with understanding essence in terms of species and genera is that the resulting notion of essence is too logical and abstract and risks obscuring the explanatory role that essence is supposed to play. As Aristotle sees things in *Met*. Z, H and Θ, an essence is an internal principle of organization and structure or, as Aristotle puts it, a nature (φύσις)[51]. Essence, in other words, is an eminently physico-metaphysical notion and not a logical one. This understanding of essence explains why Aristotle maintains that only natural objects are substances and only natural objects have an essence, at least in the strict sense of the term[52]. For natural objects have a high level of internal organization and complexity. The soul, that is, the form of living beings, is Aristotle's paradigmatic example of essence: the soul is the essence of living beings in that it explains their essential properties and functions, their organization and the internal transformations they undergo[53]. When Aristotle talks of essences in the central books, what he has in mind is such internal principle of structure and organization. For forms are repeatedly identified with the essences of sensible objects[54]. Given Aristotle's new understanding of essence, it is clear that species and genera have little or no explanatory role to play. Our classification of sensible objects into species and genera is certainly correct. However, we classify things into species and genera *on the basis of* their natures or essences, which are internal principles of structure and organization. Species and genera are no longer the essences of sensible objects but are rather derived or obtained from their essences. Another way of making this point is to say that, while form is prior to the sensible object of which it is the form, species and genera are posterior to it. Form is prior to sensible objects because it explains their properties, functions and behaviour. Species and genera, by contrast, are posterior to sensible objects, because we obtain species and genera simply by generalizing over the common features of sensible objects – features which are the effects of sensible objects' having a certain essence, i.e. a certain form. To put it more simply: all objects of a certain kind have certain common characteristics in virtue of possessing a similar principle of structure and organization, i.e. a certain form; by looking at these common characteristics we form the general

[51] Cf. Arist., *Met.*, Z 17, 1041b30.

[52] Cf. Arist., *Met.*, Z 17, 1041b28-31.

[53] See in particular Arist., *Met*., Z 10, 1035b14-16.

[54] Cf. Arist., *Met.*, Z 7, 1032b1-2; Z 10, 1035b15-17 and 1035b32; Z 17, 1041a28.

notion of their genus or of their species. Species and genera, therefore, are not ontological principles of explanation, but simply general notions or concepts.

These considerations should help us to understand what Aristotle means by saying that species and genera are universal composites of matter and form and why he thinks that their being universal composites of matter and form goes together with their not being substances. Particular sensible objects, Aristotle says in (A) and (B), are analysable into matter and form and hence are particular composites of matter and form. Species and genera are particular composites of matter and form taken universally, in short: universal composites of matter and form. The expression «universal composites of matter and form» has two parts: species and genera are «universal» and «composites of matter and form». Scholars usually insist on the second part of the expression in the following way. In *Met*. Z 10-11 Aristotle discusses in much detail the question of whether matter is part of the essence of sensible objects. Although some scholars disagree, many think (and I am among them) that his final view is that matter is not part of the essence of sensible objects[55]. Thus, the essence of sensible objects is to be identified with their form alone and not with a composite of matter and form. This view implies that a sensible object is distinct from its essence in that it is matter plus form while its essence is form alone[56]. Another implication is that the essence of a sensible object is distinct from the species and genus to which the object belongs because the essence is the form of the object, while the species and the genus are universal composites of matter and form. Although this way of looking at things is all right, it is not sufficient. For it may mislead one into thinking that the difference between essence on the one hand and species and genera on the other is just a difference in *content*: essence is form alone, while species and genera are composites of matter and form. Their difference, by contrast, is also a difference in *ontological status*. To see this point, we must pay attention to the fact that species and genera are not only composites of matter and form, but also universals. If my analysis of Aristotle's new understanding of species and genera is correct, this is another way of saying that species and genera are not extra-mental entities, but rather general concepts we

[55] For a reconstruction of the debate over whether matter is included in the definition of sensible objects see Galluzzo, Mariani 2006, pp. 134-65.

[56] Cf. Arist., *Met*., Z 11, 1037a29-b5 (esp. 1037b3-5).

obtain by generalizing over the common features of particular objects: species and genera are not entities, but a certain way of considering particular objects or, as Aristotle puts it, particular objects taken in general. This reading explains why Aristotle connects the fact that species and genera are universal composites of matter and form with their not being substances. Here I agree with M. Frede and Patzig that being non-substances is equivalent to not existing as extra-mental entities[57]. It is clear, in fact, that if species and genera existed, they should be substances and not accidents. Their role in the *Categories*, for instance, is that of substantial universals, i.e. universals in the category of substance. Therefore, when Aristotle says in (A) that species and genera are not substances, he must mean that they are not real[58]. I suggest that we should take them to be concepts we obtain by generalization from particular objects.

4. *Aristotelian forms: universal or particular?*

In the previous Section I have argued that the introduction of forms gives Aristotle good reasons to think that species and genera play no explanatory role and hence cannot count as the substantial principles of particular sensible objects. In Section 2 I have also suggested that Aristotle means to refer to species and genera when he uses expressions such as «the universals» and the like in the central books of the *Metaphysics*. Thus, it is with species and genera in mind that Aristotle insists that universals are not substances. This use of «the universals» perfectly corresponds to the way Aristotle uses the expression outside the central books. This reconstruction leaves room for saying that, even if they are not the things that Aristotle refers to by the expression «the universals», forms are nonetheless universal in the standard sense *we* attach to this expression: that is, they are repeatable entities. A form is universal if it exists as one and the same in different parcels of matter and is made particular by the different parcels of matter it exists in. It is particular, by contrast, if it is primitively particular, i.e. if its particular-

[57] Cf. Frede M., Patzig 1988, 2, pp. 189-91.

