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The Problem of Katholou (Universals) in Aristotle

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Graduate Program in Philosophy

A thesis submitted in partial fulfillment of the requirements for the degree in Doctor of Philosophy

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THE PROBLEM OF *KATHOLOU* (UNIVERSALS) IN ARISTOTLE

(Thesis format: Monograph)

by

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Graduate Program in Philosophy

A thesis submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy

The School of Graduate and Postdoctoral Studies
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ABSTRACT

My dissertation focuses on what I call Aristotle's "problem of *katholou*" in order to distinguish it from the "problem of universals" which is traditionally framed as the problem about the ontological status of universals. Aristotle coins the term *katholou* (traditionally rendered as "universal") and defines it as "that which is by nature predicated of many things" (*De Int.* 17a38). Yet, the traditional focus on the ontological status of universals is not Aristotle's. His positive remarks about universals remain neutral with regard to their ontological status and escape the standard divide of realism and nominalism. I start with Aristotle's neutrality and focus on *his* problem concerning universals and particulars.

The problem of *katholou* is to explain how what is most real can also be most knowable. It is generated by two of Aristotle's philosophical commitments: (i) particulars are most real and (ii) universals are most knowable (since knowledge is of the universal). My central task is as follows. I show that Aristotle's writings reveal three related solutions: one that appeals to the ontological interdependence between universals and particulars; one that appeals to the corresponding epistemological interdependence (and to notions of potentiality and actuality); and one that invokes the concept of form. In the last chapter of the dissertation, I show that Aristotle's commentator, Alexander of Aphrodisias, adopted primarily the last solution, which appeals to forms. I suggest that Alexander influenced the future direction of discussions about Aristotle's problem of *katholou* and the traditional problem of universals.

Keywords: Aristotle, universals, particulars, essentialism, ontological priority, substance, Alexander of Aphrodisias, the problem of universals.

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1

Introduction

My dissertation focuses on the problem of how what is most real can also be most knowable in Aristotle. I call it the “problem of *katholou*” in order to distinguish it from the age-old, and occasionally bitter, controversy over the existence and ontological status of universals, which is known as the “problem of universals”. The “traditional” problem of universals asks whether or not universals exist – whether they exist in reality or only in thought. Aristotle clearly plays an important role in the evolution of the traditional problem. He is the first to give the concept “universal” a name, coining it *to katholou*. He is also the first to define it: “that which is by nature predicated of many things” (*De Int.* 17a35-37).¹ Yet, Aristotle does not formulate the problem. The traditional problem of universals was first raised some six centuries later by Porphyry, who near the beginning of his *Isagoge* formulates but then modestly refuses to answer three questions about the ontological status of universals, saying that they are too “deep” for the present investigation.² These questions were made famous and bequeathed to the Middle Ages by Boethius through his translation of *Isagoge*.

¹ *Katholou* is a contraction of the phrase *kata holou*, meaning “according to the whole” or perhaps “in respect of a whole”, or “on the whole” – although of course without the casual tone of the latter. It is reasonably clear that the philosophical term *katholou* originates with Aristotle, for although Plato uses the adverbial phrase *kata holou* (*Meno* 77a5-9, *Rep.* 392 d-e), the term *katholou* does not occur in a technical sense prior to Aristotle’s works. The English term “universal” comes from the Latin *universale* which is a contraction of *unum versus alia* – a Latin translation of such Greek phrases as *hen epi pollon* and *hen kata pollon* (roughly, “one over many”), which occur a number of times (in relevant connections) in Aristotle’s corpus (e.g. *De Int.* 20b12, *An. Post.* 77a5-9). For a further discussion of Aristotle’s terminology, see Sacksteder (1986). I prefer to speak about Aristotle’s problem of *katholou* (rather than Aristotle’s problem of universals) since the phrase “problem of universals” associates too easily with the traditional problem of universals.

² Porphyry, *Isagoge*, 1,10-14. These questions are: “Whether genera and species are real or reside in bare thoughts alone, whether as real they are bodies or incorporeal, and whether they are separated or are in

From Porphyry and Boethius onward, generations of commentators have disputed over whether Aristotle's views on universals should be classified as a form of realism or nominalism (or conceptualism). However, the traditional focus on the ontological status of universals is not Aristotle's, and so it is little wonder that commentators have puzzled over his positive views, attributing to him radically different and opposing positions. In so far as Aristotle is concerned with opposing the Platonic separation of universals, he seems to be aware of the ontological problem. Nonetheless, his positive discussions of universals remain neutral and non-committal with regard to their ontological status and so escape the standard classifications of realism and nominalism.³ I will start with Aristotle's neutrality and approach his concept of *katholou* without assuming that he is concerned with the problem that was raised by Porphyry.

I focus on Aristotle's problem of *katholou*, which is to explain how what is most real can also be most knowable. Before discussing this problem in greater detail, I will sketch out some important aspects of Aristotle's understanding and criticism of the Platonic theory of Forms.⁴ One thing that is certain about Aristotle's universals is that they are not separate from particulars. Since "separation" is something that separates Aristotle from the Platonists, it is important to clarify what Aristotle means when he criticizes the

sensibles and have reality in connection with them". Although the commentators disagree on details, they are at one in supposing that Porphyry raised "the problem" and tabulated its possible solutions.

³ A good example is Aristotle's definition of a universal as "that which is by nature predicated of many things" (*De Int.* 17a38). This definition does not resolve the problem about the ontological status of universals (see footnote 5). Further, this definition (as Aristotle's remarks on universals in general) seems to escape a distinction we might draw between being *a* universal and being universal (which in any case would be much more awkward to draw in Greek since Greek does not have an indefinite article). This distinction might be comparable to a distinction between *a* human being and being human, for example. The talk of *a* universal might suggest that we are talking about some thing or entity, whereas the talk of universal (or being universal) might suggest that we talk about some property or feature of something. In my dissertation, I will flip back and forth (like Aristotle himself) between these two ways of talking about (a) universal, but even when I speak about *a* universal (or universals in plural), one should not assume that I am speaking about something that we would nowadays call "universal".

⁴ I will not consider here the controversial question of whether or not Aristotle's criticism of the Platonists is justified, or whether Plato himself is a Platonist.

Platonists for separating Forms from sensible particulars. In the second part of this introductory chapter, I will turn to Aristotle's formulation of an *aporia* in *Metaphysics* B 6 concerning whether the principles of things should be regarded as universal or particular. I show how it invokes Aristotle's problem of *katholou* and consider a well-established understanding of this *aporia*.

Separation

Aristotle repeatedly insists that universals are not separate, not apart from or beside (*para*) the particulars, not substances (etc.). In fact, his negative remarks about universals are significantly clearer and less tentative than any of his positive ones. The primary targets of these negative remarks are evidently the Platonists who, according to Aristotle, separated universals from particulars and turned them into substances. As is well known, the central point in Aristotle's criticism of the Platonists concerns the separation of Forms. We are told that separation is responsible for all the difficulties in the Platonic theory of Forms (e.g. *Met.* M 9, 1086b6). Unfortunately, however, Aristotle never provides a clear explanation of what he means by "separation" (*chôrismos*). I believe this becomes clearer when we consider three questions that seem to underlie his negative and polemical remarks about universals:

1. Are there uninstantiated universals, i.e., universals that can exist without, or independently of, particular things?
2. Are universals ontologically prior to particulars? Stated otherwise, is there an asymmetrical ontological dependence between universals and particulars such that particulars cannot exist without universals but not *vice versa*?

3. Do universals remain outside the being (*ousia*, essence) of the things that have them?

Aristotle answers these questions negatively, whereas the Platonists (as Aristotle understands them) give affirmative answers. These affirmative answers, I believe, can all be subsumed under the title “separation of universals”. In what follows, I will consider Aristotle’s approach to these questions in greater detail and take as my starting point his characterization of a universal in *De Interpretatione* 7, which is a *locus classicus* for Aristotelian definitions of the “universal” and “particular”:

Some things (*pragmata*) are universals (*ta katholou*), others are particulars (*ta kath’ hekasta*). By universal I mean that which is by nature predicated (*katêgoreitai*) of many things; by particular, what is not; human being, for instance, is a universal, Callias a particular. (17a35-38)

This passage presents universals and particulars as two kinds of things, *pragmata*. This suggests, at the very least, that there are universals, i.e., they exist. Indeed, whenever Aristotle criticizes the Platonists for separating universals, he does not give as a reason that they do not exist (though if they did not exist, it would, of course, be true that they are not separate). Further, this passage suggests that the particular and the universal are correlative, interdefinable notions – universals are said of many things, particulars are not. The one is the negation of the other. But other than that, Aristotle’s definitions are rather vague. He does not tell us how universals are supposed to exist⁵ or what is the nature of their relationship to particulars (which are defined only negatively). Even a

⁵ As Lloyd says, this definition “allows at least three categories of things to be ‘said of’ or predicated of something: (a) linguistic entities, i.e., predicate expressions, (b) extra-linguistic entities, i.e., properties, (c) entities which are possibly intermediate, i.e., the ‘terms’ of his [Aristotle’s] logic” (1981, 3-4).

committed Platonist could find his definition of a universal acceptable since it may be interpreted as compatible with universals that are separate from the things of which they are predicated.

Aristotle's ontological commitments become remarkably clearer when we combine his definition of a universal with what he says in the *Categories*, where he distinguishes between primary and secondary substances. He does not use the terms "universal" and "particular" in the *Categories*, but he tells us that primary substances are "not said of a subject" (2a14), whereas a secondary substance such as human being "is said of a subject, this human being" (1a21). And this conforms to his definition of the "particular" and "universal" in the *De Interpretatione*. The culmination of the *Categories* is Aristotle's conclusion that "if the primary substances did not exist it would be impossible for any of the other things to exist" (2b5). I will analyze Aristotle's arguments leading to this conclusion in Chapter Two, but for now suffice it to say that this is a strong conclusion. Aristotle insists that it is *impossible* for universals to exist without primary substances; that they *cannot* exist without them. Following Gail Fine (2008; 2004), I will call the capacity to exist without the existence of some other thing the capacity for independent existence with respect to that thing. So, Aristotle believes that universals lack the capacity for independent existence with respect to particulars. A universal conceived of as capable of existing on its own, independently of particulars, is an impossible entity – a fiction perhaps.

In the *Categories* Aristotle does not contrast his views on universals with those of the Platonists, but he does so in the *Metaphysics* where he famously argues that no universal is substance (Z 13-16). It is controversial whether he intends to make the strong claim that universals are not substances at all, or the weaker claim that they are not substances

in the same way as particulars,⁶ but it is clear that he intends to deny (as he also does in the *Categories*) that universals can exist without particulars. He argues that “none of the universals can exist apart from particulars separately (*hōris*)”, whereas the Platonists “separate (*chōrizontes*) Forms” (Z 16, 1040a25-26). When Aristotle argues that no universal exists “separately” from particulars, he (minimally) has in mind that they cannot exist without, or independently of, particulars. Hence “separation” indicates the capacity for independent existence.⁷ Accordingly, the Platonic Forms are separate from particulars in the sense that they can exist whether or not particulars exist. In contemporary literature, this point is often put in terms of “instantiation” – the Platonic Forms (unlike Aristotelian universals) can exist without their instances.

Further, it seems that the Platonic Forms are not only separate from particulars, but also ontologically prior to them. Aristotle explains the notion of what is traditionally called “ontological priority”, but what he calls a priority by “nature and substance”, as follows:

Some things then are called prior and posterior in this sense, others by nature and substance, i.e., those which can exist without (*einai endechetai aneu*) other things, whereas others cannot exist without them – a distinction which Plato used. (*Met.* Δ 11, 1019a1-4)

⁶ This issue is more complicated since a substance (*ousia*), as we will see in Chapter Four, is ambiguous. Aristotle speaks (i) of a thing, such as Socrates, as an *ousia*, but also (2) of the *ousia* of a thing. The proposal that has gained fairly widespread acceptance is that Z 13 is not making the strong claim that no universal is a substance, but a weaker claim that no universal is the *substance of* that of which it is predicated. See, e.g., Loux (2008, chap. 6).

⁷ That Forms’ separation amounts to their capacity for independent existence is the most widespread interpretation, which is defended, most notably, by Fine (2008 [2003], 2004 [1993]). This interpretation is challenged, e.g., by Spellman (1995), who admits that Aristotle takes the Platonic Forms to be capable of independent existence, but denies that this is what “separation” means. On her interpretation, “separation” means “numerical distinctness”. See also Morrison (1985), who makes a similar suggestion. I do not think that “separation” needs to mean only one thing (or that the capacity for independent existence needs to exclude numerical distinctness), but, whatever else “separation” means, it seems clear to me that it means “capacity for independent existence”.

This priority (i.e., the priority of whatever can exist without other things which in turn cannot exist without it) is defined in terms of the capacity for independent existence and attributed to Plato.⁸ According to this definition, universals (say) would be ontologically prior to particulars just in case they can exist independently of particulars, whereas particulars cannot exist without them. Aristotle does not explicitly identify the notions of separation (i.e., the capacity for independent existence) and ontological priority. Nonetheless, his account of the Platonic position (as well as his remark that such a distinction was used by Plato) suggests that in the case of Forms, separation and ontological priority come to much the same thing. In *Metaphysics* A 5, for example, Aristotle says that Plato held “all things are called after (*para*) Forms and in accordance (*kata*) with them; for it is by participation (*kata methexin*) that there exists the plurality of things called by the same name as the Forms” (987b9-11). Since particular things can exist only by participating in Forms, whereas Forms do not likewise depend on their particular instances, it follows that Forms are ontologically prior to particulars – the relation of ontological dependence between them is asymmetrical.

But why is separation a problem? Why does Aristotle object to separate universals? One important objection is that the Forms “make no contribution to our knowledge of other things, for they are not even the *ousia* (being, substance, essence) of these – if they were, they would have been in (*en*) them; nor do they contribute to the being (*to einai*) of other things since they do not exist in (*mê enhyparchonta*) the things that participate in them” (*Met.* A 9, 991a12-14).⁹ This suggests that Forms are separate from particulars also in the sense that they remain outside the being (*ousia*) of things that participate in

⁸ See Fine (2008), who argues that this sense of priority is illustrated at *Eudemian Ethics* A 8 in Aristotle’s discussion of the Form of the Good (1217b1-16). For a further discussion of Aristotle’s definition of ontological priority, see Chapter Two.

⁹ See also *Met.* Z 8 (1033b27), M 12 (1079b37).

them; they are not any essential part of those things. The force of this objection will become clearer in the following chapters. For now, it is enough to point out that Aristotle thinks that, on the Platonic account, the definition of human being, for example, applies to Socrates not because of something he is (to wit, a human being) but only because of something he has or participates in (namely, the Form of human being). So, as Aristotle sees it, the Platonists distinguish between universals and particulars in so harsh a manner that a universal cannot possibly contribute to the being or knowledge of particular things. The Platonic theory of Forms thus involves a radical bifurcation of reality, with particulars and universals as irreducibly distinct types of things.

Further, Aristotle holds that the Platonists not only make Forms entirely distinct from particulars, but turn them into separate substances. No universal, however, can be a separate substance, which is tantamount to saying that no universal can be a particular. Aristotle develops this objection in greatest detail in *Metaphysics* M 9, which also contains his most detailed account of the origin of separate Forms:

For they [the Platonists] treat Forms both as universal and again as separate (*chôristas*) and particular (*tôn kath' hekaston*). But it has been argued before that it is impossible. The reason why those who say that the substances are universals combined these [universals and particulars] in one is that they did not make them [the substances] the same with sensible things (*aisthêtois*). They thought that sensibles were in a state of flux and that none of them remained, but that the universal was apart from (*para*) these things and different (*heteron*) from them. Socrates gave the impulse to this [view], as we said before, by means of his definitions; but he did not separate (*echôrise*) them [universals] from the particulars. And he was right not to separate them. This is clear from the results. For it is not possible to get knowledge without the universal, but separating (*chôrizein*) is

the cause of the difficulties arising about the Forms. Since the Platonists, on the assumption that any substance besides the sensible and flowing ones had to be separate (*chôristas*), had no others, they set apart universally predicated substances, so that it followed that universals and particulars were almost the same sort of thing. This in itself, then, would be one difficulty for the view discussed. (1086a31-b11)

According to this passage, the separation of Forms is a consequence of the Socratic view of knowledge, the Heracleitean view about sensible things, and the assumption that Forms as substances should be universal. Aristotle tells us that Socrates gave the impulse to the theory of Forms through his attempt to define universals. He “sought the universal in moral things and was the first to turn his thought to definition” (*Met.* A 1, 987a31; M 4, 1078b18-19). However, Socrates did not separate universals, and Aristotle sides with him on this issue, saying that without the universal one cannot attain knowledge but separation is responsible for all the difficulties concerning Forms. Platonists agreed that knowledge and definition are of universals. But since they also accepted the Heracleitean view that “all sensible things are always in flux and there is no knowledge of them” (*Met.* A 6, 987a31; M 4, 1079b13), they conceived that the subjects of Socratic definitions must be different and apart from (*para*)¹⁰ sensible particulars. The above passage suggests that the Platonists’ move from the flux of sensibles to the separation of Forms is mediated by the assumption that if there are any substances besides the sensible flowing ones, they must be separate. Since the Platonists “had no others”, they assigned separate existence to substances that are “predicated universally” (*katholou legomenas*).

¹⁰ “*Para*” can but need not indicate separation (it can also indicate mere difference). See Fine (2008, 266), Cherniss (1962, n. 56).

Aristotle does not challenge the assumption that substances must be separate; he rather endorses separation as a criterion of substantiality. In *Metaphysics* Z 16, he says that the Platonists are “right in one respect by separating Forms, if indeed they are substances” (1040b27-29). The problem Aristotle sees with the Platonists is that they “did not make them [separate substances] the same with sensible things” (1086a36) but identified them with universals. In other words, the mistake of the Platonists is to think that the Form considered as a separate substance should be universal. Thus, it seems that although the Heracleitean view of flux motivates the Platonists to separate Forms (it explains why they did not make substances the same as sensible particulars), the notion of the *separate* Form does not follow directly from the Heracleitean view, but rather from the mistake of considering the separate substance to be universal.¹¹

Aristotle holds this mistake to have the absurd consequence that “universals and particulars were almost the same sort of thing” (1086b11). I agree with Fine (2008) that this objection relies on the assumption that separability implies particularity. Indeed, in *Metaphysics* M 10 Aristotle says, “if one does not suppose the substance to be separated, and in the way in which particular existing things (*kath' hekasta tôn ontôn*) are said to be separate, one will destroy substance as we wish to speak of it” (1086b16-19). Accordingly, if Forms are separate from particulars, they cannot be universals but must themselves be particulars. Hence, the Platonists put (according to Aristotle) incompatible requirements on their substances. In so far as Forms are universals, they must have instances; but in so far as they are separate substances, they are particulars and

¹¹ Similar interpretation is developed by Cherniss (1962) and Fine (2008). I will not consider the question of whether Aristotle is right to understand Plato (or Platonists) the way he does. For a further discussion of this issue, see Mabbott (1926), Irwin (1977), Devereux (2008).

particulars cannot have instances. In other words, the Platonists, in treating universals as separate substances, treat them as particulars *beyond* their particular instances.

Although Aristotle criticizes the Platonists for turning universals into separate (and hence particular) substances, he does not challenge the main motivation for this theory, *viz.*, the position that knowledge and definition are of universals. He shares with Plato the Socratic insight that knowledge is concerned with definitions, and definitions are of universals. Aristotle repeatedly claims that knowledge (*epistêmê*) is of the universal, and he frequently contrasts universals as objects of knowledge with particulars as objects of sense perception.¹² In presenting the “greatest” problem in *Metaphysics* B 6, Aristotle says:

Connected with these is a problem (*aporia*), greatest of all and the most necessary to examine. If there is nothing apart from particulars (*para ta kath' hekasta*), and these are infinite (*apeira*), how is it possible to get knowledge (*epistêmê*) of things that are infinite? For in every case we know things just in so far as they are something one and the same and in so far as something universal belongs to them (*katholou ti hyparchei*) ... Well, then, if there is nothing apart from particulars, nothing will be intelligible (*noêton*), and there will be no knowledge, unless one calls sense perception (*aisthêsin*) knowledge. (999a26-b3)

Aristotle asks us to consider two alternatives: either (i) there is something beside or apart from (*para*) particulars, or (ii) there is not. The above passage focuses on (ii), arguing that if there were nothing apart from particulars, there would be no knowledge of particulars. He offers as a reason for why particulars cannot be known in the absence of

¹² See, e.g., *An. Post.* A 8, A 24 (86a29), A 31 (87b29-38), B 12 (97b28-31); *Met.* A 1 (981a12-28), Z 15; *NE* Z 3, Γ 8 (1142a23-31).

universals that particulars are “infinite” (*apeira*, lit. “without limits”), where “infinite” is most naturally understood as indicating numerical infinity. However, it seems to me that the real problem is not that the number of particulars is actually infinite or even that it is very large. The real problem is the lack of something universal, something that is common to many particulars. For everything we know, Aristotle says, we know in so far as some one and the same thing, some universal belongs to it (999a28-29). It seems that even a finite plurality of particulars would be unknowable without something belonging to them in common. Thus, the point of this “greatest” problem seems to be that it is impossible to have knowledge of particulars in themselves in the absence of universals. That is to say, it is impossible to know them in all their particularity – as such, they are accessible only to sense perception. So, if only particulars existed (if there were no universals) then there would be no knowledge, unless we call sense perception knowledge.