[58] Malcolm 1993; Malcolm 1996 has defended the view that species are still regarded in the central books of the *Metaphysics* as *secondary* substances. In light of the textual evidence I have provided in this section, there seems to be little room for such a conciliatory view.

ity does not depend either on the substance of which it is the form or on the matter in which it exists. A form can still be a universal entity in spite of Aristotle's powerful arguments against the substantial character of species and genus because such arguments do not apply to form: form is not posterior to particular sensible objects, but prior to them; unlike species and genera, form plays a crucial, explanatory role. But are forms universal in our sense? As is known, the question whether Aristotelian forms are universal or particular has been at the centre of a rather heated debate among scholars. Many textual and doctrinal arguments have been advanced by both parties in the dispute and the significance of many crucial passages in Book Z is still under discussion. I do not intend to review here all the aspects of this controversy[59]. In this Section, I shall confine myself to making three basic points. First, I shall show that some arguments on both sides of the controversy are not conclusive. The arguments I shall examine are the so-called argument from knowledge, which is often thought to provide evidence in favour of the universal character of forms, and the argument based on the notion of τόδε τι, which is played out, instead, by supporters of particular forms. Second, I shall discuss the only text that, in my opinion, unequivocally suggests that forms are repeatable entities and so universal, i.e. *Met*., Z 8, 1034a5-8. Given my definition of what it means for a form to be universal or particular, it is in texts concerning individuation that we should look for an answer to the question whether forms are universal or particular: forms are universal if they are made particular by the things in which they exist; they are particular, by contrast, if they are particular of themselves or primitively. And *Met*. Z 8 explicitly says that forms are made particular by the particular pieces of matter they exist in. Finally, I shall use my analysis of *Met*. Z 8 to explain away one text in *Met*. Λ that is rightly taken to provide at least *prima facie* support for the view that forms are particular.

There is one common argument, which may be labelled «the argument from knowledge», that is often invoked by supporters of universal forms. It is contained in a rather sketchy form in the discussion of Puzzle 12 in *Met*. B and in the corresponding puzzle in *Met*. M 10[60]. The argument is based on a number of apparently genuine Aristotelian claims and can be summarized as follows:

[59] For my state-of-the-art chapter on the issue see Galluzzo, Mariani 2006, pp. 167-211.

[60] Cf. Arist., *Met*., B 6, 1003a13-17; M 10, 1086b32-37.

P1) Forms are substances;
P2) Substances are primary objects of knowledge;
C1) Forms are primary objects of knowledge;
P3) Particulars cannot be known (=knowledge is of the universal);
C2) Forms are universal.

I have said much about the meaning of P1). But also P2) seems to be uncontroversial. Aristotle argues, for instance, in *Met*. Z 1 that substance is prior to all other things in both knowledge and definition, definition being one of the highest forms of knowledge[61]. Moreover, one of the main claims in *Met*. Z 4 is that only substance has an essence and a definition[62]: if things other than substance have an essence and a definition, this is only in a derivative sense of «essence» and «definition»[63]. Finally, in *Met*. Z 13, Aristotle remarks in the same vein that if substance is not definable, nothing else is[64]. So P1) and P2) are unproblematic. P3) deserves some more attention. The equivalent of P3), i.e. the claim that knowledge is of the universal, shows up also in Aristotle's discussion of Puzzle 12 and in *Met*. M 10. In the latter text, Aristotle argues in its favour that demonstration and definition, the most eminent kinds of knowledge, take primarily a universal form: we cannot conclude that this triangle has the property *2R* (i.e. the property of having the sum of the internal angles equal to two right angles) if we have not concluded that triangles in general do; likewise, we cannot know that this man is an animal unless we know that men in general are animals[65]. This line of thought represents itself in *Met*. Z as well. *Met*. Z 15, for instance, is entirely devoted to showing that particulars cannot be defined. Admittedly, some of Aristotle's arguments are clearly meant to establish that *material* particulars cannot be defined and hence do not seem to concern forms[66]. For forms, even if they are particulars, are presumably not material particulars. Some other arguments in *Met*. Z 15, however, clearly concern forms, since they are arguments against the definability of any particular whatsoever. In *Met*., Z 15, 1040a8-14 and 1040a27-b2, for instance, Aristotle argues that no

[61] Cf. Arist., *Met.*, Z 1, 1028a34-b2.
[62] Cf. Arist., *Met.*, Z 4, 1029b22-1030a17 (esp. 1030a5-6).
[63] Cf. Arist., *Met.*, Z 4, 1030a17-b13 (esp. 1030a28-32).
[64] Cf. Arist., *Met*., Z 13, 1039a19-20.
[65] Cf. Arist., *Met*., M 10, 1086b32-37.
[66] Cf. Arist., *Met*., Z 15, 1039b27-1040a7.

definition uniquely picks out one particular object to the exclusion of all others of the same kind. For a definition is a conjunction of predicates and predicates are always applicable (at least in principle) to a plurality of objects. Definitions too, therefore, are always applicable to a plurality of objects. The result of this general argument is that if there were particular forms, they would not be definable. But this means – supporters of universal forms insist – that forms are not particulars. For forms are substances and substances are definable more than anything else.

I agree with M. Frede and Patzig that, appealing as it might be, this line of argument is not conclusive[67]. The claim that knowledge is of the universal is ambiguous between two rather different claims, i.e. the claim that the objects of knowledge are universal entities and the alternative claim that we know the things we know universally or in a universal form. The second claim is compatible with there being in reality only particular entities. Take two particular forms of the same kind, say two human souls: S1 and S2. According to Frede-Patzig, these two forms are particular and numerically different of themselves, but the same in kind, i.e. they are the same kind of soul. Aristotle's argument in *Met*. Z 15 shows that the definition of S1 is the same as the definition of S2 and that we only define a certain kind of soul and never a particular soul as such. We should not, however, infer from the fact that we always define a certain kind of soul that there are universal souls in reality. For Aristotle's argument only establishes *how* we know particulars, i.e. universally, and does not rule it out that *what* we know are only particulars, even though we never know them as particulars but only as a certain kind of particular. As a matter of fact, in *Met*. M 10 Aristotle responds to the argument from knowledge by saying that the claim that the principles of knowledge must be universal is partly true and partly false[68]. For *potential* knowledge is of universals, while *actual* knowledge is of particulars[69]. I take Aristotle's point to be the following. When we know some universal truths, our knowledge is indeterminate (i.e. potential) because it does not bear on any determinate object. It is only when our knowledge is brought to bear on some particular object that it gets determined or, as Aristotle puts it, actualized. For instance: when we know that triangles in general have the

[67] Cf. Frede M., Patzig 1988, 1, p. 56.