On the other hand, if we assume that (i) there *is* something apart from particulars in the way Platonic Forms are apart from particulars, then various other problems arise, some of which I have discussed above. Aristotle argues that Forms that exist separately from particulars cannot contribute to our knowledge of a given particular, because knowing a Form would not be knowing this particular (*Met.* A 9, 991a12-13). Further, it is not even clear how there could be knowledge of Forms themselves. Since separation turns Forms into particular substances, it would appear that they are as unknowable and indefinable as sensible particulars (*Met.* Z 15).¹³ Aristotle thus seems to admit that the demand for separate Forms is the strongest when we consider that the sensible particulars are unsuitable for being the objects of knowledge. And although he denies that such

¹³ I consider Aristotle’s argument for the indefinability of Forms (in Z 15) in Chapter Four.

Forms exist (or are necessary for knowledge), he concedes that the possibility of knowledge requires there to be something common to many sensible particulars.¹⁴

Aristotle is thus very much concerned with opposing the Platonists' attempt to promote universals to the status of separate substances. For Aristotle, no universal can be a separate substance. Nonetheless, he accepts the Socratic-Platonic claim that knowledge and definition are of universals. Aristotle seems to be aware that these commitments (no universal is a substance; knowledge is of the universal) involve a certain tension, which he expresses most clearly near the end of *Metaphysics* B. There he formulates an *aporia* concerning whether the first principles are universal¹⁵ or “what we call particulars”. In what follows, I will analyze this *aporia*, and show how it leads to Aristotle's problem of *katholou*, i.e., the problem of showing how what is most real can also be most knowable.

Aristotle's Problem of *Katholou*

In the first lines of *Metaphysics* B, Aristotle argues that any progress in philosophy hinges on working through problems, *aporiai* – and he devotes the whole of B to drawing up these problems. An *aporia* indicates a puzzle (problem, impasse) in inquiry or the corresponding mental state of puzzlement, especially one arising from arguments for conflicting conclusions. Aristotle compares an *aporia* to a knot and the corresponding state of puzzlement to being tied up by a particular knot or problem in inquiry: “in so far

¹⁴ See *Peri Ideôn* (79, 15-19; cf. 81, 8-10), where Aristotle argues the Platonic “arguments from the sciences” do not prove that there are separate Forms, but they do prove that there are “common things” (*ta koina*) that are objects of knowledge.

¹⁵ The ambiguity in the term “universal” (see footnote 3) becomes especially obvious when we move to Aristotle's positive discussions of universals. For it is more problematic to talk about Aristotle's first principles as universals than to talk about Platonic Forms as universals, since such talk creates the impression that we are talking about some sort of *things* (in the strong sense of the word). Although my aim is to explore Aristotle's concept of *katholou* without settling the controversy over the ontological status of his universals, I typically translate *katholou* as an adjectival expression (without always pluralizing it).

as one is in a state of *aporia*, one resembles people who are tied, since one cannot move forward either way” (995a33).¹⁶ An *aporia* (in the sense of a particular puzzle or problem) is not just any old question, but a question that takes the form of a dilemma (e.g. *whether* the principles are universal *or* particular). A genuine *aporia* arises because there are good arguments and considerations on *both* sides of an issue, pulling us in apparently opposite and conflicting directions and making us unable to “move forward either way”.

Aristotle seems to think that working through *aporiai* is conducive to making progress (*euporein*) for at least three reasons. Firstly, going through *aporiai* provides an awareness of the problem. There cannot be a resolution or untying of a knot unless we first recognize that there is a knot to be untied: “it is not possible for those who are unaware of a knot to untie (*luen*) it” (995a29). Secondly, Aristotle says that those who inquire without first going through problems are like people who do not know where they have to go, what their goal is, or whether the goal has been reached (995a34-b2). Thus, going through *aporiai* provides a direction and goal for an inquiry, giving us (presumably) a clearer idea of where we need to be going (for our inquiry needs to aim in some direction rather than being aimless), and whether or not we have found the solution. Thirdly, Aristotle says that one is in a better position to judge when one has heard all the conflicting arguments, like opposing parties in court (995a1-2). Thus, going through *aporiai* gives us a better grasp of the relevant evidence (as opposed to a one-sided grasp of the evidence).

¹⁶ See also *Top.* Z 6 (145b4-20), where Aristotle distinguishes between two senses of *aporia*, claiming that an *aporia* indicates an “equality of contrary reasonings”, and then specifies the contrary reasonings are what produce the *aporia* in the thought.

The majority of *Metaphysics* B's *aporiai* are concerned with the principles (*archai*, sources) of things. As Aristotle explains in *Metaphysics* Δ, it is common to all principles “to be the first point from which a thing either is or comes to be or is known” (1013a17-18). Nowadays we are in a habit of distinguishing between ontological principles (principles of being) and epistemic principles (principles of knowledge), but Aristotle would not draw a sharp contrast between them. He assumes the correlation of being and knowing familiar from Parmenides and Plato¹⁷: what is real is knowable, and what is knowable is real. In other words, he assumes that there must be a close relationship or correspondence between the order of being and the order of knowledge. In *Metaphysics* M 10 (1087a10-12), he argues that the statement “all knowledge is of the universal” presents the “greatest problem” since it has as a consequence that the principles of things (*tas tôn ontôn archai*) and hence all existing things themselves are universal (and this conflicts with the notion of substance as something separate and particular). This argument clearly relies on the assumption that knowledge is of what is real and shows that Aristotle is committed to what we might today call a “realist” conception of knowledge and reality.¹⁸

Altogether Aristotle presents in *Metaphysics* B some five or six *aporiai* that discuss universals (either directly or indirectly).¹⁹ The most important of them for my purposes is the last *aporia* of book B (commonly distinguished as *aporia* 15), which asks whether the principles are universal or “what we call particulars”:²⁰

¹⁷ See DK 28 B 3; *Rep.* 477b, *Parm.* 134a.

¹⁸ See also *Cat.* 12 (14b11-23); *An. Post.* B 7; *Met.* Γ 6 (1011b26-28), Z 9 (1034b20-2). For a further discussion of Aristotle's commitment to a metaphysical realism conception of knowledge and reality, see Irwin (2002, 5-7).

¹⁹ For a well-written discussion of these *aporiai*, see Madigan (1999).

²⁰ This *aporia* is also stated in *Metaphysics* K 2 (1060b20-24) and M 10 (1086b20-1087a35).

We must not only raise these problems about the principles, but also ask whether they are universal or what we call particulars (*kath' hekasta*). If they are universal, they will not be substances (*ousiai*). For nothing that is common indicates a this something (*tode ti*), but rather a such (*toionde*); but substance is a this something. But, if we can set up that which is predicated in common as a this something and one thing, then Socrates will be many animals – himself, the human, and the animal, if each of these indicates a this something and one thing. So, then, if principles are universal, these things follow. If, on the other hand, they are not universal, but rather like particulars, they will not be knowable, for knowledge of all things is universal. Therefore, if there is going to be knowledge of the principles, there will be other principles, prior to them, which are predicated universally of them. (1003a5-17)

In the formulation of this *aporia* Aristotle clearly assumes that the principles of things must be *either* particular *or* universal. Thus the *aporia* is a dilemma, one horn of which casts doubt on the claim that the principles are universal, and the other horn raises the problem of how there can be knowledge if the principles are not universal.

Taking the first horn of the dilemma, Aristotle argues that no universal is a substance because no universal indicates a “this something” (*tode ti*) and a substance is a “this something”.²¹ Aristotle is not clear about what he means by “this something”, but he frequently contrasts *tode ti* with “such” (in the above passage *toionde*, elsewhere *poion ti* or *toiouton*). Since he insists that a universal signifies a “such”, rather than a “this

²¹ Although scholars often translate *tode ti* as a “particular”, I will understand the phrase literally to mean “this something”, where *tode* is demonstrative and *ti* picks out a certain sort of thing. As we will see in Chapter Two, this understanding has implications for Aristotle’s conception of particularity and for his solution of the problem of *katholou* (in particular, I will argue that this phrase indicates that particular substances are not completely unique but share features with other particulars of the same species or kind). However, the above passage remains non-committal about the ontological character of *tode ti*, and, accordingly, I will not attempt to read these implications into his formulation of the problem.

something”, it seems to follow (given the assumption that principles must be *either* universal *or* “what we call particulars”) that a “this something” is a particular substance, e.g. Socrates.²² Indeed, it seems that the most obvious way to defend the premise that no universal is a substance would be to argue that no universal is a particular. So, to treat universals as “this somethings” is equivalent to treating them as particulars (to give them names say). Aristotle thinks that this was precisely the mistake of the Platonists, who in separating universals promoted them to the status of particular things.²³ However, in the above passage Aristotle appeals to a slightly different line of thought. He argues that if universals themselves were “this somethings”, then a particular substance like Socrates would turn out to be a bundle of substances, “many animals”, one for each universal predicated of him.

So, universal principles cannot be “this somethings” and hence they cannot be substances. However, if principles are not universal, they will not be knowable, for “knowledge of all things is universal” (*katholou gar hê epistêmê pantôn*). Aristotle argues that particular principles could only be known through prior universal principles, each of them predicated of a number of particular principles. And this is problematic, since it would cancel out the assumption that all principles are particular (and hence the assumption that principles are *either* universal *or* particular), and/or it would lead to the problematic position that non-substances (universal principles) are prior to substances (particular principles of which universal principles are predicated).

²² See, esp., *Cat.* 5 (3b10-12), where Aristotle argues that *tode ti* indicates a primary substance or, more generally, whatever is “one in number and indivisible”, whereas a secondary substance signifies not a *tode ti* but a “such” (*poion ti*).

²³ Aristotle seems to think that the Platonic Third Man Argument results from treating the Form of human being as if human being were a *tode ti* (see *Met.* Z 13).

In summary, the dilemma is this: if the principles are universal, it appears that they are not substances, but if the principles are particular, there is a danger of having to conclude that (although they are substances) no knowledge of them is possible. So, the premise that a substance is a “this something” (or that no universal is a particular) pulls us toward the conclusion that principles are particular, whereas the premise that knowledge is of the universal pulls us towards the conclusion that principles are universal. In order for these premises to produce a real conflict and genuine puzzlement, Aristotle must be relying on the following two assumptions.

Firstly, this *aporia* is formulated within a dichotomy between the particular and the universal. According to Aristotle, particular principles will not be knowable and universal principles will not be real (or substantial). Thus, the formulation of an *aporia* relies on the assumption that there is no obvious correlation between particulars and knowability, on the one hand, and the substantiality and universals, on the other. In light of these considerations one could express the dichotomy between the particular and the universal as a contrast between what is real (or substantial) and what is knowable. Nonetheless, this would not be the most obvious way of putting Aristotle’s point. For when we contrast what is real with what is knowable, then it is not evident why the substantiality of *particulars* should conflict with the knowability of *universals*. One could easily argue that particulars as substances *are* knowable (though perhaps less knowable than universals) and/or universals as objects of knowledge *are* real (though not as real as particulars). Indeed, in the above passage Aristotle says that particular principles can be known only through prior universal principles (and hence they *are* knowable somehow); but he does not think that this avoids the problem. This suggests that the contrast Aristotle wants to draw is the contrast between what is *most* real and

what is *most* knowable. That is to say, Aristotle's formulation relies on the assumption that particulars (not universals) are most real and universals (not particulars) are most knowable (since knowledge is of the universal).

Secondly, in order for the premises of the *aporia* to produce a real conflict, Aristotle must be assuming that the principles that are most real will also be most knowable. For one could supposedly accept both the premise that particulars are most real and the premise that universals are most knowable (and leave it like that). Why assume that those premises generate an *aporia*? It seems that these premises lead to an *aporia* precisely because Aristotle does not distinguish the order of being from the order of knowledge. He assumes that whatever is most real must also be most knowable. This assumption creates a problem because it is not obvious how knowability and substantiality could apply to one and the same thing. The problem of explaining how what is most real can also be most knowable is what I call Aristotle's problem of *katholou*.

I believe that the problem of *katholou* is indeed *Aristotle's* problem. He formulates it in terms of principles and commits himself to the premises that generate this *aporia*. He remains committed throughout his writings to the position that no universal indicates a "this something" and that substance is a "this something". And he repeatedly says that knowledge is of the universal. Nonetheless, it is not easy to determine how serious Aristotle takes this problem to be.²⁴ As I have suggested above, the formulation of the *aporia* relies on a dichotomy between the particular and universal. The *aporia* is generated on the assumption that the particular and the universal are two entirely distinct things, which leaves it hard to see how knowability and substantiality could apply to one

²⁴ Alexander of Aphrodisias, for example, does not seem to think that the *aporiai* of book B express serious problems for Aristotle. At least he nowhere in his commentary on book B suggests that Aristotle himself is seriously perplexed. Several modern scholars, however, have taken the opposite view; for an overview of modern scholars' views, see Madigan (1999, xxii-xxvii).

and the same thing. This assumption, however, is characteristically Platonic. According to Aristotle, the Platonists distinguish universal Forms sharply from particulars, ascribing to Forms independent existence and ontological priority over concrete particulars. Platonism is thus a dualist view that distinguishes between two things, the one of which can exist apart from the other.

My view on this issue (as will become clearer) is that Aristotle solves the problem by minimizing the distinction between particulars and universals. Since the universal and the particular are not entirely distinct things, there is no deep or insoluble problem of how what is most real can also be most knowable. However, this does not mean that there is for him no problem at all. I think he is aware that the premises of the problem (substances are “this something” and knowledge is of the universal) involve a tension. This tension is real. As we will see, it will not be easy to develop and conceptualize a middle position that does justice to both sides of this *aporia*.

It seems to me that the *seriousness* of the problem is generated to a large extent by later tradition. The first author who draws attention to the problem is Eduard Zeller, claiming that “it only remains, then, to recognize in this point, not merely a lacuna, but a deep contradiction (*Widerspruch*) in the philosophy of Aristotle” (1862, 234). Since then, the difficulty has often been explained as an inconsistency between three positions (or “pillars”, as Zeller calls them) to which Aristotle is committed:

- (i) Substance is particular (substance is what is most real);
- (ii) knowledge is of what is most real;
- (iii) knowledge is of the universal (universal is what is most knowable).

Harold Cherniss (1962) claims that these commitments of Aristotle lead to “a discrepancy between the real and the intelligible” (p. 340), that is to say, a failure to

reconcile the requirements of his ontology with the requirements of his epistemology (and logic). Cherniss' phrase is now widely used by scholars who think that Aristotle's commitments form an inconsistent triad. Virtually all scholars working on Aristotle's ontology and epistemology recognize the problem, and many of them regard it as insoluble on Aristotelian assumptions.²⁵ For example, George Brakas (1988), one of the very few authors to devote a whole book to Aristotle's concept of the universal, claims that such a discrepancy constitutes for Aristotle an "impossible dilemma", since he needs to give up either knowledge or substances (p. 104). More recently, C. D. C. Reeve (2000) has termed this dilemma the "Primacy Dilemma", claiming that "Aristotle's attempt to solve it is the central project of his entire epistemology and metaphysics" (p. xiii).

As I have indicated earlier, the seriousness of Aristotle's problem of *katholou* depends on how sharp and exhaustive we take the distinction between the universal and the particular to be. If the particular and the universal were two distinct things, so that their distinction is exhaustive, then the discrepancy between the real and the knowable would indeed be serious and unavoidable. Now, it seems that the interpreters of Aristotle who think this *aporia* constitutes a serious, if not insoluble, problem regard the distinction between the particular and the universal as sharp and exhaustive. The widespread understanding of this problem appears thus to be grounded on some predominantly Platonic presuppositions. A similar point is made by Walter Leszl (1972), who says:

It would seem that interpreters believe that there is some reason why the difficulty arises, or is particularly worrying, in the context of Aristotle's own philosophical system. On

²⁵ See Leszl (1972) and Heinaman (1981) for the traditional formulation of the problem, as well as for a list of authors who think these propositions form an inconsistent set.

their account the individual coincides with the real or substantial while the universal is not such, or anyhow is “less real” than particular substances. This involves the adoption of an ontological dualism between the individual and the universal, which differs from the Platonic dualism only in that the individual has ontological priority, while the universal maintains its logical and epistemological priority – a discrepancy which is sufficient, however, to make a conflict unavoidable. (1972, 282)

Indeed, Aristotle’s philosophical commitments (particulars are most real, and knowledge is of the universal) would generate a serious problem or an “impossible dilemma” if it is assumed that Aristotle, like Plato, is committed to a dualism of particulars and universals. And since commentators typically think that Aristotle’s commitments generate a serious (or perhaps insoluble) problem, they seem to attribute to Aristotle (whether explicitly or implicitly) a Platonic dualism between the particular and universal.²⁶

On a popular line of interpretation, Aristotle introduces this problem in his early works, especially in the *Categories*, where he appears to treat universals and particulars as distinct types of things. As Michael Wedin (2005) puts it, “that the *Categories* pursues a policy of ontological liberality is virtually an article of faith among commentators” (p. 86). At first glance, there seems to be good evidence for the view that Aristotle regards them as distinct types of things. Firstly, Aristotle subsumes both particulars and universals under the title “substance” (*ousia*). This might suggest that he treats universals as fully-fledged entities, thus extending a kind of irreducible ontological status to them.

²⁶ “Platonic dualism” is a much-used concept in the philosophy of mind and metaphysics. When I talk about “Platonic dualism”, I have in mind primarily the metaphysical doctrine (sometimes called simply “realism” or “Platonism”) that distinguishes between two irreducibly distinct types of things, holding that one type of things can exist apart from (or independently of) the other.

Secondly, according to a traditional interpretation, Aristotle believes that particulars enjoy ontological priority over universals, i.e., particulars can exist independently of universals predicated of them, while universals depend for their existence on particulars. This also suggests that Aristotle commits himself to an ontological dualism of particulars and universals, which differs from the Platonic dualism only in that Aristotle attributes an ontological priority to particulars.

Since the problem of *katholou* goes back to the *Categories*, I will in Chapter Two consider Aristotle's position there. I will show that there is essentialism at work in the *Categories* which undermines the traditional view according to which Aristotle assigns an unqualified ontological priority to particulars over universals. According to my essentialist interpretation, particulars and universals are, for Aristotle, ontologically interdependent. It is no more possible for particulars to exist without universals than it is for universals to exist without particulars. Since they are ontologically interdependent, there cannot be any sharp dualism and hence any sharp discrepancy between the real and the knowable.

In the *Categories* Aristotle does not say much about knowledge, but the statement that knowledge is of the universal seems to be the kernel of the problem. Indeed, he says in *Metaphysics* 10 that this statement constitutes the "greatest problem" since it would follow (on the assumption that knowledge is of what is real) that only universals are real. However, Aristotle is evidently not willing to give up the position that substances are particular, and hence faces the problem of explaining how there can be knowledge of particular substances when knowledge must be universal.

I will devote Chapter Three to considering the problem of *katholou* from an epistemological point of view. My primary focus will be on the *Posterior Analytics*,

which contains Aristotle's most sustained and detailed discussion of scientific knowledge. But I also consider *Metaphysics* M 10, where Aristotle gives his most explicit solution to the problem he formulates in B 6 (his solution consists in modifying the statement that all knowledge is of the universal).