[68] Cf. Arist., *Met*., M 10, 1087a10-15.

[69] Cf. Arist., *Met*., M 10, 1087a15-21.

property *2R*, there is no determinate and actual object our knowledge is about, for there is no general triangle for us to know. It is only when we know of, say, the particular triangle ABC that it has the property *2R* that we can be said to have determinate and actual knowledge. Likewise, when we know that men in general are rational animals, there is no determinate and actual object our knowledge is about, for there is no general man for us to know. It is only when we know of a particular man that he is a rational animal that we acquire determinate and actual knowledge. Of course, that triangles in general have the property *2R* or that men in general are rational animals are genuine pieces of knowledge, but they do not count as actual knowledge until they are brought to bear on a particular instance of a certain kind. Thus, the way is open for someone to say that general knowledge does not require general objects. For it is always particulars that our actual knowledge is about, even if, necessarily, truths about particulars take a universal form.

The argument from knowledge, therefore, is not conclusive. Neither, however, is one of Frede-Patzig's arguments in favour of particular forms, the argument based on the notion of τόδε τι. Frede-Paztig's reasoning is rather simple[70]. Often in the central books of the *Metaphysics* Aristotle characterizes forms as τόδε τι[71]. Now, in the *Categories*, being a τόδε τι means or at least implies being a particular: Aristotle, for instance, opposes primary substances, i.e. particular substances, and secondary substances, i.e. species and genera, on the grounds that primary substances signify a τόδε τι, while secondary substances signify a ποιόν τι, a *such*. The same contrast between being a τόδε τι and being a such is represented in *Met*. B 6, where, once again, universals are described as *suches* and particulars as τόδε τι[72]. Thus, M. Frede and Patzig argue, when Aristotle says that forms are τόδε τι, he simply means that they are particulars. In spite of its simplicity, this line of argument is not convincing, either. In *Met*. Z 3 Aristotle explores and rejects the suggestion that matter is primary substance. The suggestion that matter is primary substance is the conclusion of the so-called «stripping away argument», where Aristotle pushes to the extreme the idea that being a substance is being an ultimate subject[73]. Since matter seems to qualify as an ultimate subject of all the properties of an object, matter

[70] Cf. Frede M., Patzig 1988, 1, p. 52.

[71] Cf. Arist., *Met*., Z 3, 1029a27-30; H 1, 1042a27-31; Θ 7, 1049a34-35.

[72] Cf. Arist., *Met*., B 6, 1003a8-9.

[73] Cf. Arist., *Met*., Z 3, 1029a16-19 and a26-27.

may also be thought to be primary substance. Aristotle rejects this conclusion. The reason is that matter does not satisfy two other requirements for something to qualify as primary substance, i.e. being separable (χωριστόν) and being a τόδε τι. Since both form and the composite of matter and form are χωριστόν and τόδε τι, they can both lay better claims than matter to being called primary substance[74]. Now, in *Met*. H 1 Aristotle makes it clear that form and the composite are not χωριστόν in the same sense[75]. The composite is χωριστόν unqualifiedly (ἁπλῶς), by which I take Aristotle to mean that it enjoys an autonomous and independent existence; form, by contrast, is χωριστόν not unqualifiedly, but only «in formula» (τῷ λόγῳ), by which it is presumably meant that the definition of form does not contain any reference to the matter in which form exists. Thus, there are two rather distinct senses of χωριστόν, one for the composite and the other for form. Why not suppose that there are two parallel senses of τόδε τι, one for the composite and the other for form? If we take this line, for instance, we could insist that only when referred to the composite does being a τόδε τι mean being a particular. Composites of matter and form are τόδε τι, i.e. particular objects, and are contrasted with species and genera, which are not τόδε τι but rather *suches*, i.e. kinds of thing. When applied to form, by contrast, being a τόδε τι does not mean being a particular, but something else, for instance, being *fully determinate*. As fully determinate entities, forms are not contrasted with species and genera, but rather with matter, which is indeterminate. If form is a τόδε τι in the sense of being fully determinate, it need not be a particular, but can still be some fully determinate and repeatable entity[76]. If this line of reasoning is plausible, Frede-Patzig's argument can be resisted and the possibility is still open of there being universal forms[77].

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[74] Cf. Arist., *Met*., Z 3, 1029a27-30.

[75] Cf. Arist., *Met*., H 1, 1042a28-31.

[76] This line of argument has been advocated by Gill 1989, pp. 31-8. I would only add to her account that the determinateness of form should be understood in opposition to the indeterminateness of matter.

[77] Another traditional option (see Ross 1924, 2, p. 310; Loux 1991, pp. 143-6) is to say that form is not a τόδε τι in the primary sense in which the composite of matter and form is. According to this view, form is a τόδε τι only in the sense that it is that in virtue of which the composite is a τόδε τι without being itself a τόδε τι in the strict sense of the term. Arist., *De An*., B 1, 412a7-9 is often invoked in support of this line of thought. This interpretation cannot be right for two reasons. First, form is primary

As a matter of fact, I think that forms are universal in so far as they are repeatable entities, i.e. entities that can exist as identical in many different things. Aristotle characterizes forms in precisely this way in *Met*., Z 8, 1034a5-8, when he rapidly touches upon the problem of the synchronic individuation of sensible objects:

> What is already a composite, i.e. such a kind of form in these flesh and bones, is Callias and Socrates. And they differ on account of their matter (for their matter is different), but are the same in form (for their form is indivisible)[78].

In the text quoted, Aristotle is just saying that two co-specific individuals, Callias and Socrates, have the same form and differ, i.e. are numerically different, on account of the different pieces of matter in which their form exists. Thus, form is clearly described as a repeatable entity, something that exists as one and the same in different things, i.e. the different pieces of matter it exists in. And it is the different pieces of matter that make form particular, by making it the form of this or that particular object. Form, in other words, is not primitively particular but is rather made particular by matter. This is just another way of saying that form is in itself universal[79].

It is important to lay stress on what distinguishes belief in universal forms from belief in universal kinds, i.e. species and genera. We have seen that Aristotle has two reasons to deny kinds any substantial status. For one thing, kinds are posterior to the particulars of which they are the kinds and hence are somehow drawn from particulars. For another, kinds do not play the explanatory role they might be thought

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substance. Therefore, if being a τόδε τι is one of the distinguishing marks of substantiality, form cannot be a τόδε τι in a secondary sense of the term. Second, this interpretation pays too little attention to the explanatory criterion of substantiality which Aristotle endorses throughout the central books of the *Metaphysics*. If form is that in virtue if which the composite is a τόδε τι, it must be, *for this very reason*, a τόδε τι in a more pregnant sense than the composite is, just as, if form is that in virtue of which the composite is a substance, it is substance more than the composite itself is.

[78] Trans. Ross.

[79] Note that in the passage quoted, the form of Socrates and Callias is said to be «indivisible» (ἄτομον), by which I think Aristotle means that Socrates and Callias cannot be divided, i.e. cannot be distinguished, on account of their form. This suggests that if we consider only the form of two co-specific individuals and not also their matter, we never get two individual things of the same kind, but only their common form.

to play. Now, form, whether it be universal or particular, does not fall prey to any of such two criticisms. Form, for instance, is not posterior to particulars, but rather prior to them. For it is one of the metaphysical constituents of particulars and so is in no sense drawn or obtained from particulars. Quite the contrary, form is what endows a particular object with its typical structure, internal organization and essential properties. As to the second criticism, form clearly plays a crucial explanatory role. For it is the constituent that accounts for the essential characteristics of a particular object and so explains its fundamental functions, its causal interaction and typical behaviour. What the passage from Z 8 shows is that the constituent that accounts for the essential characteristics of a particular object is universal. Particular objects are of the same nature because they share one of their constituents, i.e. their specific form, which is identical in each of them. The result is that the two constituents into which a particular object is analysable differ in their explanatory role and fundamental ontological status: form is common and so explains the common features of particulars, while matter is particular and so explains the individual features of particulars.

This understanding of the notion of universal forms enables us to explain away some texts that seem to establish, instead, that forms are particulars. The most important one comes form *Met*. Λ 5. As is known, in *Met*. Λ 4-5, Aristotle sets himself to establish in what sense things can be said to have the same causes and principles. Aristotle's answer is rather complex because «causes and principles» as well as «the same as» are spoken of in many ways. One further complication is that Aristotle does not only take substances into consideration, but also things belonging to categories other than substance. As far as substances are concerned, however, one line of thought clearly seems to emerge from the text. Aristotle believes that the form, the matter and the proximate moving cause of substances different in kind are themselves different in kind. Thus the form, the matter and the proximate moving cause (i.e. the male parent) of human beings are of a different kind from the form, matter and proximate moving cause of horses. What is more, Aristotle also believes that the form, matter and proximate moving cause of one individual of a certain species are different in number from those of another individual:

> [The causes] of things in the same species are different, not in species, but in the sense that the causes of different individuals are different, your matter and form and moving cause being different from mine, while in their universal definition they are the same (Arist., *Met*., Λ 5, 1071a27-29, trans. Ross).

The text is evidence in favour of particular forms. For it seems to say that your form (i.e. the form of one particular human being) is different from mine (the form of another particular human being) simply because they are different, i.e. because they are primitively different things. The same thing is true, of course, of your matter and mine, as well as of your proximate moving cause (your father) and mine. It is not surprising, therefore, that the text has been often invoked by supporters of particular forms[80]. These interpreters, however, misunderstand the sense in which, on my reconstruction, forms are universal. On my view, there is a perfectly reasonable sense in which my form is numerically different from yours. Since the forms of sensible objects only exist in matter, the only things we are confronted with in reality are enmattered forms, i.e. forms existing in different parcels of matter. And the form existing in *this* parcel of matter is numerically different from the form existing in *another* parcel of matter. In this sense, i.e. when we consider a form existing in different parcels of matter, I am well prepared to say that the only forms that exist are particular forms. Even if the only forms that exist are particular forms, however, the question can be raised of what makes forms particular. Are forms, in other words, particular of themselves or are they made particular by matter? What I am suggesting is that, in the light of *Met*. Z 8, the answer to the question should be that forms are made particular by matter. Thus, I gladly agree that my form is numerically different from yours, but I still insist that we are allowed to talk of numerically different forms only when we take into account the different pieces of matter in which forms exist. Forms, therefore, are not particular of themselves but are rather made particular by matter, which is another way of saying that they are of themselves universal, i.e. repeatable, entities. If we could strip away the matter that constitutes me and the matter that constitutes you, we would be left with one and the same form for both of us.

5. Met. *Z 13: a riddle*

5.1. *Two common strategies*

Everyone who claims that Aristotle's forms are universal must explain how this claim is compatible with Aristotle's explicit argument in *Met*. Z 13 to the effect that no universal is substance. For the argu-

[80] Cf. Frede M., Patzig 1988, 1, p. 52.

ment seems to establish that, if form is substance – and form is, indeed, substance – it must be particular. There are two common strategies to deal with *Met*. Z 13. I shall first present both of them and try to show that they are not entirely satisfactory. Then, I shall defend a different approach to the text, in line with the considerations I have made in the previous Sections.