Aristotle's account of scientific knowledge raises two related questions concerning knowledge of particulars. First, does scientific knowledge in the strict and unqualified sense exclude the possibility of knowing particulars? Second, does Aristotle allow statements about particulars to be part of *any* kind of scientific knowledge? I will argue in Chapter Three that Aristotle answers these questions affirmatively. He distinguishes between unqualified scientific knowledge, which is of the universal, and qualified scientific knowledge, which is of the particular. Since particulars can be known in the qualified sense, the statements about them *are* part of scientific knowledge. Further, unqualified scientific knowledge does not exclude (but rather implies) knowledge of particulars – knowledge of the universal is (as Aristotle puts it) *potential* knowledge of particulars. I will discuss also *Posterior Analytics* B 19, which suggests that the knowledge of universals is acquired from the perception of particulars. According to my interpretation, there is (corresponding to an ontological interdependence) an epistemological interdependence between particulars and universals – particulars cannot be scientifically known without universals under which they fall, and universals cannot be scientifically known without particulars (since our scientific knowledge of universals begins with the perception of particulars). Consequently, Aristotle's claim that knowledge is of the universal does not necessitate a divorce of epistemology from ontology.

Aristotle's so-called logical works (including the *Categories* and the *Posterior Analytics*) are innocent of the matter-form distinction. Admittedly, this distinction complicates the picture that emerges from the *Categories* and *Posterior Analytics*. In the central books of the *Metaphysics* Aristotle regards form as a primary substance, which immediately invokes the controversial question of whether his forms are supposed to be particular or universal. If they are universal, then it appears that they will not be substances, but if they are particular, then it will be hard to see how there can be knowledge of them.

Indeed, most scholarly discussions of the problem of *katholou* centre on Aristotle's account of substance and form in *Metaphysics Z*. The question about the status of forms has received so much scholarly attention in recent decades that some commentators have coined a separate phrase to refer to this problem. They call it the "Zeta Problem",²⁷ which can be summarized in terms of three of Aristotle's putative commitments which, again, form an inconsistent triad:

- (i) Substance is form;
- (ii) no universal is substance;
- (iii) form is universal.

I will discuss the "Zeta Problem" in Chapter Four, where I sketch out four possible solutions to the puzzle concerning the status of form, and analyze in greater detail the view that particular forms are instances of universals. I take this to be the best solution to the problem. My interpretation suggests that Aristotle remains committed to the position of the *Categories*, namely that a particular (whether concrete particular like Socrates or

²⁷ See, e.g., Kirby (2008, chap. 4).

the particular form of Socrates) cannot exist without being a particular of a certain kind, and the universal cannot exist without being instantiated (or “particularized”).

In the final chapter, I consider briefly the solution that emerges from the writings of Alexander of Aphrodisias to the problem of how what is most real can also be most knowable. Alexander’s account of universals became very influential in the later tradition (Porphyry, Boethius, Avicenna and Thomas Aquinas all picked up Alexander’s take on the problem). It would not be an exaggeration to say that he influenced the future direction of both the discussions of Aristotle’s problem of *katholou* and of the traditional problem of universals. Alexander seems to be the first post-Aristotelian author who explicitly defends the distinction between being a form and being a universal. I suggest that this distinction (while it may appear to offer a more satisfactory solution than the one I have defended in earlier chapters) eventually raises more problems than it solves. It forces to the surface the underlying ambiguities in Aristotle’s position and invokes the traditional problem about the ontological status of universals. I will conclude by returning to the traditional problem of the ontological status of universals, and discuss Aristotle’s neutrality with regard to the ontological status of universals.

2

Essentialism and Ontological Interdependence in Aristotle's *Categories**

The aim of this chapter is to develop an essentialist interpretation of Aristotle's *Categories*, according to which particulars ("primary substances", *prôtai ousiai*) and universals ("secondary substances", *deuterai ousiai*) are ontologically interdependent, i.e., their ontological dependence is not asymmetrical but mutual. This interpretation challenges three long-standing and deep-seated views about Aristotle's *Categories*. *Firstly*, Aristotle believes that particulars enjoy ontological priority over universals in the sense that particulars can exist independently of universals, whereas universals depend on particulars for their existence. Indeed, according to what could plausibly be called a traditional interpretation, the relation of ontological dependence between particulars and universals has been seen as asymmetrical. Such asymmetry has been regarded as the "lynchpin of Aristotelian metaphysics"²⁸. *Secondly*, in treating particulars as ontologically independent from universals, Aristotle commits himself to an ontological dualism of particulars and universals, which does not seem to be much different from Platonic dualism. The only difference, though of course not a small difference, is that Aristotle attributes ontological priority to particulars and denies that universals could exist without particulars instantiating them. *Thirdly*, in assigning ontological priority to particulars, rather than to Platonic Forms or anything resembling them, Aristotle turns the Platonic picture "upside down". The Platonic dualism implies that universals – that is

* A version of this chapter is submitted for publication in *Oxford Studies in Ancient Philosophy*.

²⁸ I take this expression from Corkum's (2008, 65) characterization of the traditional position.

to say, Forms – are ontologically prior, while particulars have being only in so far as they participate in such Forms.

My essentialist interpretation suggests that Aristotle does not attribute to particulars any unqualified ontological priority, and hence he is not committed to any robust dualism. Thus my interpretation minimizes the apparent seriousness of Aristotle’s problem of *katholou*, i.e., the problem of how what is most real can also be most knowable. Since particulars and universals (primary and secondary substances) are ontologically interdependent, there is no sharp discrepancy between the real and the knowable.

I begin by explaining the notions of the particular and the universal, and examine the argument that is supposed to lead to the ontological priority of particulars. Then I develop the essentialist interpretation of the *Categories*, and conclude by examining the consequences of my interpretation for Aristotle’s alleged anti-Platonism, and for Aristotle’s problem of *katholou*.

Particulars and Universals

Aristotle does not use his standard terms for “universal” and “particular” – *katholou* and *kath’ hekaston*²⁹ – in the *Categories*. Instead, he relies on two phrases: “being said of a subject” (*legesthai kath’ hypokeimenou*) and “being [present] in a subject” (*en hypokeimenōi einai*).³⁰ Although the language Aristotle uses might suggest otherwise, these two phrases do not merely express linguistic relations, but above all they express ontological relations. More precisely, we will see that Aristotle construes them as

²⁹ The term *kath’ hekaston* occurs once (at 2b3).

³⁰ Aristotle introduces these relations, somewhat abruptly, in chapter two of the *Categories*, and relies on them in his discussion of primary and secondary substances in Chapter Five.

relations of ontological dependence – both things that are “said of” and those that are “present in” a subject depend on the subject for their being.

The traditional position³¹ holds, and I think correctly, that the “present in” relation (often called inherence) distinguishes substances from quantities, qualities, and other categories that the tradition has lumped together as “accidents”, and what we would today call “accidental properties”. Accidents are always present in a subject (they are always accidents *of* something), while substances (neither primary nor secondary ones) do not inhere in anything further (they cannot be said to be *of* anything in a similar manner). The “said of” relation (often called predication), on the other hand, is held to distinguish particulars from universals – universals are said or predicated of a subject, particulars are not. This position relies on Aristotle’s “standard” definition of the “particular” and “universal” in the *De Interpretatione*: “I call universal (*katholou*) that which is by nature predicated (*katêgoreisthai*) of many things, and particular (*kath’ hekaston*) that which is not” (17a38).

Thus, these two relations distinguish substances from accidents, on the one hand, and particulars from universals, on the other. But Aristotle, at least in the *Categories*, does not see these distinctions as coinciding. Rather, they cut across each other, giving rise to the so-called fourfold division of “of things that are” (*tôn ontôn*, “of beings”) which is presented in chapter two of the *Categories*:

Of things that are: (i) some are said of a subject but are not in any subject. For example, human being is said of a subject, this human being, but is not in any subject. (ii) Some are in a subject but are not said of any subject. (By “in a subject” I mean what is in

³¹ See Ackrill (2002 [1963], 74). Since the publication of Ackrill’s translation and commentary on the *Categories* (1963), the traditional position is usually equated with his view. But see also Granger (1980), who offers a well-written overview and defense of the traditional position.

something, not as a part, and cannot exist separately from what it is in.) For example, this knowledge of grammar (*hê tis grammatikê*) is in a subject, the soul, but is not said of any subject; and this white (*to ti leukon*) is in a subject, the body (for all colour is in a body), but is not said of any subject. (iii) Some are both said of a subject and in a subject. For example, knowledge is in a subject, the soul, and is also said of a subject, knowledge-of-grammar. (iv) Some are neither in a subject nor said of a subject, for example, this human being (*ho tis anthrôpos*) and this horse (*ho tis hippos*) – for nothing of this sort is either in a subject or said of a subject. (1a20-1b4).³²

The combination of the “present in” and “said of” relations thus yields a distinction between two types of particulars (i.e., (ii) and (iv)) and two types of universals (i.e., (i) and (iii)). The former distinction has been the main focus of recent literature on the *Categories*. In particular, there has been a fierce dispute over the precise nature of these things that are present in but not said of a subject (whether they are recurrent or non-recurrent properties).³³ It is not important for my present purposes to take sides in this issue, and I shall be content to agree with the traditional position that Aristotle is

³² Here and in what follows I rely on Ackrill’s translation of the *Categories* (2002 [1963]). However, I do not follow Ackrill in all the details, and translate some of the expressions differently, e.g. while Ackrill translates *ho tis anthrôpos* as “the individual man”, I translate it more literally as “this human being”.

³³ According to one view, Aristotle’s reference to “this white” picks out a determinate property, e.g. a determinate shade of white, rather than a particular property unique to its possessor. The salient feature of this view is that, according to it, nothing prevents particular properties from being recurrent and repeatable. This view was originated by Owen (1965), and has been defended, most notably, by Frede (1987). But see also Dancy (1975), Furth (1988), Loux (2008 [1991]). According to another and more widespread view, Aristotle’s reference to “this white” picks out a non-recurrent property, i.e., a property that is peculiar to the particular to which it belongs. On this view, each white thing has its *own*, entirely distinct, property of whiteness (we might call such properties “tropes”). Owen calls this view “dogma” and equates it with Ackrill’s (2002 [1963]) view. See also (for a criticism of Owen) Moravcsik (1967), Allen (1969), Hartman (1977), Granger (1980), Heinaman (1981), Wedin (2005). According to a third view (which is a version of Ackrill’s view), defended by Matthews (2009), particular properties are non-repeatable instances of universal properties. This view emphasizes that although each white thing has its own property of whiteness, these particular properties themselves are instances of the universal property of whiteness (we might call this view “tropes plus universals”). As we will see, my interpretation offers indirect support to the latter type of view. I will argue that particular things (primary substances) are instances of universals, and hence it is reasonable to think that particular properties are likewise instances of universals.

referring here to particulars in categories other than substance. I will focus on those things that are neither said of nor present in a subject – these are the ones Aristotle calls in chapter five of the *Categories* “primary substances”, such as “this human being” and “this horse” (2a11-14). It is generally agreed that when Aristotle speaks about primary substances, he has in mind concrete particulars, and, above all, naturally existing particulars (humans and horses).

What is important for present purposes is the distinction between two types of universals: those that are both said of and present in a subject (e.g. knowledge, white), and those that are said of but not present in a subject (e.g. human being). The first type indicates universals in categories other than substance, whereas the second type corresponds to what Aristotle calls in chapter five “secondary substances” (2a14-19). Secondary substances include the species and genera under which primary substances fall, e.g. human being, animal, etc. This distinction is important because it can and has been interpreted as Aristotle’s (perhaps first) attempt to distinguish between essential and accidental predication: what is said of but not present in a subject is essential to its being what it is, whereas what is both said of and present in is accidental to its being what it is.³⁴ In order to make referring to these types of universals easier, I will reserve the term “universal” for secondary substances, i.e., species and genera under which primary substances fall. When I want to refer to universals in other categories, I will use the term

³⁴ See Duerlinger (1970), who suggests that the predication-inherence distinction represents Aristotle’s “first attempt” to distinguish essential and accidental predication: “Aristotle does not exactly say that he is trying to distinguish what is essential from what is incidental to the nature of an individual thing, but his examples and statements strongly suggest that the attempt is being made” (p. 181). See also Loux (2008), who argues that all parties to the dispute over the precise nature of particular properties agree that “a distinction between two forms of metaphysical predication (what have been called strong or essential predication and weak or accidental predication) is operative in the *Categories*” (p. 21).

“accidents”. Now I will turn to Aristotle’s argument – sometimes called the “priority claim” – that is supposed to establish the ontological priority of particulars.

Priority Claim

Aristotle begins his account of primary and secondary substances in chapter five of the *Categories* with the claim that “a substance (*ousia*) – that which is called a substance most strictly, primarily (*prôtôs*), and most of all – is that which is neither said of a subject nor present in a subject” (2a11-13). Aristotle appeals to our linguistic intuitions about predication to tell us what the primary substances are. In a linguistic predication, there is a subject of predication and that which is predicated of a subject. But, to forestall a possible source of confusion: predication, as Aristotle conceives of it, is not merely a linguistic matter but also a matter of ontology. He thinks that when we predicate something of something (i.e., when we form subject-predicate sentences), we reveal (*dêloi*) something about something. More precisely, we reveal that something belongs (*hyparchein*) to something.³⁵ So language is not a mere instrument for Aristotle – it reveals something about the way things are in the world. This suggests that there must be some sort of corresponding structure between the language we use and the way things are in the world.³⁶

Now, in saying that primary substances are neither said of nor present in a subject, Aristotle identifies them with subjects themselves (*hypokeimenon*, lit. “that which stands

³⁵ See *De Interpretatione* 4 and 5 (esp. 17a15 ff.).

³⁶ Although it is reasonable to suggest that Aristotle (in so far as he insists that language or *logos* is revealing) is committed to the position that there exists an isomorphism between language and the world, it is important to notice that his commitment to such a position is not uncritical. As I will argue in the next section, Aristotle is well aware that the so-called subject criterion might not be the best guide for discovering primary substances. Thus, he seems to be aware that language is not a completely reliable guide to ontology.

under”).³⁷ However, the fact that primary substances function as subjects does not yet distinguish them from universals because Aristotle claims that secondary substances can likewise function as subjects: “As the primary substances stand to everything else, so the species and genera of the primary substances stand to all the rest: all the rest are predicated of these” (3a1-6; 2b17-20). Indeed, if it is insisted, for example, that a species (e.g. human being) can function only as predicate, not as subject, then in the very act of insisting on this one makes the species a subject of predication.

All Aristotelian commentators agree that the distinction between primary and secondary substances does not lie in the fact that primary substances are subjects *simpliciter*, but rather in the fact that they are *primary* or *ultimate* or *basic* subjects. The idea that primary substances are ultimate subjects is in scholarly literature often called the “subject criterion”.³⁸ Aristotle himself does not express this point explicitly, but he does seem to think that primary substances are called substances most strictly because “all the other things” are predicated of them, while they are not predicated of anything more basic. So primary substances are the only subjects in the ontology of the *Categories* of which it is correct to assert that nothing stands under them. This seems to be the core insight that leads Aristotle to his famous position that “all the other things” require primary substances as basic subjects for their existence:

All the other things are either said of the primary substances as subjects or in them as subjects. This is clear from an examination of cases. For example, animal is predicated of human being and therefore also the particular human being (*tinós anthrôpou*); for were it

³⁷ The subjecthood of the primary substances helps to explain why Tertullian and Augustine, and then Boethius and the medieval tradition following him chose to render *ousia* with *substantia*, rather than with *essentia* (which is what the morphology of Greek and Latin would suggest) – the role of the primary substance is to stand under (Id. *substare*) everything else.

³⁸ See, e.g., Loux (2008, 23), Lewis (1991, chap. 2), Mann (2000, 24).

predicated of none of the particular human beings it would not be predicated of human being at all. Again, colour is in body and therefore also in a particular body; for were it not in any of the particulars (*kath' hekasta*) it would not be in body at all. Thus all the other things are either said of the primary substances as subjects or in them as subjects. So if the primary substances did not exist it would be impossible for any of the other things to exist (*mê ousôn oun tôn proton ousiôn adynaton tôn allôn ti einai*). (2a34-2b6)

Aristotle begins by claiming that everything which is not a primary substance is either said of and/or present in a primary substance. He tries to justify this claim on a case-by-case basis and argues that to predicate animal of human being is, ultimately, to predicate it of particular human beings for “were it predicated of none of the particular human beings it would not be predicated of human being at all”. From this Aristotle draws a famous conclusion that if the primary substances did not exist, then neither would anything else. This is a strong conclusion. Aristotle is claiming that the existence of everything other than primary substances would be *impossible* were there no primary substances. From this it would follow that the world of uninstantiated universals in the absence of primary substances is a fiction.

This conclusion is evidently intended to show that universals (both those that are present in a primary substance, and those that are not) are ontologically dependent on particulars, that they cannot exist independently of particulars. The question becomes whether or not this conclusion also implies that particulars can exist independently of universals. If so, it would turn out that particulars are *ontologically prior* to all the other things. The traditional answer to this question is “yes”. Traditionally, the relationship of ontological dependence between particulars and universals is seen as asymmetrical:

particulars can exist without universals, but not *vice versa*, and hence they enjoy ontological priority over universals.

The notion of ontological priority is traditionally identified with what Aristotle calls priority “by nature and substance”. In *Metaphysics* Δ 11, Aristotle states: “Some things then are called prior and posterior (*protera kai hystera*) ... by nature and substance, namely all things which can exist without (*einai endechetai aneu*) other things, whereas others cannot exist without them – a distinction which was used by Plato” (1019a1-4). There are at least three things worth noticing about this statement of priority. Firstly, ontological priority amounts to the capacity for independent existence, and is expressed in modal terms: A is ontologically prior to B if A *can exist* without B while B *cannot exist* without A. The conclusion of the above passage is presented in similar modal terms – universals cannot exist without particulars.³⁹ Secondly, ontological priority implies that the relation of ontological dependence is asymmetrical: A is ontologically prior to B just in case A can exist without, independently of, B but B cannot exist without A, i.e., the dependence is only one way.⁴⁰ Thirdly, this notion of priority was, as Aristotle says, used by Plato. It is not overly surprising to find Aristotle endorsing what he takes to be a Platonic criterion for what is prior by nature and substance, given that Aristotle often uses the ideas of his predecessors for his own purposes. On the traditional interpretation,

³⁹ Aristotle discusses a similar form of priority also in chapter twelve of the *Categories*: “What does not reciprocate as to implication of being [is called prior]” (14a30). Cleary (1988) argues that the priority “by nature and substance” and the priority as to the implication of being come to much the same thing – both “use the test of non-reciprocity on two related things in order to determine which of them is prior by nature” (p. 45).

⁴⁰ Wedin (2005) claims that “virtually all commentators assume that the *Categories* brand of ontological dependence is asymmetric” (p. 81). Corkum (2008) summarizes the prevalent understanding of the *Categories* in the following way: “Aristotle holds that individual substances are ontologically independent from non-substances and universal substances but that non-substances and universal substances are ontologically dependent on substances. There is then an asymmetry between individual substances and other kinds of being with respect to ontological dependence. Under what could plausibly be called the standard interpretation, the ontological independence ascribed to individual substances and denied of non-substances and universal substances is a capacity for independent existence” (p. 65).

Aristotle uses this Platonic criterion of priority in a fairly radical manner, *viz.*, he uses it to overturn the Platonic position.

Nonetheless, it is important to notice that the above passage establishes only the ontological dependence of universals and accidents on particulars. It does not establish the ontological independence of particulars. In fact, nothing in the above passage excludes the possibility that the relation between particulars and universals is one of mutual ontological dependence. Why, then, does the traditional interpretation maintain that Aristotle is committed to the ontological priority of particulars?

I believe that the traditional interpretation relies on two assumptions. The first assumption is that the relation of predication expresses ontological dependence – what is said of a subject is dependent on this subject for its being. The second and more important assumption is that the relationship between a subject of a predication and its predicate is irreducibly asymmetrical (i.e., predicates are predicated of subjects but not *vice versa*).⁴¹ Given these assumptions, it is clearly tempting to conclude that the relationship of ontological dependence between particulars and universals must likewise be asymmetrical. A further motivation behind the traditional interpretation might be Aristotle’s terminology. After all, Aristotle calls primary substances “primary” which might suggest that he attributes to them ontological primacy over universals.⁴² Finally, some⁴³ contend that the conclusion of the above passage – “if the primary substances did not exist it would be impossible for any of the other things to exist” – would simply be pointless unless it is implied that the dependence is asymmetrical. However, there are

⁴¹ This assumption has persisted successfully in the history of philosophy, and has been challenged seriously only recently. One of the first authors who vigorously denies it is Ramsey (1925); he argues that there is no fundamental antithesis between subjects and predicates, and hence no irreducible asymmetry.

⁴² See, e.g., Corkum (2008, 70).