In *Met*. Z 13, Aristotle puts forward eight arguments for the claim that no universal is substance[81]. A good way to present the two most common strategies for explaining away the force of Aristotle's conclusion is to focus on the first two arguments, which are the most general in scope. In sum, the arguments are the following:

[81] According to the traditional division, *Met*. Z 13 contains the following eight arguments: (i) 1038b8-15; (ii) 1038b15-16; (iii) 1038b16-23; (iv) 1038b23-29; (v) 1038b29-30; (vi) 1038b30-34; (vii) 1038b34-1039a3; (viii) 1039a3-14. The arguments are preceded by an introduction (1038b1-8) and followed by some kind of concluding dilemma (1039a14-23). The traditional division has been called into question by Gill 2001. I have defended it and criticized Gill's reconstruction in Galluzzo 2004. Burnyeat 2001 has attacked the traditional view from a different angle. According to him, Aristotle presents arguments against two different claims, the claim that universals are substances or parts of substances (arguments (i)-(vii)) and the claim that a substance is composed of other substances existing in actuality (argument (viii)). The rejection of both claims results in the final dilemma: if a substance is neither composed of universals nor of substances existing in actuality, then it is absolutely incomposite and hence indefinable. Burneyat's interpretation is guided by his general idea that the discussion of each candidate for the title of substance (as well as the analysis of substance as cause in Z 17) splits up into two levels of analysis: the logical level, which is abstract and so ends in *aporia*, and the metaphysical level, which provides, instead, positive solutions. Since, according to Burneyat, Z 13 belongs to the logical level of the section on universals, it is natural to expect the chapter to end in something like the final dilemma. The difficulty raised in the final dilemma is solved, Burnyeat holds, in *Met*., Z 15, 1039b20-31. A complete assessment of Burneyat's proposal falls outside the scope of the present paper. I am rather sceptical, however, that Burnyeat's two-level schema might apply equally well to all sections of *Met*. Z (and in particular to the section on universals, i.e. *Met*. Z 13-16), even though, I agree, it perfectly fits the structure of the section on essence (*Met*. Z 4-6 and Z 10-11). Nor is it entirely clear to me how the distinction between substance in the sense of form and substance in the sense of composite which Aristotle recalls in *Met*., Z 15, 1039b20-31 should solve the difficulty raised in the final dilemma. All things considered, I think the traditional understanding of the structure of *Met*. Z 13 is preferable.

A1) It is impossible that any of the things said universally be substance. For the substance of each thing is peculiar to it, i.e. it does not belong to anything else. The universal, by contrast, is common, i.e. it can belong, by nature, to many things (Arist., *Met*., Z 13, 1038b8-12).
A2) Moreover, substance is that which is predicated of no subject. The universal, by contrast, is always predicated of some subject (Arist., *Met*., Z 13, 1038b15-16).

As they stand, the arguments seem to conclude that no universal whatsoever can be substance. A1), for instance, rests on some sort of Peculiarity Condition: the substance of something must be peculiar to it. Universals, by contrast, are always shareable, at least in principle. Therefore, universals cannot be the substances of anything. Likewise, A2) establishes that predicates cannot be substances. And universals are predicates *par excellence*, i.e. things that exist in many things by being predicated of many things. Predication is here taken also as an ontological relation and not as a merely linguistic one. The conclusion in A1) and A2) seems to be very general: Aristotle does not distinguish between kinds of universal; nor does he seem to restrict the validity of his claim in any way. As is made clear in *Met*., Z 13, 1038b8-9, the arguments are supposed to show that universals cannot possibly be substances. If forms are universals, they are not substances. Since they are substances, they must be particular.

How to explain away A1) and A2)? The response provided by Driscoll and Code is that A1) and A2), as well as all the arguments in *Met*. Z 13, do not concern forms but only species and genera[82]. They think that *Met*. Z 13 does not concern forms because forms are not universal in the same sense as species and genera. For universals are predicated of particular sensible objects, i.e. particular composites of matter and form. Forms, by contrast, are not predicated of particular sensible objects, but, as Aristotle himself says, of different parcels of matter. Therefore, forms are not universal. This should not be taken in the sense that forms are particular. Forms are not particular because it is one and the same specific form that is predicated of different parcels of matter. Thus, form is something common or shareable, yet not universal, because only the things that are predicated of particular sensible objects are universal. As I shall attempt to make clear in a short while, there is much truth to this view. In particular, I agree with Driscoll and

[82] Cf. Driscoll 1981; Code 1984.

Code that *Met*. Z 13 is directed against the substantiality of species and genera. I also agree that the reason why forms are not classified as universals by Aristotle has something to do with their not being predicated of particular objects. There is, however, one crucial aspect of Driscoll and Code's view which I cannot accept, that is, the claim that forms are not universal in the same sense as species and genera. If to be universal means to be a repeatable entity, then forms are universal. For one and the same specific form exists in different parcels of matter. It is true that forms are universal with respect to particulars different from those with respect to which species and genera are universal: forms are universal with respect to different pieces of matter, while species and genera are universal with respect to particular composites of matter and form. But this fact alone is not enough to say that forms are not universal in the same sense as species and genera. Therefore, Driscoll and Code are right that A1) and A2) do not concern forms, but put forward the wrong motivation for believing so.