⁴³ See Moravcsik (1967, 93).

reasons to doubt that Aristotle would be committed to this implication. The critical consideration here is the reason Aristotle gives for calling species and genera “substances”, which leads us to his essentialism.

Essentialism

It is well known that “secondary substances” are never mentioned, at least by name, in the Aristotelian corpus outside the *Categories*. So why does Aristotle call species and genera “substances”? There are authors, who think that genera and species of primary substances are substances because they can function as subjects, although not as primary subjects.⁴⁴ But this is not the reason Aristotle himself gives for calling species and genera substances. Rather, he says the following:

It is reasonable that, after the primary substances, their species and genera should be the only other things called substances. For only they, of things predicated (*tôn kategoroumenôn*), reveal (*dêloi*) primary substance. For if one is to say of the particular human being (*tina anthrôpon*) what he is (*ti esti*), he'll do so appropriately (*oikeiôs*) by giving the species or the genus (though more informative is to give human being than animal); but to give any of the other things would be out of place – for example, to say “white” or “runs” or anything like that. So it is reasonable that these should be the only other things called substances. (2b30-37)

The species and genera of primary substances are called substances, because only they, of the “things predicated”, answer the question “What is it?” It is Aristotle’s settled position that the answer to this question is a definition that reveals the essence (*ti esti, to*

⁴⁴ See Kohl (2008), Moravcsik (1967), but also Lewis (1991) and Wedin (2005), who develop what Kohl (2008) calls “reductive accounts of subjecthood”. That is, they attempt to show that the subjecthood of secondary substances can be entirely reduced to that of primary substances.

ti ên einai, ousia) of a thing.⁴⁵ So we may contend that only species and genera reveal the essence of a primary substance.⁴⁶ Aristotle thus draws a distinction between two sorts of universals: genera and species, on the one hand, and all the other “things predicated”, on the other. It is reasonably clear that this corresponds to the distinction between those universals that are said of but not present in a subject, e.g. human being, and those that are both said of and present in a subject, e.g. white (pale). These remain Aristotle’s stock examples. Practically all commentators agree that these distinctions correspond to those of essential and accidental predication.⁴⁷ But even though it is generally acknowledged that Aristotle is, in the *Categories*, committed to such a distinction (to a position that can be labeled “essentialism”), it is not clear what this distinction amounts to.

Aristotle himself explains the distinction between secondary substances, e.g. human being, and accidents, e.g. white, in the following manner (2 a19-33; 3a10-20). He says that things are *present in* a subject when their definition is not predicated of the subject, although their name may be predicated of the subject. “For example, white, which is in a subject (the body), is predicated of the subject; for a body is called white. But the

⁴⁵ The definition (*horismos*) is described as “*logos tês ousias*” in the *Topics* (101b37, cf. 101b21, 103b9-10), and as “*logos of what something is*” (*tou ti esti*) in *Posterior Analytics* (93b30). Aristotle also links essence (*to ti ên einai*, lit. “the what it was to be” for a thing) with definition and a certain sort of essential predication in *Metaphysics Z 4*, and argues that the essence of something is what the thing is “in virtue of itself” (*kath’ hauto*), or, more precisely, “just what a this something is” (*hoper tode ti*).

⁴⁶ I ignore here the difficulties surrounding *differentia*, and what category to put it in (whether it is substance, quality or something else). Considering that *differentiae* of primary substances are part of their definition and essence, and that Aristotle insists that *differentiae*, like substances, cannot be present in a subject (3a21), they have to be, or so it seems, substances. On the other hand, however, some of Aristotle’s remarks seem to point in other directions (e.g. he says that *differentiae* admit of more and less, while substances do not, cf. 4a8-9). See, e.g., Irwin (2002 [1988], 64-66), who has a good discussion of the “anomaly of *differentiae*”.

⁴⁷ That is, it is assumed that these distinctions correspond to the distinction which is most frequently marked by Aristotle by the terms “*kath’ hauto*” and “*kata symbebêkos*” (see, e.g., *An. Post. A 4*, 73a34-73b16, *Met. Δ V 7*, 18). The only author (to my knowledge) who denies that Aristotle is distinguishing in the *Categories* accidental from essential predication is Moravcsik (1976). His main argument is that if this distinction holds, then “the priority claim on behalf of substances becomes absurd” (p. 91). He does not argue for this position, and near the end of the article he contends that “we must set aside the thorny question whether Aristotle really means to draw an asymmetrical dependency claim between secondary and primary substances and to what extent” (p. 95).

definition of white will never be predicated of the body” (2a31-33). Thus, accidents might share the same name with their subjects, but never the same definition and essence.⁴⁸ Now, things are *said of* a subject when both their name and definition are predicated of it. “For example, human being is said of a subject, and the name is of course predicated (since you will be predicating human being of the particular human being), and also the definition of human being will be predicated of the particular human being (since the particular human being is also a human being)” (2a20-24). Thus, secondary substances share both their name and their definition with their subjects. On Aristotle’s account (3a35-b1), this makes this human being (e.g. Socrates) and the species human being “synonyms” (*synonyma*), i.e., things that share the same name (*onoma*) and the same “definition of essence” (*logos tês ousias*).

This explanation suggests that although accidents are present in a subject, they are not part of the essence of the subject. When we predicate an accident, we are predicating a property that attaches to the subject from outside, so to speak. But when we predicate a secondary substance, we are not just predicating a property of a subject.⁴⁹ Rather, the predication reveals what the subject itself is. This implies that the subject of such a predication has to be *that very thing* that is predicated of it. For example, the subject of which human being is predicated has to be *that very thing*, a human being.⁵⁰ Hence, the

⁴⁸ This claim might be confusing, since we can evidently say that “white is a penetrative color” or “white is a color penetrative of sight” (this is how Aristotle defines white in the *Topics*, see 119a30, 158a38-b1). Aristotle’s point seems to be that in such predications the subject is *something* that is white. So to speak about “white” is a shorthand way of speaking about whatever happens to be white (e.g. Socrates, or, more precisely, his body). Evidently, we cannot say that “Socrates is a penetrative color”.

⁴⁹ This raises the difficult issue of how we are supposed to understand the ontological character of secondary substances. Should we regard them as some sort of class, collections of particulars, or rather as some sort of property? For a further discussion of this issue, see Irwin (2002, 78-80, 264-265) and Code (1986). It is clear, however, that Aristotle does not regard secondary substances as properties like white, i.e., properties that attach to the thing from outside.

⁵⁰ Aristotle makes this point very clear in the *Posterior Analytics*, where he claims that predicates which signify the substance (*ta men ousian sêmainonta*) signify the very things (*hoper ekeino*) they are predicated

predication is not one in which a property is predicated of some independently existing subject; Socrates is essentially human. If the essence of Socrates is being human, then Socrates cannot *be* without *being human* – Socrates will be human as long as he exists. So the anti-essentialist suggestion that Socrates could exist without (or independently of) being human would, on Aristotle’s view, take Socrates out of being.

What, then, does this explanation say about Aristotle’s essentialism? According to anyone’s essentialism, some of the predicates or properties are essential to the thing, whereas others are not. Although this characterization is usually associated with Aristotle,⁵¹ it is potentially misleading. For it might suggest that there are some independently existing things that have some properties essentially (or “permanently”) attached to them, and some not. However, the picture that emerges from the *Categories* is that particulars are not things that can exist independently of their species and genera. Rather, particulars are things whose very essence (and being) is determined by their species and genera.

Further support for this interpretation can be found near the end of chapter five, where Aristotle introduces yet another important distinction between substances and predicates:

It seems most distinctive of substance that being the same and one in number (*tauton kai hen arithmōi*), it can admit contraries. In no other case could one bring forward anything, numerically one, which is able to receive contraries... A substance, however, the same

of, whereas accidental predicates are always predicated of something different (*heteron ti*), for example, white is predicated of a human being (see A 22, 83a24-35).

⁵¹ See Quine, who argues that “[Aristotelian essentialism] is the doctrine that some of the attributes of a thing (quite independently of the language in which the thing is referred to, if at all) may be essential to the thing and other accidental” (1966, 173-174; cf. 1960, 199-200). Quine is definitely responsible for the revival of interest in Aristotelian essentialism (despite, or perhaps because of, his rejection of it). For discussions of Aristotle’s views in relation to contemporary versions of essentialism, see Witt (1989, chap. 6), White (1972), Cohen (1978), Matthews (1990).

and one in number, is able to receive contraries. For example, this human being, being one and the same, becomes pale and dark, and hot and cold, and bad and good. Nothing like this is to be seen in any other case. (4a10-21)

Although Aristotle does not explicitly speak about change in the above passage (nor does he do so anywhere in the *Categories*), it is reasonably clear that what he takes to be the most distinctive feature of substances is their ability to survive accidental change. For Aristotle is obviously not claiming that a substance is both pale and dark, or good and bad, at the same time. The claim is rather that a substance can admit contraries at different times, while remaining the same substance. But that is just to say that substances can change while remaining the same. At first it may seem surprising that Aristotle makes the ability to survive accidental change distinctive of substances in general, while the most natural understanding of the above passage would suggest that it is a feature of primary substances alone. What, then, counts as a substance that persists through change? The answer seems to be that it is a primary substance that falls under species and genera. For it seems that a particular cannot receive accidental properties unless it is something essentially, unless it falls under species and genera. For example, this human being, say Socrates, may be pale at one time and tanned at another, but he remains a human being. The fact that he is, essentially, a human being is what makes Socrates the same over time. Thus, Socrates is not the kind of thing that can exist, or continue to exist, independently of species and genera that are predicated of him. Rather, Socrates continues to be what he is as long as he belongs to species and genera, whatever other changes may come upon him.

Aristotle's essentialism thus appears to rely on his firm belief (at least at the time of writing the *Categories*) that every primary substance must belong to or exist in

(*hyparchein en*⁵²) a species and genera (2a14, 16). Aristotle does not justify this belief, but treats a particular's belonging to species and genera as a primitive or unanalyzable fact.⁵³ Montgomery Furth points out that even though in the *Categories* Aristotle never actually says that "a substantial individual *has* to belong to a substantial kind" (1978, 628, my emphasis), it is clearly intended. For otherwise it would follow that substantial individuals would be "capable of retaining their numerical identities through arbitrary migrations between substantial kinds or out of the kinds altogether" (Furth 1978, 628). In other words, it would be possible for one and the same thing to have at one time, one thing essentially predicated of it, and at another time, something else, or that nothing is predicated of it at all. But Aristotle would hardly accept that Socrates need not be a human being, or, even worse, that he could be human at one time and artichoke at another. So a thing's species is, for it, a "migration barrier". Aristotle does not explicitly express this view in the *Categories*, but in works from roughly the same time we find him denying that one and the same thing could migrate between species. In the *Topics*, for instance, he says that "it is impossible for the same thing to continue yet entirely change its species; the same animal, for instance, cannot be a human being at one time but not another" (125b37-39, cf. 145a3-12).⁵⁴

⁵² The word "*hyparchein*" is usually rendered "to belong to/in" or "to exist/be in". Nonetheless, commentators tend to ignore the existential implication of the word in the *Categories*, saying that the primary substances are "contained" or "included" in their species (see, e.g., the Loeb translation).

⁵³ See Loux (2008, 4; 34-36), who argues that in the *Categories* Aristotle is committed to the "Unanalyzability Thesis", i.e., the idea that the primary substance's belonging to a species is an unanalyzable fact. This thesis emerges when we consider that if the primary substance's belonging to a kind (e.g. Socrates' being the man he is) is analyzable in terms of some prior case of one thing's being said of or present in another (these two relations exhaust the tools Aristotle has at his disposal in the *Categories* for ontological analysis or reduction), then Socrates cannot be a primary substance, but the more fundamental subject would have a better claim to this status.

⁵⁴ This citation expresses the position that is traditionally attributed to Aristotle (esp. in his early writings). The traditional understanding of Aristotle's position has been challenged in recent decades by scholars working on Aristotle's biological writings, who have argued that Aristotle's views on species (esp. in this biological writings) are more relaxed and compatible with evolutionary theories. See, e.g., Franklin (1986), Lennox (1987). The difficulty of determining whether or not Aristotle intends to rule out the possibility of

Although it is not unambiguously clear whether Aristotle is committed in the *Categories* to the view that denies the possibility of migration between species, he is definitely committed to the (weaker) view that a particular cannot migrate out of species altogether, to have nothing essentially predicated of it. There is every indication that Aristotle would not admit that talk of primary substances as basic subjects leads us to what John Locke calls “something I know not what” or what contemporary philosophers call “bare particulars” or “bare substrata” (i.e., things that are essentially no kinds of things at all, that have nothing essentially predicated of them).⁵⁵ A primary substance is presented in the *Categories* not simply as a “this” but as “this something”, *tode ti* (cf. 3b10-13), where “something” (*ti*) picks out a certain *kind* of thing.⁵⁶ Accordingly, I sympathize with Michael Loux (2008) who argues that “we better capture the point of the “this something” epithet if we understand it as a kind of schema, where the term “something” functions as a placeholder for predicates expressing the species under which primary *ousiai* fall” (p. 29). Hence this epithet emphasizes that every particular must belong to a species. This does not seem to imply anything stronger (or more “technical”) than that every particular must be of a certain kind. Further, Aristotle’s only examples of primary substances are “this human being” and “this horse”. Verity Harte (2010) has pointed out that although Aristotle very often uses personal names in his examples, his

arbitrary migration between species lies in the fact that in the *Categories* Aristotle does not seem to be concerned with, much less explicitly address, issues involving change and persistence. In fact, Aristotle discusses change only in so far as he claims in the passage cited above that substances are able to “admit contraries”. This seems to imply that in order to persist through accidental changes a substance must belong to the *same* species (and thus cannot change its species), but Aristotle does not state it *expressis verbis*. On the other hand, however, there is nothing in the *Categories* supporting the opposite suggestion that he does *not* intend to rule out the arbitrary migration. Hence, I am inclined to agree with Furth (and the traditional interpretation) that Aristotle is in the *Categories* committed to the same position as in the *Topics* and holds that particulars must belong to their *proper* species.

⁵⁵ For the characterization of the bare particular view, see Loux (2006, chap. 3).

⁵⁶ “*Tode ti*” is usually translated as a “particular” or an “individual” but its literal translation is “this something”. See Smith (1921).

talk of primary substances in the *Categories* is not such an occasion.⁵⁷ Rather, he uses the grammatical formula which combines the article, indefinite pronoun and sortal term: *ho tis anthrôpos*, *ho tis hippos*. I agree with Harte that Aristotle uses such formulae to refer to any particular human or any particular horse when he does not mean to refer to any of them in particular.⁵⁸ Again, the force of this formula is to emphasize that particulars are instances of universals under which they fall.

Accordingly, to identify a primary substance is to identify things that belong to certain species, that are of a certain kind (e.g. particulars-as-humans or particulars-as-horses). A primary substance, e.g. this human being, is already something, a human being – the secondary substances provide the “something” that the thing is. Thus the assumption underlying Aristotle’s discussions in the *Categories* seems to be that for a particular thing *to be* it has to be *something*, and *what* a thing is, is determined by genera and species.⁵⁹ Since the existence of a particular thing is dependent on its being

⁵⁷ It is very common among scholars to give names to one’s examples of primary substances. Although I have followed this common practice (and sometimes used Socrates as an example), it is important to notice that this is not Aristotle’s own practice in the *Categories*.

⁵⁸ Harte (2010) argues that the difference that is made by the use of the expression *ho tis anthrôpos* rather than a proper name is its deliberate indefiniteness: the expression ignores what may be distinctive or special about any one particular individual. She suggests that such an expression is used in a similar manner by Sophocles and by Aristotle in the *De Interpretatione* 7 (17b37-18a7).

⁵⁹ See Loux (2008, 26-33) and Jones (1972, 1975), who both locate the essentialist reading of “to be” as early as the *Categories*. One consideration that supports this reading is Aristotle’s claim that each primary substance is “one in number” (*Cat.* 4a10-13). Both Loux and Jones argue that Aristotle denies that there is anything that counts as just being one thing (*Met* I, 1-2). Rather, to say that the primary substances are one in number is to say that they fall under universals that provide us with measures for counting their instances. As Jones (1972) puts it: “Since what is one is specified with reference to its being something other than merely one, to be able to point to something and say “That is one” entails having the ability to apply some count noun, or sortal to it. If it is one, then it is one *something*, one man or horse or geranium” (p. 159). Another, related consideration is that Aristotle denies that there is anything that counts as just being (*to on*, “existent”). Aristotle does not express this point explicitly in the *Categories*, but in works from roughly the same time, we find him denying that “being is a genus”, i.e., everything that is/exists must be something other than merely being/existent (e.g. *De Soph. El.* 172a37-39, *Top.* 127a26-35, *An. Post.* 92b13-14). Loux argues that there is strong evidence that, even in the *Categories*, Aristotle took the categories “to provide the parameters for disambiguating the term” (p. 27-28). See also Matthews (2009), who argues that Aristotle is committed to a principle (he calls it “Aristotle’s Principle”) that everything that exists is a something or other. The essentialist interpretation of “to be” implies that we cannot, in case of primary substances, distinguish between essential and existential dependence (we cannot argue, for

something, i.e., dependent on a universal's being said of it, it follows that particulars cannot exist without their universals. In other words, Aristotle's commitment to essentialism in the *Categories*, and his rejection of the notion of the bare particular, entails that particulars are ontologically dependent on universals.

Before drawing out the consequences of my interpretation for Aristotle's anti-Platonism and for his "problem of *katholou*", I would like to spend more time analyzing the bare particular view as an alternative to essentialism. In fact, it seems to be the only feasible alternative available to those who believe (as Aristotle does) that ontologically privileged entities must function as subjects. Why does Aristotle find the notion of a bare particular philosophically repugnant? We cannot simply say that he fails to see as far as bare particulars: he occasionally flirts with the idea of a bare substratum in his *Metaphysics*. In *Metaphysics Z 3*, he includes basic subject (*hypokeimenon eschaton*) on his list of possible candidates for the title of substance, and uses a thought experiment to discover what sort of thing the basic subject is. Aristotle argues that when we abstract from a concrete substance everything that could be predicated of it, we are left with matter "which in itself is neither a something (*ti*) nor a quantity nor otherwise determined" (1029a25). Although it is not obvious what conclusion Aristotle wants us to draw from this thought experiment, it is clear that he does not accept the conclusion that bare matter, as basic subject, is a substance. He rejects this as an impossible result on the grounds that matter is nothing determinate, but a substance must be something determinate – a substance, he claims, must be a "this something" (*tode ti*, 1029a28). So Aristotle seems to be aware that the "subject criterion" (when pushed to its limits) leads

instance, that primary substances depend on secondary ones for their essence but not for their being) – their essential dependence implies existential dependence.

us to bare substrata, and remains anxious to hold on to the idea that something of which nothing is essentially predicated cannot be a substance; it cannot be a “this something”.

Paul Vincent Spade (1999) calls the bare particular view a “Platonic view of things”. On this view, we have an object or thing, which has certain properties or features that are somehow (by participation, say) attached to it, but by itself, all on its own, the object has no properties. In light of Spade’s interpretation we might regard Aristotle’s reluctance to adopt the notion of a bare particular as a reaction to the Platonic approach.⁶⁰ But what precisely is wrong with the bare particular view? Spade argues that on the bare particular view there are pressures from two different directions. On the one hand, the bare particular view runs into trouble with the principle of the Identity of Indiscernibles.⁶¹ Since the bare particulars do not have any features of their own, there seems to be nothing to distinguish them. So we are pushed toward the view that there is really just one substratum. On the other hand, if there really is just one substratum underlying bare particulars, then we seem to run into trouble with the Law of Non-Contradiction, because this one underlying something will have contrary properties at the same time. So Spade contends that “the Identity of Indiscernibles would lead us to say that there is only one such object. On the other hand, the Law of Non-Contradiction would lead us to say there are *several* “bare particulars” that play this role. Neither alternative solves the problem once and for all” (1999, 5).

⁶⁰ Similar suggestion is made by Mann (2000), who argues that Aristotle challenges the Platonic view which treats all predication in the sensible world as accidental predication. I shall not consider the question whether such an understanding of Plato is justified, but see Code (1986), who discusses Plato’s position in the *Phaedo*, although he also emphasizes that he examines Plato “through Aristotle’s eyes”. Code argues (and this, I believe, is a widely accepted view) that Aristotle holds that sensible particulars are endowed with essential natures, whereas Plato holds that “the inhabitants of the sensible realm are not the natures in which they participate”, e.g. “Socrates merely Has, or participates in, man, without Being man” (p. 428).