Other scholars, like for instance Loux, Lewis and Wedin, start from the correct assumption that forms are universal in the same sense as species and genera[83]. Their strategy to deal with A1) and A2), therefore, is different from Driscoll and Code's. Instead of saying that Aristotle does not have forms in mind, they insist that there is a way of reading A1) and A2) which makes forms completely immune to them. For brevity's sake, I shall follow Wedin in calling this strategy the Weak Proscription View (WPV). According to the WPV, we should distinguish between the mono-argumental sense of substance (*x* is a substance) and the bi-argumental sense (*x* is the substance of *y*). First of all, supporters of the WPV maintain that *Met*. Z 13 is concerned with the bi-argumental sense of substance and not with the mono-argumental sense. They insist, in particular, that Aristotle's claim in *Met*. Z 13 is not that universals are not substances (Strong Proscription), but rather that no universal is the substance of the things of which it is predicated (Weak Proscription). A universal, however, can still be the substance of the things of which it is *not* predicated. If the WPV is right, A2) can be easily explained away. If we read A2) in the light of the WPV, the argument simply establishes that a universal cannot be the substance of the things of which it is predicated. Thus, species and genera cannot be the substances of the particular composites of matter and form of which they are predicated. Analogously, form cannot be

[83] Cf. Loux 1979; Lewis F. 1991; Wedin 2000.

the substance of the particular parcels of matter in which it exists. For, as Aristotle says, form is predicated of the different parcels of matter it exists in[84]. But form can be the substance of the particular composites of matter and form, because it is *not* predicated of the particular composites of matter and form, but rather of the different parcels of matter it exists in[85]. A1) can be explained away in roughly the same way. The argument simply establishes that a universal cannot be the substance of that with respect to which it is universal. Thus, species and genera cannot be the substance of the particular composites with respect to which they are universal and, by the same token, form cannot be the substance of the particular pieces of matter with respect to which it is universal. But form can be the substance of particular composites of matter and form. For it is *not* universal with respect to them, but rather with respect to the different pieces of matter it exists in.

The WPV strikes me as implausible, most of all on textual grounds. It makes much of the distinction between the mono-argumental and bi-argumental sense of substance. I have already pointed out in Section 2 that I do not think that this distinction has the importance that some scholars attach to it. Whether I am right or wrong on this general point, however, the distinction does not seem to play any significant role in *Met*. Z 13. At 1038b8-9 Aristotle claims that the arguments he is about to present show that it is impossible for any of the things that are said universally to be substance. The main claim of the chapter is clearly formulated through the mono-argumental sense of substance and there is no indication that Aristotle wishes to qualify such a claim in some way or other. The same claim is restated at 1038b34-35 and referred back to in *Met*., Z 16, 1040b23 where, once again, no allusion is made to any possible qualification or restriction. Thus, the most natural reading of Aristotle's argument in Z 13 is that the items that he wants to call «universals» are not substances. There may be disagreement as to what Aristotle exactly means by «universals». One might also say that he is not entitled to the conclusion that universals are not

[84] Cf. Arist., *Met*., Z 3, 1029a23-24; Z 13, 1038b4-6 and Θ 7, 1049a27-b3.

[85] Frede M., Patzig 1988; Gill 2001 hold that form is predicated of the composite of matter and form. Arist., *Met*., Z 8, 1033a28-31 and Z 16, 1040b23-24 are often invoked in support of this view. These texts, however, are far from being unequivocal. Everything in the central books suggests that form is predicated of matter (whatever this claim might precisely amount to) and not of the composite. For more on this, see Galluzzo 2004, pp. 14-7.

substances but only to the weaker one that universals cannot be the substance of the things of which they are predicated. But it is clear it is the stronger conclusion that he wishes to argue for. WPV supporters would like us to restrict Aristotle's argument to the notion of 'substance of' but everything in the text suggests that we should not follow them in doing so.

To sum up, I agree with Driscoll and Code that in *Met*. Z 13 Aristotle does not have forms in mind, but species and genera. I cannot accept, however, their idea that forms are not universal in the same sense as species and genera. As supporters of the WPV insist, forms are simply universal with respect to particulars different from those with respect to which species and genera are universal. Although being right on that point, supporters of the WPV are wrong in insisting that *Met*. 13 can be understood only by distinguishing between 'substance' and 'substance of'. Thus, the common strategies to explain away *Met*. Z 13's arguments are not entirely satisfactory. What we need is a different approach.

5.2. *A different approach*

The different approach I am proposing takes as its starting point the claim that the things which Aristotle calls «universals» are the species and genera of particular sensible objects. Forms are universals (for they are repeatable and shareable entities) but are not the kind of things that Aristotle refers to by the word «universals» or equivalent expressions. Another way of making this point is to say that, within the philosophical tradition to which Aristotle himself may be said to belong, i.e. the tradition of Platonism, the species and genera of particular sensible objects are thought to be substances to the highest degree in that they possess per se the characteristics that particular objects possess only derivatively, i.e. by participation. And it is precisely of species and genera that Aristotle wants to say that they are not substances. If my reconstruction in Section 3 is correct, Aristotle has good philosophical motivations for holding this view. For species and genera are posterior to the particulars falling under them and so cannot explain their fundamental characteristics. Aristotle's motivations are sufficient to reject not only the Platonic understanding of species and genera, but also the view that he himself takes in the *Categories*, according to which species and genera do not exist apart from particular objects: species and genera, however understood, are not substances in that they are posterior to the objects of which they are the species and the genera.

In Section 2 I have tried to show that the question as to whether the principles of substances are universal should be read as the ques-

tion of whether the substantial principles of sensible objects are the species and genera to which these objects belong. In Section 3 I have also argued that this is precisely the sort of question Aristotle has in mind when he investigates whether the universal and the genus qualify for the role of substance. There is a certain expectation, therefore, that *Met*. Z 13 should evaluate the substantial character of species and genera. To appreciate how this expectation is actually met, it is crucial to understand the place which *Met*. Z 13 occupies within the section on universals, i.e. *Met*. Z 13-16. In *Met*., Z 13, 1038b6-8 Aristotle selects the universal as his new theme of enquiry. He remarks that the universal is thought by some people to be a cause and principle to the highest degree. The people in question are clearly Plato and the defenders of Forms. Thus, the view Aristotle is exploring is, first of all, the view that the kinds to which particular objects belong are substance more than they are precisely because they are their principles and causes. The assumption behind Plato's view, as Aristotle sees it, is that universality is a road to substantiality: things that are universally predicated of particular objects are more real than them. The consequence of this way of looking at things is that particular sensible objects either are not substances at all or are so only in a very derivative sense. Thus, one reasonable suggestion is that Aristotle's main target in *Met*. Z 13-16 is Plato's understanding of species and genera. It is important to realize, however, that Aristotle's objective is broader than that. This point can further be elucidated if we consider the peculiar character of *Met*. Z 13 when compared to the other three chapters of the section. The peculiarity concerns the notion of separation, the claim, in other words, that Plato's universals exist apart from particulars, which is prominent in Z 14, 15 and 16, but almost absent from Z 13. Aristotle's main contention in Z 14, for instance, is that it is impossible to hold that species, genus and *differentia* are separate and, at the same time, that the species is composed of genus and *differentia*[86]. Likewise, the notion of separation seems to play a crucial role in the argument against the definability of Forms in Z 15[87]. Finally, in Z 16 Aristotle assesses the merits and demerits of Plato's theory of Forms by putting emphasis on the role of separation[88]. In *Met*. Z 13, by contrast, separation plays

[86] Cf. Arist., *Met*., Z 14, 1039a24-26. For the notion of separation, see also 1039a30-b1.

[87] See, for instance, Arist., *Met*., Z 15, 1040a8-9; a19.

[88] Cf. Arist., *Met*., Z 16, 1040b26-30.

a considerably minor role in Aristotle's reasoning. It is mentioned, rather incidentally, only in one of Aristotle's eight arguments against the substantiality of universals. At 1038b30-34 Aristotle remarks that, if *man* and things like *man* are substances, then none of the parts of the definition of *man* (and in particular the genus) are substances, nor exist separately (χωρίς) from the species defined. Clearly, Aristotle is alluding here to the Platonic view that the species *man* and the genus *animal* are both separate and independent substances and is arguing that such a view is untenable because the parts of a definition do not exist apart from the object defined – a point he establishes in *Met*. Z 12. However, this is the only mention of separation in *Met*. Z 13. These considerations strongly suggest that in *Met.* Z 13 Aristotle is evaluating the substantiality of species and genera regardless of whether they are taken to exist apart from particulars. Of course, the substantiality of species and genera is especially hard to defend if one takes them to be separate. But species and genera cannot be substances even if they are not taken to be separate from particulars because they are, on any account, posterior to the particulars of which they are predicated.

There is much evidence that *Met*. Z 13 is concerned with species and genera. Form and matter are mentioned only in the introductory section of the chapter (1038b6, referring to form by the term ἐντελέχεια), where Aristotle sums up the results of his discussion of the subject. No mention of matter and form, by contrast, is made in the eight arguments against the claim that universals are substances. What is more, in 1038b23-29 Aristotle presents the following argument: it is impossible and absurd, he remarks, that a «this something» (τόδε τι), i.e. a substance, should consist of non-substances and of what is not «this something», namely of qualities. For, if this were the case, i.e. if substance consisted not of substances but of qualities, quality would be prior to substance (for parts are somehow prior to the whole), which is unacceptable. The argument evaluates the possibility that universals might be taken to be the substantial parts of substances. The possibility is ruled out on the grounds that universals are not τόδε τι, but ποιόν: the substantial parts of a τόδε τι, i.e. of a substance, must be themselves τόδε τι, i.e. substantial in character, while universals are not τόδε τι, i.e. substantial, but ποιόν, i.e. qualitative in character. It is not difficult to see that the argument is exactly the same as the one Aristotle advances in *Met*. B 6 and M 10: universals cannot be the substantial principles of substances because they are not τόδε τι. The only change is terminological: in B 6 universals are described as τοιόνδε, while in *Met.*, Z 13, 1038b23-29 they are described as ποιόν, in line with the characteriza-

tion we also find in the *Categories*. The terminological variation is, however, completely immaterial, as the text of *Met*. Z 13 clearly shows: in 1038b34-1039a2 and 1039a14-16 universals are once again contrasted with things that are τόδε τι and this time around the ordinary τοιόνδε replaces the term ποιόν in Aristotle's characterization of universals. Since in *Met*. B 6 and *Met*. M 10 the universals that are characterized as τοιόνδε are clearly the species and genera of particular sensible objects, it is natural to suppose that Aristotle also has species and genera in mind when in *Met*. Z 13 he characterizes universals as ποιόν /τοιόνδε. Consequently, as in B 6 and M 10, the substances that are τόδε τι, i.e. the substances of which we seek the principles, are particular sensible objects. It must be noted, in the same vein, that in *Met*., Z 13, 1039a2-3 Aristotle connects the contrast between τόδε τι and τοιόνδε with the Third Man Argument (TMA): if universals signified not a τοιόνδε but a τόδε τι, Aristotle says, many absurd consequences would ensue including the TMA. Now, the TMA concerns the species (and the genera) that are predicated of particular sensible men and posits the existence of a third man over and above the particular men and the Form of man. To my knowledge, nowhere does Aristotle apply the TMA to forms and I do not see any reasons why he should have done so.

The conclusion of my analysis, therefore, must be that the universals of which Aristotle talks in *Met*. Z 13 are the species and genera of particular sensible objects. The hypotheses that Aristotle seems to take into consideration are two: that the species is the substance and essence of the particular objects of which it is predicated; that the genus is *part* of the substance and essence of the particular objects of which it is predicated. Both hypotheses are rejected[89]. The general tenor of Aristotle's argument suggests that species and genera are not substances, however one conceives of them: while there is a special problem with the Platonic understanding of species and genera, species and genera cannot be substances even though they are taken to depend for their existence on their particular instances, as Aristotle suggests in the *Categories*. This squares with Aristotle's observations in *Met*. Z 10 and 11 to the effect that species and genera are not substances, but just universal composites of matter and form.