⁶¹ This principle states that if two or more things share all their properties/features, they are the same thing. That is, things are really the same thing unless there is some feature to distinguish them.

On Aristotle's view, primary substances have – in virtue of belonging to their species and genera – internal features of their own. A primary substance is something (human being, say) all by itself or in its own right. And since primary substances can be distinguished from one another by their own internal features, the problem with the Identity of Indiscernibles disappears. Also the worry about the Law of Non-Contradiction is lessened – if there are many subjects then we do not need to worry about one and the same thing having contrary properties at the same time.⁶² Further, the fact that primary substances belong to their species and genera also explains why they can have contrary properties at different times. This comparison with the bare particular view suggests that secondary substances make the primary substance something determinate, something that can be distinguished from other substances, something that can underlie accidental changes – this might be the reason why Aristotle believes that primary substances must exist in, or fall under, secondary substances.⁶³

By now it should be obvious that there is a kind of essentialism at work in the *Categories* and that this essentialism is not merely epistemological. That is, secondary substances do not merely give us knowledge of primary substances but determine the very being of those substances.⁶⁴ Aristotle's commitment to essentialism has major

⁶² In fact, in *Met.* Γ 4 (1007a33 ff.) Aristotle argues that to obliterate the distinction between essence and accident (to reduce all predication to accidental one) is to obliterate the Principle of Non-Contradiction, and with it the possibility of meaningful discourse on any subject.

⁶³ This interpretation suggests that Aristotle of the *Categories* (which is innocent of the matter-form distinction) has a hold of the phenomenon we would nowadays call individuating universals or sortal universals, etc. So, Aristotle of the *Categories* might agree with Strawson, who argues that “a sortal universal supplies a principle for distinguishing and counting individual particulars which it collects” (1964, 168). Loux (2006) argues that on such a view there is no “special problem of explaining the particularity of concrete objects. Just in virtue of instantiating its proper kind a concrete object is marked out as a particular... Furthermore, the multiple instantiation of the kind is, by itself, sufficient to secure the existence of numerically different particulars” (p.112). The idea that Aristotle of the *Categories* has a hold on the notion of individuating predication is developed also by Furth (1988).

⁶⁴ Practically all authors, who believe that Aristotle introduces the discrepancy between the real and the knowable in the *Categories*, seem to think that particulars are ontologically prior, while universals enjoy some sort of epistemological priority. (See Letszi (1972, 279) for the list of these authors.) I agree that the

consequences for the traditional view which attributes to Aristotle the position that particulars are ontologically prior to universals, i.e., the relation of ontological dependence between them is asymmetrical.

I believe that the required asymmetry can be defended with respect to the relationship between primary substances and accidents. Aristotle might be able to show that things present in a subject are ontologically dependent on primary substances as their subjects, whereas primary substances do not in the same way depend on them. The reason for this is that accidents are not essential to primary substances – a particular human being would still be what she is, regardless of whether or not she is pale. Nonetheless, the details of this account are messy and complicated. For it seems that if a particular human being is to exist she must be of some colour, of some weight, and so on (she cannot exist without all the so-called determinable accidents, like being coloured). But I believe that it *is* possible to develop an account which makes plausible the idea that the relationship here is asymmetrical. One possible account of asymmetry, in rough terms, is the following. The claim that a primary substance can exist without those accidents that inhere in it does not imply that the substance might be lacking in accidents altogether, but only that it is capable of possessing different accidents from the ones it actually has. The accidents, on the other hand, cannot exist unless substances also exist, i.e., unless they are instantiated by substances. So humans, for instance, can exist without

distinction between essential and accidental predication might be based on epistemological considerations. But I do not agree that secondary substances merely give us knowledge of primary substances. Rather, they determine, so to speak, the conditions for the existence of primary substances. They are, as Furth puts it, “something constitutive or even causal, *required* for the continuity of the substantial individuals across time” (1978, 631).

exhibiting a given quality, such as being pale or being bald, but pallor or baldness cannot exist without some particular human having it.⁶⁵

However, the relevant sort of asymmetry does not obtain in the relationship between primary and secondary substances. It is Aristotle's view that there would not be a species such as human being without there being particular human beings, but it is not the case that a particular human being could exist without belonging to the species human being, that is, without being human. Thus, the essentialist interpretation suggests that in addition to the dependence of "all other things" on primary substances, there is also a reverse dependence that primary substances have on secondary substances. Stated otherwise, to be a particular is to be a particular of a certain sort, i.e., to be an instance of a universal under which a given particular falls, while to be a universal is to be instantiated by particulars that fall under it. In what follows, I consider the consequences that my interpretation has for Aristotle's alleged anti-Platonism and for his "problem of *katholou*".

⁶⁵ We are now in a position to discuss briefly my earlier remark (footnote 33) that my interpretation offers indirect support to the view that Aristotle's reference to "this white" picks out an unrepeatable instance of a universal accident white. On my interpretation, primary substances (e.g. this human being) are instances of secondary substance (e.g. human being). Hence we may suppose that particular accidents (e.g. this white) are likewise instances of universal accidents (e.g. white) – both this human being and this white are "this somethings". What is the role of particular accidents? I believe that they mediate the dependence that universal accidents have on primary substances. That is to say, for the universal, human being, to exist is merely for there to be particular humans. But for the accident, white, to exist is for there to be instances of whiteness in particular humans. (A convincing account of this kind of two-step dependence is developed and defended by Deurlinger (1970).) So we can say that white depends on this human being because this white depends on the particular human being (Socrates say) in which it exists. This raises the question of why universal, human being, is dependent on this human being (Socrates say, rather than Callias). Aristotle avoids this question because he does not use proper names but indefinite formulas such as "this human being". I suggested earlier that Aristotle uses this formula to refer to any particular humans when he does not mean to refer to any of them in particular. Hence it is safe to say that human being is dependent on this human being, for it cannot exist without some human beings, even though it is not dependent on any of them in particular. For a further discussion of these complications, see Corkum (2008).

Consequences

The possibility of interpreting Aristotle's position in a way that makes particulars ontologically dependent on universals has not gone completely unnoticed by scholars. Martin Tweedale (1993), Montgomery Furth (1978, 1988), and Michael Loux (2008 [1991]), in particular, have taken this interpretation seriously.

Tweedale thinks that the ontological interdependence, as I have called it, between universals and particulars indicates a "definite tension, if not outright contradiction" (1993, 78) right at the heart of Aristotle's ontology. Loux and Furth, who focus more specifically on the *Categories*, see the dependence that particulars have on species as a problem that motivates or inspires Aristotle's discussion of substance in his later writings. Furth thinks that Aristotle is well aware that this dependence "must immediately begin to erode their ultimacy as subjects" (1978, 631). This, he believes, is the reason why Aristotle did not definitely settle the matter by making their dependence explicit. So the omission of the clear statement of this position is not an oversight on Aristotle's part, but "the author, seeing plainly the edge of abyss and knowing that it could not possibly be plumbed within the scope of the work in hand, deliberately, silently drew back. He hoped, perhaps, that no one would notice, and hardly anyone did" (p. 631).

But why should we see the ontological interdependence as a problem in the first place? It seems that it constitutes a problem on the assumption that Aristotle intends the subject criterion to establish an unqualified ontological priority of particulars (i.e., a priority over universals and accidents), which, then, enables him to turn the Platonic picture "upside down". But there does not seem to be enough evidence to show that Aristotle wants to *overturn* the Platonic position rather than *change* it. This leads us to

the question of what precisely are the consequences of the essentialist interpretation for Aristotle's alleged anti-Platonism.

According to the traditional interpretation, Aristotle's famous conclusion that "if the primary substances did not exist, it would be impossible for any of the other things to exist" commits Aristotle to an unqualified ontological priority of particulars. This position may be regarded as the prime example of Aristotle's anti-Platonism, for in assigning ontological priority to particulars, rather than to universals, he turns the Platonic picture upside down. According to the essentialist interpretation, his position is more nuanced. On this interpretation, Aristotle is not committed to the ontological priority of particulars over secondary substances (or else he needs to give up the assumption that particulars are "this somethings" and embrace the notion of a bare particular). Rather, we could say that Aristotle equalizes the status of primary and secondary substances. It is no more possible for universals to exist without particulars than it is for particulars to exist without universals. But even on the essentialist interpretation there is a sense in which particulars as "this somethings" remain ontologically prior, *viz.*, they are prior to accidents that belong to them. Accordingly, the answer to the question of whether particulars are ontologically prior is in a sense "yes", and in a sense "no". It is "yes" if by universals we mean accidents, and it is "no" if by universals we mean secondary substances. The interpretation according to which particulars as "this somethings" are ontologically prior to accidents gives us also a possible explanation for why Aristotle subsumes both particulars and universals under the label "substances", *viz.*, he does so to distinguish them from accidents which lack the independence that "this somethings" have.⁶⁶

⁶⁶ Further support for the view that Aristotle is committed to the ontological priority of substances over accidents is found in the *Metaphysics*. As I have suggested in the previous chapter, Aristotle often uses

Nonetheless, even if we agree that ontological priority distinguishes substances from accidents, there still remains the question of why Aristotle uses the labels “primary substance” and “secondary substance”. It might seem that the essentialist interpretation, according to which primary and secondary substances are ontologically interdependent, leaves mysterious the point of using such labels. Loux, for instance, worries that the essentialist interpretation “leads us to wonder just why should we say that substance-species or whatever it is that makes basic subjects be what they are are only derivatively or secondarily *ousiai*. Do they not have as much right to the title ‘primary *ousia*’ as the basic subjects themselves?” (2008, 48). This worry seems to rest on the assumption that the criterion for being a substance is ontological priority. This assumption is adopted by the traditional interpretation which maintains that the subject criterion is used to establish not only the ontological dependence of secondary substances on primary ones, but – by implication – the ontological independence of primary substances. The essentialist interpretation challenges this implication, but there is a sense in which it does not challenge the subject criterion itself, i.e., the idea that primary substances are ultimate subjects of which everything else is predicated but which themselves are not predicated of anything more basic. On the essentialist interpretation, primary substances cannot exist independently of universals predicated of them. Nevertheless, they remain primary in the sense of not being ontologically dependent on any further subjects. Stated

separation terminology (*chôris*, etc.) to refer to ontological priority. In the opening chapter of *Metaphysics Z*, he uses the term “separate” to express the ontological asymmetry between substances and accidents. This chapter clearly suggests that the relevant “somethings” from which substances are separate are accidents (while the relevant “somethings” from which the Platonic Forms are separate are sensible particulars). Since Aristotle seems to be committed to the ontological priority of substances over accidents in the *Metaphysics*, it is not unreasonable to suggest that he is committed to this position already in the *Categories*.

otherwise, particulars are instances of universals, but particulars themselves do not have instances.

The essentialist interpretation is thus compatible with what could plausibly be called the weak reading of the subject criterion. This reading agrees with the traditional view that secondary substances depend for their existence on primary substances as their subjects. But it differs from the traditional reading in that it does not draw the conclusion that primary substances can therefore exist independently of secondary substances. The minimum reading only draws the conclusion that primary substances exist independently of further subjects; they do not need to be instantiated in order to exist. Thus primary substances retain a sort of primacy and independence, but their primacy is a weak one – it does not imply the capacity to exist independently from universals predicated of them.⁶⁷ In so far as this reading of the subject criterion does not establish any strong independence of particulars, it might not appear to be wholly satisfactory. But it provides a possible answer to the question of why Aristotle uses the labels “primary” and “secondary”. Namely, secondary substances are “secondary” because they are always instantiated by primary substances, whereas primary substances remain “primary” in the sense of not having instances.⁶⁸

⁶⁷ A somewhat similar suggestion is advanced by Corkum (2008), who challenges the traditional understanding of the notion of ontological independence, and proposes to weaken the notion of ontological independence from a capacity for independent *existence* to the possession of a certain *ontological status*. He leaves open the question of what precisely this ontological status amounts to as a subject for further research. My interpretation differs from Corkum’s in that I do not challenge the traditional understanding of the notion of ontological independence as a capacity for independent existence. I only challenge the idea that primary substances can exist independently of universals. On my interpretation, primary substances are primary because they can exist independently of further subjects (because they are not predicated of anything further), not because they can exist independently of universals predicated of them.

⁶⁸ The fact that this criterion admits of different readings (a weaker and a stronger one) might well be the reason why Aristotle complains in *Metaphysics* Z 3 that this criterion is “not only obscure (*adêlon*), but makes matter substance” (1029a11). The weaker reading gives us only a weak sort of independence. The stronger reading establishes an ontological priority over universals. This, however, is too strong, since particulars cannot exist without universals predicated of them. As Aristotle argues in *Metaphysics* Z, when

So, the essentialist interpretation suggests that Aristotle does not require primary substances to be capable of existing independently of universals, and hence he does not *overturn* the Platonic position. But Aristotle definitely changes it, and he changes it in a more radical manner than is usually thought. The traditional interpretation holds that particulars can exist independently from universals, thereby committing Aristotle to an ontological dualism of particulars and universals. The essentialist interpretation, on the other hand, holds that particulars and universals are ontologically interdependent, and their ontological interdependence implies that “primary” and “secondary” cannot be labels for irreducibly distinct types of entity. Hence, this interpretation does not commit Aristotle to any robust dualism.

Nonetheless, the question of what precisely is the positive view that emerges out of this interpretation is not an easy one to answer. On the one hand, the notion of ontological interdependence does not imply that particulars and universals are irreducibly distinct types of things, complete entities in their own right, that are somehow dependent on each other. On the other hand, to say that their ontological interdependence amounts to identity seems also to go beyond what Aristotle has in mind in the *Categories*. The notion of identity is nowadays usually equated with the principle which can here be loosely expressed by saying that if A and B are identical, then whatever is true of the one is true of another.⁶⁹ But it does not seem to be the case that whatever is true of a primary substance is true of a secondary substance, and *vice versa*. Firstly, secondary substances are predicated of a subject, whereas primary substances are not. Secondly, in addition to

we eliminate everything that that is predicated of a subject, we do not end up with a substance and “this something” but with an indeterminate matter.

⁶⁹ Aristotle seems to formulate something that looks like this principle (“Leibniz’s Law”, as it is usually called) in *Topics* H (152b25-29). For a further discussion, see White (1971), who argues that the *Topics* is the only work of Aristotle which reveals a “relatively firm grasp of something like the notion of identity” (p. 177).

essential predications, we can also make accidental predications of a primary substance: for example, “Socrates is white”. This predication is true of Socrates but is no part of his essence. So it seems that there are more things true of Socrates than are stated in a definition expressing his essence. Hence, it does not seem to be the case that primary and secondary substances are strictly identical. These considerations suggest that Aristotle, in the *Categories*, is interested in some sort of a middle position between robust dualism and strict identity. And here we are at the beginning of a very long and complicated story, which, to borrow from Porphyry, is too deep for the present investigation.⁷⁰

For the present purpose, suffice it to say that Aristotle is clearly committed to the existence of particular things of a certain sort, “this somethings”. In so far as “this somethings” are neither purely or “barely” particular nor purely universal, we can, alternatively, characterize them as “universalized particulars” or “particularized universals”.⁷¹ In other words, Aristotle does not think that when considering “things that are” or “substances”, we can pick out full-fledged entities such as universals and full-fledged entities such as particulars. Rather, he seems to think that there *are* particulars, but to be a particular is to be an instance of a universal (particulars are always “universalized”), and that there *are* universals, but to be a universal is to be instantiated by particulars (universals are always “particularized”). So universality or particularity are, one could say, inseparable aspects of all existence; every existing particular is a particular something or other.

⁷⁰ Porphyry famously formulates three questions concerning the ontological status of species and genera but refuses to answer them, saying they are too “deep” (*Isagoge*, 1, 10-14). For a further discussion of the ontological status of Aristotle’s universals, see chapter 5.

⁷¹ These expressions are not my own, but I take them from Wallace (1882), who attributes to Aristotle the view that every real thing is “either an individual universalized by the relations in which it exists or an universal individualized through the particular conditions which determinate existence imposes on it” (1882, xli).

This minimizes the seriousness of the problem of how what is most real can also be most knowable. On a popular line of interpretation, Aristotle introduces this problem in his early writings, especially in the *Categories*, where he attributes to concrete particulars unqualified ontological priority over universals and “pursues a policy of ontological liberality”⁷² in treating particulars and universals as irreducibly distinct types of entities. This “ontological liberality” leaves it hard to see how substantiality and knowability can apply to one and the same thing. Although Aristotle does not speak about knowledge (*epistêmê*) in the *Categories*, it seems that “this something” would qualify as something that is both real and knowable. In so far as “this something” is an ultimate subject of all predication, it is most real. And in so far as it falls under species and genera, which answer most appropriately the “What is it?” question, it is knowable. Hence, there is no sharp discrepancy or “impossible dilemma” between knowability and substantiality.

⁷² This expression is taken from Wedin: “...that the *Categories* pursues a policy of ontological liberality is virtually an article of faith among commentators” (2005, 86).

3

Aristotle's Epistemology and Knowledge of Particulars

This chapter focuses on Aristotle's problem of *katholou* from an epistemological point of view. In the previous chapter I discussed this problem primarily from an ontological point of view and developed an essentialist interpretation of the *Categories*. According to this interpretation, particulars ("primary substances") and universals ("secondary substances") are ontologically interdependent, and hence there cannot be any sharp discrepancy between the real and the knowable. Thus, on my interpretation, the *Categories* can be understood as presenting a possible solution to the problem (rather than introducing the problem). Nonetheless, the account of substance put forward in the *Categories* included almost nothing about knowledge, and from this aspect the proposed solution to the problem of *katholou* is vulnerable.

Aristotle's often repeated statement that knowledge (*epistêmê*) is of the universal⁷³ seems to be the main source of the problem. He says in *Metaphysics* M 10 (1087a10-11) that the statement that all knowledge is of the universal presents the "greatest problem", since it would follow (on the assumption that knowledge is of what is real) that only universals are real. However, Aristotle is evidently not willing to give up the position that particulars are most real, and hence he faces the problem of explaining how there can be knowledge of particulars when knowledge must be universal. Also Aristotelian commentators agree that the statement that knowledge is of the universal is primarily

⁷³ See, e.g., *Post. An.* A 24 (86a6-7), B 19 (100a6-9); *Met.* A 1 (981a5-12), B 4 (999a24-29), K 2 (1060b20-21), M 10 (1086b32-37); *EN* Z 6 (1140b31-32).

responsible for the discrepancy between Aristotle's ontology and epistemology. For example, George Brakas states, characteristically enough, that "the premise that knowledge is of the universal *has* to cause the most fundamental problems for Aristotle's epistemology, for, by appropriating knowledge to those objects, it leaves us without knowledge of the individuals which make up the world in which we live" (1988, 108).

At first glance, however, it is not clear why this statement is particularly worrisome in the context of Aristotle's philosophy. It is not clear, for example, why it is more problematic for Aristotle than for any philosopher who believes that knowledge proceeds through terms having general application. But it is clear that the position that knowledge is of the universal becomes a source of the problem if it is taken to imply that (i) there is no knowledge of the particulars and/or (ii) universals as objects of knowledge are separate from particulars (so that knowledge of the universal does not contribute to knowing particulars). If so, then it is indeed difficult to see how what is most real can also be knowable, or, as Michael Novak (1964) puts it, "how we can have science about the world of our experience and, if we cannot, how the world of our experience can be real" (p. 5).

My aim in this chapter is to show that (i) there is a way in which knowledge, though universal, has the particular as its object, and that (ii) Aristotle does not separate universals as objects of knowledge from particulars. My interpretation suggests that corresponding to the ontological interdependence there is also an epistemological interdependence between particulars and universals. Particulars cannot be scientifically known without universals under which they fall, and universals cannot be scientifically known without particulars, since we acquire knowledge of universals by having

perceptions of particulars. Consequently, Aristotle's claim that knowledge is of the universal does not necessitate a divorce of epistemology from ontology.

Particulars and Knowledge

In the following sections, I consider whether (and to what extent) Aristotle's account of knowledge and its requirements excludes the possibility of knowing particulars. There are passages in Aristotle's writings that invite skepticism about this possibility. Among these are passages, in which Aristotle contrasts universals as objects of knowledge with particulars as objects of perception,⁷⁴ and passages, which appear to exclude the possibility of knowing particulars under any condition. The latter include, most notably, *Metaphysics Z 15*, where he emphatically states there is no demonstration or knowledge of particular substances, since they "have matter whose nature is such that they are capable both of being and of not being, for which reason all particular substances are perishable" (1039b29-31), and *Posterior Analytics A 8*, where he argues that there is no unqualified scientific knowledge of perishable things.⁷⁵

But to begin with, it should be pointed out that the answer to the question of whether there can be knowledge of particulars depends, first of all, on what we mean by a particular (*kath' hekaston*). The picture that emerges from Aristotle's writings is, in rough terms, the following. Particulars can be considered either in respect of their particularity, in what does not make them members of certain species (e.g. Socrates *qua* Socrates), or insofar as they belong to their species and genera (e.g. Socrates *qua* human

⁷⁴ See, e.g., *An. Post.* A 24 (86a29), A 31 (87b29-38), B 12 (97b28-31); *Met.* A 1 (981a12-28).

⁷⁵ See also *NE Z 3* and *Γ 8* (1142a23-31). I will examine *An. Post.* A 8 in the following section, but the treatment of *Met. Z 15* has to wait until the following chapter, which focuses on Book Z of *Metaphysics*.

being), or insofar as they have certain qualities, quantities or other accidents (e.g. Socrates *qua* sitting or white).

Secondly, the answer to the above question depends on what we mean by knowledge.⁷⁶ One clear instance of knowing is knowing what the thing is (*ti estin*), i.e., knowing its essence. Although Aristotle does not speak about knowledge in the *Categories*, we may assume that secondary substances, by revealing what a primary substance is (2b33), give us knowledge of primary substances. At least he says that “if one is to say of the particular human being what he is, he’ll do so appropriately by giving the species or the genus” (2b34). The idea that to know best is to know *what* something is occurs frequently in the *Metaphysics*. For example, Aristotle says in Z 1 that “we know each thing best (*malista*), when we know what human being or fire is – rather than its quantity, quality or position” (1028a25-b1).⁷⁷ Since we can ask and answer the “What is it?” question (not only about universals but also) about particulars, they are knowable. However, they are not knowable in all their particularity. The answers Aristotle mainly has in mind are those that give the species or genus of the subject. For example, when we ask what the particular human is we get an answer such as “(a) human being” or “(an) animal”. The answer tells us what *kind* of thing our subject is and, as such, is not unique to a given particular.

⁷⁶ An initial question about Aristotle’s epistemology concerns terminology. The central components in his vocabulary of knowledge are the verb *epistasthai* and the cognate noun *epistêmê*. *Epistasthai* is an ordinary Greek word for “know” and *epistêmê* ordinarily means “knowledge”. Although Aristotle sometimes uses these words in the ordinary or neutral sense, it is clear that in the *Posterior Analytics* he intends to use these ordinary words in an “unordinarily restricted way”, as McKirahan puts it (1992, 22). *Epistêmê* can refer either to the cognitive state of the knowing person or to a body of knowledge, a science. My translation of these words depends upon the context. In some contexts it is more perspicuous to translate *epistêmê* as “knowledge”, in others as “scientific knowledge” or “science”.

⁷⁷ See also *Met.* B 1 (996b15-18), Z 6 (1032b2).

A complete answer to the “What is it?” question is, according to Aristotle, a definition, which is typically given by genus and differentia.⁷⁸ Again, definition does not capture the particular thing in all its uniqueness and particularity, but the species under which the particular falls. However, when we define the species, we also give all there is to the definition of the particular belonging to that species. As Aristotle puts it in the *Categories*, species and its members are “synonyms”, things that share the same definition of essence. Thus, Aristotle’s denial that knowledge and definition is of particulars *qua* particulars does not imply that particulars are not knowable at all. Rather, his point seems to be that particulars are knowable *sub specie universalitatis*, as falling under universals. This point relies on the recognition that particulars are not *completely* unique but are capable of falling under species and genera. Thus, Socrates is not knowable *qua* Socrates, and to know him as being white or ugly is to know him unreliably (or inappropriately), but he is knowable *qua* human being – to know him as human being is to know him as what he is and must be throughout his existence.

Nonetheless, although the answer to the question “What is it?” would count as knowledge, one might be skeptical over whether such knowledge about particulars would measure up to the requirements for knowledge presented in the *Posterior Analytics*, which contains Aristotle’s most sustained and detailed (and one could add, obscure) discussion of scientific knowledge. In order to consider Aristotle’s position concerning knowledge of particulars in the *Posterior Analytics*, I begin by sketching out some important aspects of his account of *epistêmê*.

⁷⁸ That definitions will be in the form of genus and differentia is assumed throughout the *Organon* as well as in other writings. See, e.g., *Top.* A 3 (153a15-18); *An. Post.* B 13; *Met.* Z 12 (1037b28-1038a3). But see also *PA* (A 3), where his theory of definition is more subtle than elsewhere – Aristotle rejects the requirement that corresponding to each kind (species or genus) there be a single differentia that sets the kind off from others, and recognizes that often it is necessary for the definition to contain a conjunction of differentiae.

Unqualified and Qualified Knowledge in the *Posterior Analytics*

The *Posterior Analytics* is concerned primarily with what Aristotle calls “unqualified knowledge” (*epistêmê haplôs*). This unusual expression is presumably intended to signal his concern with *epistêmê* in the restricted and strict sense. What kind of knowledge counts as unqualified knowledge? Firstly, Aristotle states in *Posterior Analytics* A 2 that unqualified knowledge arises through demonstration (*apodeixis*), a special sort of syllogism consisting of premises (principles, *archai*) and a conclusion.⁷⁹ Secondly, Aristotle defines unqualified knowledge in A 2 in terms of explanation and necessity: to know something in an unqualified sense is to know its explanation (*aition*) as being its explanation, and that it cannot be otherwise (71b9-12). This definition has consequences for Aristotle’s account of demonstrations through which we obtain unqualified knowledge. It requires demonstrations to be explanations – a demonstration must not just show that its conclusion holds, but must show *why*.⁸⁰ Further, it requires the conclusion, and *a fortiori* the premises, of a demonstration to be necessary, for without necessary premises we cannot know why the conclusion holds and is necessary, and so we will lack unqualified knowledge of what cannot be otherwise.⁸¹

Of these two conditions for having unqualified knowledge, I will focus on necessity, which seems to be the most restrictive requirement for demonstrative knowledge.⁸² Aristotle holds that the demonstrative premise is necessary if the predicate and subject

⁷⁹ As we will see, demonstration is not the only way of obtaining knowledge. Aristotle holds that demonstration depends on premises, or principles, that must be known beforehand in the way that does not depend on demonstration. But although demonstrative knowledge is not the only type of knowledge there is, it is safe to say that Aristotle’s main concern in the *Posterior Analytics* is with demonstrative knowledge (*apodeiktikê epistêmê*).

⁸⁰ See *An. Post.* A 2 (71b9-19), B 2 (89b35-90a5).

⁸¹ See *An. Post.* A 6 (74b26-32).

⁸² See *NE Z* 3 (1139b19-21).

terms are related by essential (*kath' hauto*, literally “in itself”) predication.⁸³ In *Posterior Analytics* A 4 (73a23-b5), Aristotle distinguishes between two ways in which the predicate belongs to the subject *kath' hauto*: (i) if it is predicated of the subject, and belongs to the essence (*to ti esti*, “the what it is”) and definition of it, or (ii) if it is predicated of the subject, and the subject belongs to the essence and definition of the predicate.⁸⁴ Aristotle contrasts essential predications with accidental (*kata symbebêkos*) ones, which are not necessary and hence not subject to scientific demonstrations. His account of necessity relies thus on a distinction familiar from the *Categories*, even though in the *Categories* he does not use the terminology of *kath' hauto* and *kata symbebêkos*. But while Aristotle, in the *Categories*, allows the subjects of essential predications to be particulars (e.g. this horse, this human being) as well as universals (horse, human being), Aristotle of the *Posterior Analytics* (esp. A 4-5) seems to be more restrictive and associates unqualified knowledge with what is universal.

It is not unambiguously clear in what sense Aristotle requires demonstrative knowledge to be universal. At the very least, he requires demonstrative premises to be universal in the sense that the predicate “belongs to every instance of the subject” (*hyparchein kata pantos*, A 4, 73a28-30). This implies that demonstrations are first figure

⁸³ I follow the common practice (of English translators) to put the point in terms of essences: an “in itself” predication is called an essential one, and what something is (*ti esti*) is called its essence.

⁸⁴ Aristotle’s discussion in A 4 (see also A 6, 74b5-10; A 22, 84a11-17) suggests that essential predications are definitional, and there are several passages suggesting that definitions have a special claim for being first principles (e.g. A 10; A 8, 75b31; B 3, 90b25; B 13, 96b22). Nonetheless, the identification of essential predication with definitional one is also problematic: it has led scholars to complain that demonstrative explanations are severely restricted to what we might now call analytic truths (see, e.g., Ferejohn (1991, 177)), and it raises the difficulty concerning *kath' hauto symbebêkota* (*per se* accidents). Aristotle’s paradigmatic example is “having angles equal to two right angles”, which belongs to “triangle”. This is his favorite example of demonstrable truth in the *Posterior Analytics*, but neither the “triangle” nor the predicate “having angles equal to two right angles” belong to the definition of the other. On the other hand, they are not mere accidents either, since they are explained through the essence. I will not delve into the details of this difficulty, but will be content to point out that Aristotle recognizes predicates that are essential but not definitional. For a further discussion of this difficulty (and of the question whether or not all premises must be implicitly definitional), see Ferejohn (1991), McKirahan (1992), and Goldin (1996).

sylogisms whose premises and conclusions have the form “A belongs to every B”, e.g. “having angles equal to two right angles belongs to every triangle” or, alternatively, “every triangle has angles equal to two right angles”. In the *De Interpretatione*, Aristotle calls “every human being” a universal taken universally, literally, “as of a whole” (17b11-12). Since “every human being” cannot be a predicate, it is not strictly speaking universal (it does not, as Aristotle says, signify the universal, 17b12-16). But it is universal in the sense that in those statements (e.g. “every human being is animal”), a claim is made about each and every thing of which the universal term (“human”) can be truly predicated.⁸⁵ Thus, the premises of demonstrations must be universal at least in the sense that the predicate belongs to all instances of the subject, or, contemporarily stated, the subject of such premises is quantified universally.

Occasionally, however, Aristotle appeals to a stricter notion of a universal, which is introduced in *Posterior Analytics* A 4: “I mean by a universal (*katholou*) that which belongs to every instance of its subject (*kata pantos*) and in itself (*kath' hauto*) and as itself (*hêi auto*)” (73b26-27). Aristotle does not raise or answer the question whether “belonging to each instance” implies necessity but he makes clear that what belongs universally in the above sense is necessary (73b28). This definition is more demanding because it seems to require that the predicates be convertible with their subjects. Aristotle illustrates “belonging as itself” with the example of “having angles equal to two right angles”, which belongs universally to triangle but not to figure (which is supposedly too wide) nor to isosceles triangle (which is too narrow). This suggests that universal

⁸⁵ For a further discussion of “universals taken universally” in the *De Interpretatione*, see Whitaker (1996, chap. 7).

predicates are such that (in addition to belonging essentially to every instance of the subject) they are convertible or coextensive with their subjects.⁸⁶

This brief sketch of Aristotle's account of unqualified knowledge invites the widely accepted view that Aristotle restricts unqualified scientific knowledge to what is necessary and universal. Such an account raises at least two related questions concerning the knowledge of particulars. Firstly, does knowledge in the unqualified sense exclude the possibility of knowing particulars? Secondly, does Aristotle allow statements about particulars to be part of *any* kind of scientific knowledge (though perhaps not of unqualified knowledge)? I believe that Aristotle's answers to these questions are affirmative. More precisely, I will argue that Aristotle distinguishes between unqualified scientific knowledge, which is of the universal, and qualified scientific knowledge, which is of the particular. Thus, he allows statements about particulars to be instances of *qualified* scientific knowledge. Further, I will suggest that although unqualified scientific knowledge is restricted to what is universal, it does not exclude the possibility of knowing particulars. Rather, knowledge of the universal is (as Aristotle puts it) *potential knowledge of particulars*, and hence it implies (rather than excludes) knowledge about particulars.

I begin by considering *Posterior Analytics* A 8, where the distinction between unqualified and qualified knowledge is first introduced and explained:

⁸⁶ Commentators usually call predicates that are convertible or commensurate with their subjects, "commensurate universals". The precise role and function of commensurate universals in Aristotle's account of demonstration is controversial. The received view is that Aristotle does indeed subscribe to the view that premises (and, by implication, conclusions) of demonstration must be convertible. In recent decades, however, this view is challenged by scholars such as Barnes (2002, 258) and McKirahan (1992, 176), who are skeptical that Aristotle is committed to what Barnes calls "the most extreme form" of the doctrine of Commensurate Universal and holds that *all* premises must convert. Aristotle never asserts this doctrine, and considers propositions that do not convert as demonstrable. See also Inwood (1979), who argues that Aristotle is committed to a moderate version of the doctrine of Commensurate Universal.

It is also evident that if the premises from which a syllogism proceeds are universal, the conclusion of such a demonstration – of a demonstration in an unqualified sense – must be eternal (*aidion*). There is therefore no demonstration or knowledge of perishable things (*phthartôn*) without qualification, but only in a qualified sense (*houtôs hôsper kata symbebêkos*) because it [the predicate] does not belong [to the subject] universally but only at a time and in a way (*pote kai pôs*). Where there is such a demonstration and knowledge, the other premise must be non-universal and perishable – perishable because only so will the conclusion also be [about] perishable, and non-universal because it [the predicate] will belong only to one [instance of the subject] but not to others... (75b21-29)⁸⁷

The above passage is one of the few passages in the *Posterior Analytics*, where Aristotle explicitly states that the premises and a conclusion of a demonstration in an unqualified sense are universal. Nonetheless, from this he does not draw the conclusion that particulars cannot be scientifically known at all, but that they cannot be known in an unqualified sense – they can be demonstrated and known only in a qualified way. This suggests that Aristotle does not think that all scientific knowledge is of the universal without qualification. Knowledge in the qualified sense is of particulars, and qualified knowledge (as suggested by Aristotle’s explicit talk of demonstration and *epistêmê*) counts as scientific knowledge too. As we will see, Aristotle also appeals to such a distinction in *Metaphysics* M 10, where he argues that the statement “all knowledge is of the universal is true in one way but not in another” (1087a15).

Aristotle does not offer examples in the above passage but we may assume that an example of an unqualified demonstration would be a syllogism that has as its conclusion

⁸⁷ Unless otherwise noted, all the following translations are the author’s.

“every triangle has angles equal to two right angles” (which, after all, is Aristotle’s favorite example of a demonstrable truth in the *Posterior Analytics*). An example of a qualified demonstration would be the following syllogism that Aristotle presents in *Posterior Analytics* A 1:

(1) Every triangle has angles equal to two right angles (2 R);

(2) This [figure] in a semicircle is a triangle;

Therefore, (3) this triangle in the semicircle has 2 R.

This syllogism appears to be an example of a qualified demonstration because one of its premises is universal (predicate belongs to every instance of the subject term), whereas the other premise is particular (predicate belongs to only one instance of the subject term). Consequently, the conclusion of the demonstration is about something particular (this triangle here and now), and hence it does not hold universally and always, but “at a certain time and in a way”. This raises the question of why should we think that this conclusion counts as instance of scientific knowledge or *epistêmê* (though only in a qualified sense) in the first place?

The central consideration here is that the knowledge of the particular, e.g. knowledge that this triangle has 2 R, is derived from the knowledge of the universal, e.g. knowledge that every triangle has 2 R. In so far as it is derivable from universal knowledge it satisfies, in a way, two central conditions for demonstrative knowledge. Aristotle holds, as I have argued before, that we know something in an unqualified sense when we know its explanation as being its explanation, and that it is necessary. Now, the above syllogism gives us a sort of an explanation – it explains that this figure has 2 R *because* it is triangle and every triangle has 2 R. This explanation depends clearly on prior universal knowledge; without universal knowledge we could perhaps have an

opinion or a hunch *that* this triangle has 2 R but we would not know *why* it has 2 R. More fundamentally, this explanation assumes that particulars are not completely unique but are capable of falling under universals. This is the reason why we can know them scientifically, though only in a qualified sense. We can have explanations about a particular triangle *qua* triangle, but we cannot provide explanations about this triangle as such (this triangle *qua* this triangle). And this, we may presume, is also the reason why we cannot have *unqualified* knowledge of this triangle, *viz.*, we cannot know its explanation as being *its* explanation (see *An. Post.* A 5). In other words, 2 R belongs to this triangle only because it is triangle, not because it is *this* triangle – the predicate 2 R and the subject this triangle do not convert.

Another and related consideration is that the knowledge that this triangle has 2 R counts as scientific knowledge because it is derived from knowledge of what is universal and *necessary*. I do not believe that Aristotle's claim that the particular conclusion does not hold always or eternally but "at a certain time and in a certain way" implies that this conclusion is not necessary at all. If this would be the case, then it would be hard to see why Aristotle is willing to accept such conclusions as instances of *epistêmê* at all (as he clearly does not only in the above passage but also in passages I will consider below). Rather, since Aristotle clearly thinks that we can move from statements about universals to statements about particulars (this point will become clearer as I proceed), we may presume he also thinks that we can move from necessary truths about universals to necessary truths about particulars. For example, when he explains the notion of "belongs to every instance" in *Posterior Analytics* A 4, he says (with my emphasis): "if animal belongs to every human, *if* it is true to call this (*tond'*) a human, it is also true to call him

an animal, and *if* the former is true now, so is the latter” (73a29-31).⁸⁸ This suggests that, from the standpoint of the particular, the necessity is qualified or, we could say, conditional: *if* every human is (necessarily) animal, *then* this human is (necessarily) animal too. From the standpoint of the universal, however, the necessity is unconditional: humans are necessarily animals.⁸⁹ I believe that such conditional necessity is the main factor that distinguishes qualified knowledge (e.g. this triangle has 2 R), which Aristotle says is “as though accidental” (*houtôs hôsper kata symbebêkos*), from merely accidental truths (e.g. this triangle is red), which cannot be derived from necessary truths at all, and hence cannot be subjects of demonstrative knowledge.⁹⁰

⁸⁸ Cf. *Met.* Δ 18, where Aristotle is willing to extend the distinction between *kath’ hauto* and *kata symbebêkos* so that what is predicated in a singular proposition can be said to belong to its subject *kath’ hauto*. At 1022a26-29, we are told that some of the predicates true of Callias express universals that Callias exhibits *kath’ hauto*; and at 1022a34-35, we are told explicitly that the term “human being” is predicated *kath’ hauto* of this or that human being.

⁸⁹ A distinction (similar to mine) between two types of necessity is drawn also by McKirahan (1992, 107-110) and Byrne (1997, 204-207). See also Heinaman (1981b), who shows that Aristotle’s examples of “things that can be otherwise” include accidents and never statements like “this human being is animal”. For a general discussion of different kinds of necessity in Aristotle, see Sorabji (1980, chap. 13). For a discussion of Aristotle’s modal syllogistic, see Lagerlund (2000, chaps. 1-2).

⁹⁰ My interpretation differs from a common (if not traditional) understanding of the *Posterior Analytics* A 8, according to which this chapter excludes the possibility of having scientific knowledge of particulars on the grounds that particulars are perishable and hence do not *exist* necessarily. I find it very hard to believe that Aristotle is claiming that particulars (and perishable phenomena or events in general) cannot be objects of scientific knowledge. This claim would exclude virtually all natural science, since physics, as Aristotle understood it, is science of the changing. Further, this claim is not compatible with the examples Aristotle uses throughout the *Posterior Analytics*. See A 13 (78a39-b3), B 8 (93b7-14), B 16 (98b6-16), B 17 (99b5-6). Finally, Aristotle says at the end of A 8 that “demonstrations and knowledge of things that occur repeatedly – e.g. of an eclipse of the moon – plainly hold always (*aei*), insofar as they [demonstrations and knowledge] are of something of a certain kind (*toiounde*), but are particular (*kata meros*) insofar as they [things that come about repeatedly] are not always. As with eclipses, so in the other cases” (75b31-35). This suggests that Aristotle does not want to claim that recurring events (like lunar eclipses) cannot, as a matter of principle, be objects of knowledge. Rather, Aristotle wants to put restrictions on the way in which such phenomena must be considered in order to be knowable. He seems to think that we can produce unqualified demonstrations (i.e., demonstrations that hold “always”) to the effect that every eclipse is thus and so, and qualified (“particular”) demonstrations to the effect that this eclipse (*qua* eclipse) is thus and so. Both ways of having knowledge of lunar eclipse assume that it falls under certain universals, is “of a certain kind”. Thus, what counts in science is not (primarily) the eternal *existence* of particulars (or of perishable events, e.g. the eternal occurrence of an eclipse), but rather the way in which particulars are considered.