It might be objected to my general reconstruction that, even if Ar-

[89] Arguments (i), (ii), (vii) and (viii) seem to be directed against the first hypothesis, arguments (iii), (iv), (v), (vi) against the second. See footnote 84 for the traditional division of *Met*. Z 13.

istotle does not have forms in mind in *Met*. Z 13, nonetheless some of the arguments in the chapter strike against forms, if forms are universal. This is the case in particular with the first two arguments, A1) and A2). According to A1) and A2), forms cannot be substances if they are universal – and this regardless of whether it is forms that Aristotle had in mind when laying out his arguments. I shall conclude, therefore, by showing why A1) and A2) might be thought to make difficulties for forms, if they are universal, and how such difficulties can be dispelled.

A1) rests on some sort of Peculiarity Condition: the substance of something must be peculiar to it. Universals, therefore, cannot be the substance of anything because they always belong, at least in principle, to more than one thing. It seems that forms too are vulnerable to this argument, if they are universal. For, on my reconstruction, two cospecific individuals have one and the same form and differ only on account of their matter. This implies that form is an entity which belongs to more than one thing and hence cannot be peculiar to the thing of which it is the form. My reply to this line of thought is similar to the one I employed to explain away Aristotle's observation in *Met.* Λ 5 that I have my form just as you have yours. In both cases there is some misunderstanding about what it means for a form to be universal. Aristotle is not claiming that there are universal forms floating around. On the contrary, he is protesting against the view that there might be universal entities existing without a material substratum. All that we have experience of are forms in matter, i.e. forms made particular by matter. Thus the forms of which we have experience are peculiar to the object of which they are the forms simply because they exist in a particular material substratum, which makes them particular. This does not mean, however, that forms are not universal, for their particularity depends on something other than themselves, the particular parcel of matter they exist in. The Peculiarity Condition, in other words, applies to the form existing in matter (the only form of which we have direct experience) and not to the form taken apart from matter, i.e. the form taken in itself. This is a good compromise between Platonism and the view that there are no universal entities.

Things are slightly more complicated with A2). For the argument suggests that the entities that play the role of predicates cannot be substances. But in several places Aristotle says that form is predicated of matter[90]. It seems therefore that, according to A2), form cannot be sub-

[90] Cf. Arist., *Met.*, Z 3, 1029a23-24, Z 13, 1038b4-6, Θ 7, 1049a27-b3. It is rather

stance. The first thing I might say in response to this objection is that I do not see how it should worry supporters of universal forms more than advocates of particular forms[91]. For both parties must explain how form can be a predicate and still remain substance, given that Aristotle explicitly says that form is predicated of matter. What is more, there seems to be a special problem for particular forms, because it is more natural to suppose that if forms are predicates, they are universal: the same form, in fact, is predicated of different pieces of matter and it is not clear how the predicative nature of a form could accord with its being particular. Many interpreters in fact simply assume that forms, if they are genuine predicates, are universal[92]. This been said, the problem remains of explaining away A2). My suggestion is the following. Aristotle introduces the matter-form predication in several places in the central books. The most relevant for our purposes is *Met.*, Θ 7, 1049a27-36. In this passage, Aristotle distinguishes between two different types of predication, one in which the subject is a particular sensible substance and the predicate is an accidental property, and another in which the subject is matter and the predicate is form. The main point of contrast between the two types of predication is that in the particular-accident predication it is the subject, i.e. the particular object, that is τόδε τι, while in the matter-form predication the τόδε τι is the predicate. That is, in the particular-accident predication it is the subject that is a determinate entity, while in the matter-form predication it is the predicate that is so. One implication of this point is that when the subject is a particular object, it is prior to the predicate; when the subject is matter, by contrast, it is the predicate that is prior. Form, in other words, is prior to the matter of which it is predicated as well as to the result of the matter-form predication, i.e. the particular composite of matter and form. The way in which these considerations can be brought to bear on our understanding of A2) is that its being predicated of matter does not disqualify form from being substance,

difficult to see what Aristotle exactly means by the idea that form is predicated of matter. On the issue see: Chappell 1973; Brunschwig 1979; Dancy 1978; Page 1985; Lewis F. 1991; Loux 1991, pp. 147-9. I agree with Lewis that matter-form predication is, first of all, a metaphysical doctrine and so need not have any kind of linguistic counterpart, even if nothing of what Aristotle says prevents this *sui generis* kind of predication from being expressible through some kind of peculiar linguistic predication.

[91] Cf. Gill 2001.

[92] Loux 1991 is a striking example of this strategy.

for form is not predicated of a subject that is prior to it, but rather of a subject that has a secondary ontological status with respect to it. More in general, if something is predicated of a particular sensible object, it has a secondary ontological status with respect to that object; form's being predicated of matter, by contrast, does not make it a secondary entity. It is not by chance that in *Met.* Θ 7 Aristotle suggests that in the particular-accident predication the subject is substance while in the matter-form predication it is the predicate that is substance[93]. The conclusion must be that A2) only applies when the subject is a particular sensible object. This is the reason why species and genera are not substances: they are predicated of particular sensible objects and their being so predicated results in their having a secondary ontological status. A2), by contrast, does not apply when the subject is matter. For what is predicated of matter is prior and not posterior to it.

In conclusion, the arguments in *Met*. Z 13 are designed to rule out the view that the species and genera of particular sensible objects are substances, whether they are conceived of as Platonic Forms or as Aristotelian kinds. The arguments do not concern Aristotelian forms, nor are forms vulnerable to them. For forms are universal entities, but are not the kind of things Aristotle refers to by the expression «the universals».

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[93] Cf. Arist., *Met*., Θ 7, 1049a34-36.

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