Although the proposal that Aristotle distinguishes between two types of knowledge has not received much scholarly attention, there are few scholars who have taken such a distinction seriously. These scholars prefer to use application-terminology. Richard McKirahan (1992), in particular, argues that qualified demonstrations (as I call them) are demonstrations that apply the conclusions of universal demonstrations to particular cases. Accordingly, he calls them “application arguments”.⁹¹ However, I believe that the application-terminology can be misleading in so far as it might give the impression that unqualified knowledge excludes the knowledge of particulars (is something separate from them) but once we have it, we can go on to apply it to particulars. In what follows, I will argue that both unqualified and qualified knowledge involve particulars, but in different ways. This view emerges from *Posterior Analytics* A 1 (as well as from *Metaphysics* M 10).

In *Posterior Analytics* A 1, Aristotle says the following:

It is possible to come to know (*gnôrisein*) by knowing some things beforehand and getting knowledge (*lambanonta tēn gnôsin*) of the others at the very same time (*hama*), viz., of whatever falls under a universal which one knows. Thus he already knew (*proêidei*) that every triangle has 2 R, but he comes to know that this [figure] (*tode to*) in the semicircle is a triangle at the same time as he draws the conclusion (*hama epagomenos*) [that it has 2 R] ... Before drawing a conclusion or grasping the syllogism

⁹¹ McKirahan (1992) distinguishes between what he calls “USA proofs”, i.e., demonstrations that prove that an attribute belongs universally to its primary subject, and “application arguments” which apply universal conclusions of USA proofs (e.g. every triangle has 2 R) to (sub)species (e.g. isosceles), and to particulars (e.g. this triangle). He argues that “these arguments are of little interest from the point of view of scientific theory, and little is said about them, but they are the key to applying demonstrative science to the world” (1992, 184). See also Lennox (1987b), who distinguishes between A-type explanations and B-type explanations, where A type explanations are similar to what McKirahan calls “application arguments” and what I call qualified knowledge and demonstration. Cf. Reeve (1992), who distinguishes between unconditional and conditional knowledge.

(*labein syllogimon*), he should perhaps be said to know (*epistasthai*) in one way, but in another way not. If he did not know (*êidei*) without qualification (*haplôs*) whether there exists such-and-such a thing, how could he have known without qualification that it had 2 R? Yet it is clear that he knows (*epistatai*) in this sense: he knows it universally (*katholou epistatai*), but he does not know it in an unqualified sense (*haplôs de ouk epistatai*). (71a17-29)

This passage presents the familiar syllogism about this triangle, which I have used earlier as an example of a qualified demonstration. But it is interesting for two further reasons. First of all, it tells us something about the “mechanism” of qualified demonstrations. More precisely, it suggests that while one premise must be known in advance (i.e., we must already possess the knowledge of the universal), the other premise becomes known simultaneously with the conclusion. Aristotle elaborates on this point in *Prior Analytics* B 21, where he says that “it never happens that people know the particular in advance, but rather they get the knowledge of the particular at the same time as they draw the conclusion, as if by recognizing (*anagnôrizontas*) them; for there are things we know straight off (*euthys*), e.g. that it has 2 R, once we see that it is a triangle” (67a23-26). So, knowing already that every triangle has 2 R, you recognize this figure in the semicircle as a triangle and immediately infer that it has 2 R.

Secondly and more importantly, this passage reveals something about the nature of the unqualified universal knowledge. Aristotle argues that when we have universal knowledge but have not yet drawn the particular conclusion, we can be said to know the particular in one way, but not in another. In the above passage he says that we know the particular universally. Elsewhere he says that we know it potentially. In *Posterior Analytics* A 24, Aristotle argues that “if you know that every triangle has 2 R, you know

in a sense of isosceles too that it has 2 R – you know it potentially (*dynamei*) –, even if you do not know of the isosceles that it is a triangle” (86a25-27). Similar reasoning applies presumably to particulars too, for if you know that every triangle has 2 R, then you know in a sense – universally and potentially – that this triangle has 2 R. This suggests, interestingly enough, that unqualified knowledge of the universal is potential knowledge of particulars. Hence unqualified knowledge does not *exclude* knowledge of particulars nor suggest that particulars cannot be subject to demonstrative knowledge at all. Rather, unqualified knowledge *implies* knowledge of particulars.

Although there is a sense in which we can be said to know the particular before we draw the particular conclusion, there is also a sense in which we do not know the particular, *viz.*, we do not know that such-and-such a particular exists. Aristotle’s point seems to be that you may know that every triangle has 2 R and at the same time not know that this holds of some particular triangle which you have never come across. As soon as you recognize this triangle as a triangle, you come to know “without qualification” (71a27) that it has 2 R. It is a matter of initial surprise that Aristotle calls the knowledge that this triangle has 2 R – which, according to A 8, is *qualified* knowledge – *unqualified* knowledge of the particular. Aristotle does not explain why he chose such terminology, but it may well be that he wants to contrast it with the potential knowledge of the particular and indicate that unqualified knowledge of the particular is the most appropriate kind of scientific knowledge we can have *of particulars*. In *Prior Analytics* B 21 (67a11-30), where he draws a similar distinction between universal and particular knowledge, he says that “we contemplate (*theôroumen*) the particulars by universal knowledge, without knowing them by the kind of knowledge appropriate (*oikeia*) to them” (67a28-30). Indeed, the potential or universal knowledge of the particular is

definitely a less appropriate or worse way of knowing that this triangle has 2 R, since we can have such knowledge without even being aware of the existence of this triangle. Consequently, we have a neat asymmetry: knowledge in an unqualified sense is only potential (and less appropriate) knowledge of the particular, whereas unqualified (and most appropriate) knowledge of the particular is only knowledge in a qualified sense.

Thus, both unqualified and qualified knowledge involve knowing particulars, but in different ways – we can know a particular universally (potentially) or in an unqualified sense. This distinction between two ways of knowing a particular is important because I will argue in the following section that Aristotle appeals to this distinction also in *Metaphysics* M 10, where he gives his most explicit solution to what I have labeled Aristotle’s “problem of *katholou*”.

Actual and Potential Knowledge in *Metaphysics* M 10

In *Metaphysics* M 10, Aristotle formulates an *aporia* (or rather reformulates it, since he has introduced this *aporia* already in B 6) concerning whether principles should be regarded as universal or particular. His formulation of the difficulty assumes that the principles must be *either* universal *or* particular. If they are particular, they will not be knowable; if they are universal, there will be no particular substances.

Aristotle begins this chapter by saying that if one does not allow there to be substances which are separate and particular (*kath' hekaston*), one will destroy the notion of a substance (1086a14-19). The rest of the chapter proceeds on the assumption that there are such substances, and Aristotle is mainly concerned with the epistemological problem of how there can be knowledge of particular substances when knowledge must be regarded as knowledge of the universal. He claims that the statement that all knowledge is universal presents “the greatest *aporia*”. For if all knowledge is of

universals (and knowledge is of what is real) then principles and all things derived from them must be universal, which conflicts with the notion of a substance as something separate and particular. Aristotle's solution is to modify this statement – he denies that knowledge is of the universal without qualification, and argues that there is a sense in which knowledge is of particulars:

The statement that all knowledge is universal (*to de tēn epistēmēn einai katholou pasan*), so that the principles of things must also be universal and not separate substances, presents the greatest problem (*aporia*) among these mentioned, but yet the statement is true in one way but not in another. For knowledge (*epistēmē*), like knowing (*epistasthai*), is of two kinds, of which one is potential (*dynamēi*) and the other actual (*energeiai*). The potentiality, like matter, being universal and indefinite (*aoristos*), is of the universal and indefinite, but the actuality is definite (*hōrismenē*) and of what is definite, being particular (*tode ti*, this something) it is of the particular (*toude tinos*). Sight sees universal color accidentally (*kata symbebēkos*) because this color (*tode ti chrōma*), which it sees, is a color; and this A (*tode to alpha*), which the grammarian contemplates (*theōrei*), is an A. For if the principles are necessarily universal, what comes from them must also be universal, as in demonstrations; and if this is so, nothing can be separate and a substance. But it is clear that there is a sense in which knowledge is universal and a sense in which it is not. (1087a10-25)

Aristotle's solution turns on the distinction between potential knowledge, which is correlated with universals, and actual knowledge, which is correlated with particulars. That Aristotle appeals to the distinction between potentiality and actuality is not overly surprising, since it is Aristotle's favorite "device" for solving philosophical problems (he appeals to it in discussing the possibility of change, for instance, and of *akrasia*).

However, this brief passage does not make it clear whether or not the correlation between potential knowledge and universals excludes the correlation between potential knowledge and particulars. In other words, it is not clear what Aristotle means by saying that potential knowledge is “universal” and “of the universal”. There are two possible interpretations. Aristotle can be interpreted as saying that (i) universal knowledge is merely potential knowledge (potential-knowledge-full-stop, so to speak), or that (ii) universal knowledge is potential knowledge of particulars.⁹²

Interpretation (i) maintains that although Aristotle correlates potential knowledge with universals, there is no corresponding correlation between potential knowledge and particulars (or between actual knowledge and universals). Potential knowledge has one object (*viz.*, the universal), and actual knowledge has another object (*viz.*, the particular). As Walter Leszl (1972) has pointed out, this type of interpretation assumes that particulars and universals are categorically distinct and isolated objects of knowledge. The main objection to this interpretation is that it is not easily compatible with Aristotle’s account of knowledge found in the *Posterior Analytics* and elsewhere. In the *Analytics*, Aristotle says nothing to the effect that universals are objects of potential knowledge, or that an unqualified knowledge that arises through universal demonstrations is merely potential knowledge.⁹³

⁹² Not surprisingly, the question concerning how to interpret Aristotle’s solution has been the issue of scholarly dispute. However, it is safe to say that these are the two main types of interpretation developed by authors, who have considered this passage in greater detail (and not simply dismissed it as incompatible with Aristotle’s epistemological views). Different versions of interpretation (i) are developed, e.g., by Allen (1970), Brakas (1988), Witt (1989). Different versions of interpretation (ii) are developed by Leszl (1972) and Heinaman (1981b). A third type of interpretation is developed by Cherniss (1962 [1944]) and Owens (1951), who find the solution in the notion of form, which, as they argue, is neither universal nor particular. I will not consider the third type of interpretation in this chapter. (For a discussion and criticism of such an interpretation, see Leszl (1972)). However, I will consider it indirectly in Chapter Five, where I discuss Alexander’s account, which is similar to the one Cherniss and Owens attribute to Aristotle.

⁹³ See, e.g., Allen (1970), who develops a version of interpretation (i) but complains that Aristotle’s explanation in M 10 is a surprising one, since “in the *Analytics*, it has often been said that the object known is the universal, without the slightest hint that this is true only of potential knowledge” (1970, 112). Indeed,

Interpretation (ii), on the other hand, maintains that both potential and actual knowledge involve knowing particulars but in different ways – potentially and actually. This interpretation assumes that Aristotle uses the notion of potential knowledge in the same way as in the *Posterior Analytics*. Consequently, this notion does not exclude the possibility of having actual knowledge of the universal, but rather indicates that in knowing the universal we know potentially the particular too – we know potentially that, e.g. this triangle has 2 R, when we do not know that this triangle exists (and so of course we do not know that it has 2 R). Thus, interpretation (ii) is compatible with Aristotle’s account of knowledge in the *Posterior Analytics*. This, I believe, is an important consideration in favor of interpretation (ii) over interpretation (i).⁹⁴ However, there are also other considerations that support interpretation (ii).

One consideration that should be taken into account concerns Aristotle’s examples. Admittedly, Aristotle’s examples are confusing.⁹⁵ Nonetheless, it is reasonably clear that these examples concern actual knowledge, e.g. knowing *this* A. In so far as Aristotle

this incompatibility seems to be the main reason why several authors have disregarded Aristotle’s distinction between potential and actual knowledge. For a list of authors, who have dismissed Aristotle’s solution in M 10 as inconsistent with his own epistemological views, see Heinaman (1981b, 63).

⁹⁴ Although interpretation (ii) is compatible with Aristotle’s epistemological views, it is not immune to the objection that was leveled against interpretation (i). For the question – *viz.*, how can the potential knowledge of particulars be something actual? – may be raised also about interpretation (ii), and, consequently, about the *Posterior Analytics*, where Aristotle uses the notion of potential knowledge in the same way. I will return to this issue when drawing conclusions from my interpretation.

⁹⁵ Aristotle’s examples are confusing not only because he uses sense perception to illustrate a point about knowledge but primarily because these examples (“Sight sees universal color accidentally because this color, which it sees, is a color; and this A, which the grammarian contemplates, is an A”) might suggest that knowledge of particulars (this A) is potential knowledge of universals (an A). This suggestion is clearly problematic. For although Aristotle thinks that we acquire knowledge of universals from the perception of particulars (this is the main point of the process he calls *epagôgê*), he nowhere uses the terms “actual knowledge” and “potential knowledge” in the way suggested above. In fact, this suggestion conflicts blatantly with the way these terms are used in the *Analytics*, where Aristotle insists that knowledge of particulars depends on knowledge of universals (i.e., on the universal premise), but not *vice versa*. In *Posterior Analytics* A 21 he states that “one who grasps the latter proposition [this triangle has 2 R] does not know the universal in any sense, neither potentially nor actually” (86a13). See also *An. Pr.* B 21 (67a23-24); *De. An.* B 5 (417a24-9). For a more detailed criticism of such an interpretation, which no one (to my knowledge) has developed in any detail, see Heinaman (1981b, 68-69).

insists that knowing this A is knowing an A (“this A, which the grammarian contemplates, is an A”), we may suppose that he is trying to make the point that actual knowledge is not of the particular *qua* particular (this A *qua* this A) but *qua* falling under a given universal (this A *qua* an A). That this is Aristotle’s point is also confirmed by his rejection of the view that regards the particular as something absolutely unique. On this view (Aristotle associates it with the Platonic theory of Forms), the particular is “one in number” in such a way that besides it there is nothing that belongs to the same species. Aristotle argues that if particulars are one in number in this way, then there will not be many As, only one A (and so for all the letters), and the particulars will not be knowable (1086b18-33). Aristotle rejects this view by pointing out that nothing prevents there being many particulars of the same sort: “there is nothing to stop there being many As and Bs without there being an A in itself and B in itself besides the many” (1087b7-8). The point that particulars are knowable *qua* members of the same species is compatible with interpretation (ii), which maintains that neither actual nor potential knowledge is of the particular as such, but of the particular of a certain sort. But this point is not so easily compatible with interpretation (i), which relies on the contrast between the universal and the particular as categorically distinct and isolated objects of knowledge, and which thus seems to assume that particulars are absolutely unique. If “this A” and “an A” are taken to be distinct objects of knowledge, then it is difficult to see that see how knowing *this* A is knowing *an* A.⁹⁶

⁹⁶ This objection is raised by Leszl (1972). He argues that if universals and particulars are irreducibly distinct objects, then “Aristotle could not say, as he does in the present passage, that there is some sense in which knowing *this* A is to know A in general (thus to know all A’s); for this is excluded if knowledge of *this* A is something absolutely unique (something which can regard only it and nothing else), as it would follow from its correlation to the individual as such” (1972, 294).

Interpretation (ii) also finds support from Aristotle's formulation of the problem that he attempts to solve by drawing a distinction between potential and actual knowledge. This problem is epistemological and arises from the supposition that principles are particular. Aristotle claims that if principles are particular, they will not be knowable, and offers the following argument:

For they [particular principles] are not universal, but knowledge is of universals. This is clear from demonstrations (*apodeixis*) and definitions, for there is no syllogism (*sylogismos*) that this triangle has 2 R unless every triangle has 2 R, nor is there a syllogism that this human being is an animal unless every human being is an animal. (1086b33-7)

Aristotle gives an argument familiar from the *Posterior Analytics* that knowledge of particulars depends on knowledge of universals (we can know that this triangle has 2 R *only if* we know that every triangle has 2 R). Since this argument presupposes that we *can* have knowledge of particulars (e.g. knowledge that this triangle has 2 R), it might not be evident how it is supposed to show that particular principles are unknowable. It is reasonably clear that this argument constitutes a problem only on the assumption that principles of knowledge are *either* universal *or* particular. Since "it is clear from demonstrations and definitions" that knowledge of particulars requires prior universal principles, it cannot be the case that *all* principles are particular. As a result, the argument cancels out the supposition that *all* principles are particular.

Thus, Aristotle's formulation of the difficulty presupposes that we *can* know scientifically that *this* triangle has 2 R. The issue is about what kind of principles are needed to account for this knowledge. This, I believe, is the issue Aristotle addresses by drawing a distinction between potential and actual knowledge.

In order to account for the knowledge of particulars, Aristotle rejects the assumption that all principles must be either particular or universal. He develops, characteristically, a middle position between these alternatives. On the one hand, Aristotle is clearly committed to the position that if there is to be knowledge of particulars, it will depend on knowledge of universals. So, if there are *only* particular principles, there will not be any knowledge at all. On the other hand, although there is no demonstration without a universal premise, if there are *only* universal principles or premises (so that all knowledge is of the universal), there will be no inference to the particular conclusion. Aristotle's solution, his middle position, seems to be that knowledge of particulars requires both universal and particular premises.⁹⁷ He holds that in knowing the universal, we are in a position to know the particular, i.e., we know potentially the particular falling under given universal. However, in order to have actual knowledge of particulars, we also need a particular premise that "actualizes" our potential knowledge.⁹⁸

So, Aristotle's solution consists in rejecting the position that all knowledge must be universal, so that only universals are real (for knowledge is of what is real). He argues that knowledge of the universal is potential knowledge of the particular. When the potential knowledge is "actualized", we will have actual knowledge of the particular (e.g. knowledge of this triangle or this human being here and now). And this kind of knowledge counts as scientific knowledge as well. Consequently, he rejects the crude

⁹⁷ This interpretation differs from interpretation (i), which seems to maintain that Aristotle's solution consists in admitting that principles are particulars. At least Witt says that "since Aristotle's resolution of the *aporia* involves the claim that particular principles can be known, the obvious conclusion seems to be that the principles of substances are particular or individual and not universal" (1989, 163). However, Witt ignores Aristotle's formulation of the difficulty which shows that Aristotle is committed to the position that if there is to be knowledge of the particular, it must be derived from a universal principle (even though a universal premise is not, by itself, sufficient for drawing a particular conclusion).

⁹⁸ As Aristotle explains in *Posterior Analytics* A 1, a particular premise consists in the recognition of something as an instance of a universal, of which we already possess knowledge.

dichotomy between universal and particular principles; knowledge of the particular requires both universal and particular principles or premises. This interpretation is compatible with my earlier interpretation of *Posterior Analytics*, according to which Aristotle distinguishes between two types of knowledge, both of which involve knowing particulars but in different ways, *viz.*, potentially and actually. Further, this interpretation confirms that Aristotle's claim that knowledge is of the universal does not imply that there is no knowledge of particulars, or that knowledge is of something that is irreducibly distinct from the particulars. Hence, on this interpretation, the claim that knowledge is of the universal does not commit Aristotle to any sharp discrepancy between the universal and particular.

Nonetheless, although Aristotle's distinction between actual and potential knowledge minimizes the conflict between the real and the knowable, it does not seem to solve the conflict. The above interpretation explains how someone, who already possesses knowledge of the universal, comes to acquire actual knowledge of the particular. Given that the actual knowledge of the particular depends on the knowledge of the universals, universals seem to remain epistemologically prior to particulars. Surely, universals cannot be prior in any strong sense (for universal knowledge is, after all, knowledge of particulars) but we might nevertheless be skeptical about whether what is most real could also be also *most* knowable.

In the following section, I will argue that there is a sense in which universals are epistemologically dependent on particulars as well. They depend on particulars for their acquisition – knowledge of the universals is acquired from the perception of particulars. Hence the very possibility of universal knowledge requires or originates with particulars. I will focus on the last chapter of the *Posterior Analytics*, where Aristotle considers the

question of how we come to acquire the knowledge of the universal, presumably, for the first time.

Induction and Knowledge of Universals in *Posterior Analytics* B 19

Aristotle holds that demonstrative knowledge requires there to be first principles (*archai*), which must be known in some way other than demonstration. For if all the principles are demonstrable, then our demonstrations are either circular or continue *ad infinitum*, which makes knowledge impossible (see *An. Post.* A 3). This immediately prompts the question of how we are supposed to know these principles. This question is of fundamental importance, since Aristotle thinks that all knowledge is either derived from principles or is knowledge of principles.⁹⁹ So it is impossible to have any knowledge whatsoever in the absence of knowledge of principles. Aristotle takes up this question in the famous last chapter of the *Posterior Analytics*, where he promises to tell us, “concerning the principles, how they become known (*gnôrimos*) and what is the state (*hexis*) is that knows them (*gnôrizousa hexis*)” (99b17-18). Aristotle’s answers these to questions are, in rough terms, that we come to know the principles for the first time by *epagôgê* (“induction”), and that the state we are in when we know them is *nous* (“comprehension”).

It is safe to assume that what we acquire by induction is knowledge of *universals*. In light of Aristotle’s previous discussions one might expect him to account for the knowledge of propositions, especially definitions. However, his discussion in B 19 seems to concern only the acquisition of universal concepts (e.g. “human being”, “animal”,

⁹⁹ See *An. Post.* A 3, where Aristotle denies that all *epistêmê* is demonstrative, i.e., derived from explanatory principles. He says that in addition there is a type of *epistêmê* which is non-demonstrative and of the principles themselves. In *An. Post.* B 19 he identifies this type of *epistêmê* with *nous*.

100b1-3). This has led scholars to complain that Aristotle's account in B 19 is incomplete, or plainly inadequate – it does not explain how we get from concepts to definitions.¹⁰⁰ However, this complaint seems to rely on the assumption that in B 19 Aristotle intends to give a *complete* account of the acquisition of principles. I am not convinced that this is Aristotle's intention.¹⁰¹ I believe that his aim in this chapter is to show that knowledge of universals is *possible* in the first place. In order to show that the principles *can* be known, it certainly helps to show that we can acquire knowledge of concepts; for concepts can be viewed as the starting points for definitions. I will not attempt to develop a complete account of the acquisition of principles, which goes, in one way or another, beyond *Posterior Analytics* B 19. My main concern here is to show that particulars play a role in the acquisition of universal principles, and to this aim it suffices to show that they play a role in the acquisition of universal concepts.¹⁰² That Aristotle's main concern is to account for the possibility of knowing the principles becomes clearer, when we look at the way in which he motivates his discussion of the question "How do the first principles become known?"

¹⁰⁰ See Barnes (2002 [1975]), but also Kahn (1978), who speaks about the "gap between vulgar and scientific conceptualization".

¹⁰¹ I sympathize with Bronstein's (unpublished) view that Aristotle's answer in B 19 to the question of how the first principles are acquired is only partial – B 8 and 13 fill in Aristotle's account. According to Bronstein, we acquire knowledge of concepts by induction. We use these to acquire knowledge of definitional principles via demonstration and division, outlined in *An. Post* B 8 and 13, respectively.

¹⁰² Relatedly, I will not delve into the controversial issue concerning the role of *nous* in B 19, i.e., I will not try to explain how (or when) we get to the state in which we know the principles. It is clear that in B 19 Aristotle regards *nous* as a state (*hexis*) in which we know the principles. It is not clear, however, whether he would agree with the traditional interpretation of his position, according to which *nous* is not only the state in which we *know*, but also the means by which we *discover* the principles. In recent decades, several scholars have pointed out that the traditional view confuses two questions that Aristotle distinguishes near the beginning of B 19: (i) how do the principles become known? (ii) what is the state we are in when we know them? The rest of B 19 makes it clear that *nous* is Aristotle's answer the second question; he does not mention it in his answer to the first question. Different versions of the traditional interpretation are developed, e.g., by Kahn (1978), Irwin (2002 [1988]) and, most recently and in great detail, by Groarke (2009), who, however, makes almost no mention of B 19. For a criticism of the traditional interpretation, see, e.g., Barnes (2002), Leshner (1973), Bronstein (unpublished), Harari (2004).

Aristotle begins his discussion by outlining a puzzle. On the one hand, it cannot be the case that we have a sort of innate knowledge of principles. It would be absurd, Aristotle argues, to suppose that “we possess pieces of knowledge more exact (*akribesteras*) than demonstration without its being noticed” (99b26-27).¹⁰³ On the other hand, if knowledge of principles is indeed the first knowledge of all, then it would seem that if we lack it we can never acquire it, for we always acquire knowledge, says Aristotle, on the basis of prior knowledge (99b28-30, esp. 71a1-2). This puzzle is, thus, a dilemma: either we acquire knowledge of principles without any prior knowledge, which contradicts the guiding assumption of the *Posterior Analytics* (see A 1); or we have a full-fledged prior knowledge present in us that escapes our notice, which is absurd. This dilemma thus raises the question of how knowledge of principles is possible at all. In order to show that knowledge of principles is possible, Aristotle needs to explain how it gets started: What is the origin of our knowledge?

Aristotle’s explanation reveals, again characteristically, a middle position between these two alternatives. He tries to show that although we do not already know innately exactly what we come to know, our knowledge does not begin from scratch. He claims that we possess a capacity (*dynamis*) for acquiring knowledge, but not one that is greater in respect of accuracy than the states that constitute knowledge of principles. This “innate capacity for discriminating” (*dynamis symphyton kritikên*, 99b35) is identified as sense perception (*aisthêsis*). Thus, Aristotle thinks that knowledge of principles is, in a way, innate, but the innateness involved is the innateness of the capacity (shared by all animals) rather than the innateness of some items of knowledge (in human soul). Aristotle’s account of the path from perception to universals is brief and sketchy; it falls

¹⁰³ The reference is obviously to Plato and his theory of reminiscence (*anamnesis*), and the question about the origin of knowledge of the principles in general is reminiscent of Meno’s paradox.

into two parts (100a3-14 and 100a15-b5).¹⁰⁴ The first part (which in many respects parallels *Metaphysics* A 1) identifies a number of stages in rapid fashion: “from perception there comes memory, as we say, and from memory (when it occurs in connection with the same thing) experience; for memories which are many in number form a single experience” (100a3-5). Aristotle describes experience (*empeiria*) as a state in which we possess a “whole universal (*pantos katholou*), which has come to rest in the soul” (100a6). I will consider the question of what he might mean by the “whole universal” later on, but for now it suffices to say that universals are acquired in experience, through repeated perceptions and memories.

Although Aristotle does not explain in what way experience involves universals, and says little about how we get from one stage to the next, this empiricist picture presents, despite its vagueness, an explanation for why particulars are epistemologically fundamental. It shows that Aristotle holds that knowledge of the principles begins with sense perception, and sense perception is, as he often says, of the particular.¹⁰⁵ Indeed, Aristotle emphasizes also in *Posterior Analytics* A 18 (81b2-6) that it is impossible to study (*theôrein*, think of) universals except by induction, and it is impossible to carry out an induction without having perceptions of particulars (*ta kath' hekasta*).

In the second part of B 19, Aristotle makes another attempt to explain the origin of our knowledge of universals:

Let us say again what we have just said but not said clearly. When one of the undifferentiated items (*tôn adiaphrôn enos*) makes a stand (*stantos*), there is a primitive universal (*prôton katholou*) in the soul (for although you perceive particulars, perception

¹⁰⁴ For a useful discussion of Aristotle’s account of the early stages of the acquisition of knowledge (and especially of sense perception), see De Haas (2005).

¹⁰⁵ See, e.g., *De An.* B 5 (417b22); *An. Post.* A 31 (87b28-31).

is of universals – e.g. of human being, not of Callias the human being). Next, a stand is made among these items, until something partless and universal makes a stand. E.g. such-and-such an animal makes a stand, until animal does; and with animal a stand is made in the same way. Thus it is plain that we must get to know the primitives by induction (*epagôgê*); for this is the way in which perception instills universals. (100a15-b5, Barnes' translation, slightly modified)

This passage confirms that Aristotle is concerned with tracing the origin of our knowledge of principles back to sense perception. But other than that, Aristotle's clarification is rather unclear. Firstly, it is not clear what Aristotle means by saying that a "primitive universal" is in the soul when one of the "undifferentiated items" makes a stand. Secondly, it is not clear what kind of a contrast he is trying to make in saying that although we "perceive particulars, perception is of the universals – e.g. of human being and not of Callias the human being". The last part of this statement is especially confusing since it seems to blur Aristotle's standard distinction between perception (which is of the particular) and knowledge (which is of the universal).

According to what Jonathan Barnes (2002, 266) calls the "orthodox" interpretation, both "undifferentiated item" and "primitive universal" refer to the least general universal, the *infimae species* (e.g. human being), which is "undifferentiated" in the sense of not being further divisible. However, this interpretation is not easily compatible with Aristotle's contention that the primitive universal is given in a sense perception. For it is hard to see how sense perception could give us *infimae species* (or, more generally, universals in the strict sense, whether concepts or definitions). And the tentative suggestion that perception does give us *infimae species* leaves it very hard to see how

sense perception differs from knowledge. Further, if perception does as much, what need is there for memory and experience?

I believe that Aristotle's point is better captured in light of my earlier suggestion that he is trying to work out a middle position between the following alternatives: either we acquire knowledge of principles without any prior knowledge, or we have a full-fledged prior knowledge present in us that escapes our notice. He holds that our knowledge of universals does not begin from scratch but with sense perception, which is, in a way, of the universal. On the other hand, he maintains that sense perception cannot give us anything more accurate and explicit than the knowledge we acquire after going through the whole process of induction (100a10-11). This suggests that sense perception cannot give us universals in the strict or complete sense (universals that are ready to be used in demonstrations, so to speak). But if sense perception is of some sort of universal but not of the universal in the strict sense, then it seems to follow that perception gives us universals that are somehow confused or "jumbled up". This is precisely how Aristotle describes the starting points of scientific inquiry in *Physics* A 1.

As Robert Bolton (1991) has pointed out, there are many similarities between *Posterior Analytics* B 19 and *Physics* A 1. Both works aim to explain how we come to know the first principles of knowledge. Further, both identify what is most knowable to us (the starting points for knowledge) with what is most knowable in relation to sense perception.¹⁰⁶ Finally, in both works Aristotle claims that sense perception is of something universal and uses similarly unusual language to describe these starting points. According to *Physics* A 1, learning begins with a grasp of a universal that is a "sort of whole (*holon*) comprehending many things within it like parts" (184a25-26).

¹⁰⁶ See *An. Post* I 2 (72a1-5), *Phys.* A 1 (184a24).

This kind of universal is described as “jumbled up” (*sygkechymena*, 184a22) and “undifferentiated” (*adiorista*, 184b2). Aristotle gives the example of a child who begins by calling all men fathers and all women mothers (184b12-14). His point, I take it, is not that the child mistakenly believes all men to be her fathers, but that she mistakenly uses the term “father” for the more general term “man”. As she develops, she learns to make proper distinctions, and acquires mastery over the relevant concepts.

When we read *Posterior Analytics* B 19 in light of *Physics* A 1, then the interpretation suggesting itself is that “whole universal”, “primary universal” and “undifferentiated item” do not refer to universals in the strict or complete sense (*infimae species*) but instead to a vague sensible whole more knowable to us, from which come universals in the strict sense. Accordingly, the child begins with a confused grasp of human being. The universal at this state is confused or “jumbled up” with, or “undifferentiated” from, other sorts of animals, and hence it might happen that the child calls other types of animals mistakenly “humans”. As she develops, she eventually learns to distinguish humans from other animals – at this point she is able to recognize particular humans *as humans*.¹⁰⁷

On this interpretation, we do not only move from what is specific to what is more and more general but also from what is given in a sense perception in a confused and

¹⁰⁷ Although I will not attempt to solve here the controversial question of what Aristotle means by *epagôgê* (and whether or not he has an unified account of induction), I would like to propose that this kind of recognition (i.e., recognition of a particular as an instance of a universal) seems to be the main idea behind his notion of *epagôgê*. It is noteworthy that he appeals to this idea already in *Posterior Analytics* A 1, where he argues that the conclusion that this [figure] in the semicircle has 2 R *hama epagomenos egnôrisen* (“became familiar along with the induction”). It seems that *epagomenos* refers to the recognition of this [figure] as a triangle, which leads immediately to drawing the conclusion. Similar suggestion concerning A 1 is made also by Harari (2004) and McKirahan (2002). Further, this suggestion is compatible with Engberg-Petersen’s (1979) view that the root idea of Aristotle’s *epagoge* is “something like ‘attending to particular cases with the consequence that insight into some universal point is acquired’ or ‘acquiring insight into some universal point as a consequence of attending to particular cases’” (p. 305).

undifferentiated manner to what is more explicit and clear.¹⁰⁸ The advantage of this interpretation is that it helps to make sense of Aristotle's claim that "although you perceive particulars, sense perception is of the universal". It suggests that sense perception gives us universals in a confused or implicit manner (as Aristotle says in the *De Anima – kata symbebêkos*, incidentally or indirectly, 418a21-24).¹⁰⁹ Indeed, if the universal were not somehow already embedded in the particular, we could not make a transition from bare sensory discrimination to the recognition (and, further, knowledge) of the particular. Aristotle makes similar point in *Posterior Analytics* A 31, where he claims that "perception is of a certain sort of thing (*toioude*), not of the particular" (87b29). But he goes on immediately to add that, nevertheless, what we perceive must be "a this something (*tode ti*) at a place and at a time, and it is impossible to perceive what is universal and belongs to every instance (*epi pasin*)" (87b30-31). So, although perception is "of a certain sort of thing" and so (in a way) of the universal, we cannot perceive universals in the strict or "differentiated" sense (as something belonging essentially to every instance of its subject, say), and in this aspect sense perception differs from knowledge of the universal.¹¹⁰

¹⁰⁸ This interpretation differs from Bolton's (1991) interpretation in that Bolton seems to maintain (differently from what Aristotle says in *Posterior Analytics* B 19) that the movement is from what is more general to what is more specific. He claims, for instance, that we move from "the grasp of man, i.e., of a certain animal, to the point where we can clearly distinguish the kind, animal, and within it man and other distinct species" (1991, 9). I believe that the movement is from specific to general. That is, we begin with a confused grasp of a human being, which we do not differentiate from other animals, but this does not mean that we begin with the grasp of an animal. Thus, we move from "human being" to "such and such an animal" to "animal", etc.

¹⁰⁹ So, the direct objects of perceptions are not universals but sense qualities or sensible forms (see *De Anima* B 6).

¹¹⁰ Since perception does not give us universals in the strict sense, we need not be worried about the role of memory and experience. We may suppose that the refinement of the confused grasp of universals occurs through repeated perceptions and memories, which, then, constitute an experience. In *Metaphysics* A 1 (981b10-13), Aristotle claims that people with experience cannot properly explain what they know: they know the fact (*hoti*) but not the reason why (*dioti*). Those who have knowledge, on the other hand, know not only the fact but also the reason why.

This interpretation suggests that corresponding to the ontological interdependence between particulars and universals, there is also an epistemological interdependence – particulars cannot be scientifically known without universals, and universals cannot be scientifically known without particulars, since our scientific knowledge of universals begins with the perception of particulars. In other words and more generally, we grasp particulars only by grasping the universal under which they fall, and we grasp the relevant universals, in turn, only by epistemic contact with the particulars that exemplify them. To conclude this chapter, I will discuss the consequences of my interpretation in greater detail, and consider how this interpretation helps to resolve Aristotle’s problem of *katholou*.

Conclusion

Aristotle’s problem of *katholou* is generated by two of his philosophical commitments: (i) particulars are most real and (ii) universals are most knowable, since knowledge is of the universal. According to the received view, these commitments lead to a discrepancy between the real and the knowable or, alternatively, between Aristotle’s ontology and epistemology.¹¹¹

According to my interpretation, Aristotle is able to reconcile the requirements of his ontology with the requirements of his epistemology. I have suggested that the statement that knowledge is of the universal becomes the source of the discrepancy if it is taken to imply that (i) there is no knowledge of particulars, and/or (ii) universals as objects of knowledge are irreducibly distinct from particulars (so that knowing the universal does not entail knowing the particular). If Aristotle were committed to these implications, then

¹¹¹ For a more detailed characterization of the received view, see Chapter One.

the discrepancy between the real (particular) and the knowable (universal) would indeed be sharp and unavoidable. However, I have proposed that Aristotle's account of knowledge implies neither (i) nor (ii). In what follows, I will examine this proposal in greater detail.

As to the implication (i), I have argued that Aristotle's account of scientific knowledge and its requirements does not exclude the possibility of knowing particulars. Rather, Aristotle wants to put restrictions on the way in which the particular must be considered in order to be knowable. Science cannot regard the particular in all its non-repeatable particularity and uniqueness. But any given science can regard the particular under a definite aspect which it shares with other particulars and in this way can acquire knowledge of it.¹¹² Thus, what counts in science is that the particular is of a certain sort, i.e., falls under certain universals. As far as I know, no one has denied that Aristotle is committed to a position that particulars are knowable *qua* falling under universals. Nevertheless, many commentators maintain that his position involves or leads to a serious logico-epistemological problem. The source of the problem appears to be Aristotle's denial that knowledge is of the particular *qua* particular. But why is this denial problematic? It involves a serious problem only if it is assumed that particulars are completely or absolutely unique – if being unique is all that the particular is. If we make this assumption, then it would follow that Aristotle's position “leaves us without knowledge of the individuals which make up the world in which we live” (Brakas 1988, 108).

¹¹² See McKirahan (1992, esp. chap. 8), who argues that sciences treat a particular *qua* being of a certain sort, where “being of a certain sort” means belonging to the science's subject genus, e.g. a bronze triangle is comprehensible partly by geometry (*qua* triangle), partly by natural science (*qua* bronze). A given science, then, treats a particular partially, under one aspect, and ignores the manifold other aspects under which it can be considered.

However, it is clear that Aristotle does not think that particulars are utterly unique. As I have argued in chapter two, he rejects the bare particular view according to which particulars are things that can exist independently of universals essentially predicated of them. Rather, he believes that each particular necessarily belongs to a species and genus and treats a particular's belonging to a species as a primitive or unanalyzable fact. Further, in *Metaphysics* M 10 he rejects the view according to which each particular is completely unique in the sense of being the sole member of the species. (On this view, particulars would be similar to Thomas Aquinas' angels, each of which forms its own species, so that there are as many different species as there are angels.) Aristotle rules out the utter uniqueness of particulars by pointing to the fact that nothing prevents there being many particulars of the same species.

On Aristotle's view, then, particulars are instances of universals, "this somethings". This view is compatible with his epistemological position according to which particulars are knowable *qua* instances of universals. We could say that his epistemological position that particulars are knowable *sub specie universalitatis* relies on (or is prepared by) his ontological position that particulars are not utterly unique, but are capable of falling under species and genera. Consequently, there is no sharp discrepancy between his ontology and epistemology.¹¹³

As to the implication (ii), all interpreters agree that Aristotle cannot be committed to the position that knowledge is of separated universals, i.e., universals that resemble Platonic Forms in being capable of existing independently of particulars. Since Aristotle rejects the existence of separated universals, it seems uncontroversial that the objects of

¹¹³ One might still argue that since we cannot know the particular when it is considered in its uniqueness, in what does not make it a member of a species, Aristotle cannot escape the discrepancy altogether. But even so, the discrepancy between the real and the knowable would be limited to the fact that certain aspect of reality is unknowable, rather than consisting of the fact that what is real is not knowable at all.

knowledge must differ in some important ways from Platonic Forms. However, I think Walter Leszl is right to point out that Aristotle's interpreters are conditioned by certain Platonic presuppositions (1972, 282). The position that knowledge is of the universal does not appear to be particularly problematic if it is taken to mean that knowledge concerns (or applies to) all members of a species. But it becomes a problem if Aristotle accepted a Platonic separation of universals; for in this case it would appear that universal knowledge concerns something other than each instance of a given universal. Since Aristotle's interpreters tend to think that there is a reason why the problem arises or is particularly worrisome in the context of Aristotle's philosophy, they seem to adopt (and to attribute to Aristotle) an ontological dualism between universals and particulars. Earlier I suggested that one source of the problem appears to be Aristotle's denial that knowledge is of particulars *qua* particulars and that this denial appears to be problematic on the assumption that particulars are completely unique. Now, this assumption opens a back door to the Platonic dualism; for if particulars are utterly unique then they must differ in some strong sense from universals.

I have argued that knowledge of the universal is, according to Aristotle, potential knowledge of particulars. This raises the question (this question has probably been on the reader's mind ever since I introduced this view) whether universal knowledge is nothing other than potential knowledge of particulars. Does Aristotle reduce knowledge of universals to knowledge of particulars, so that the talk of universals becomes talk of particulars?¹¹⁴ The rest of this section will focus on this question.

¹¹⁴ To ask this question is equivalent to asking whether or not Aristotle is (an extreme) nominalist. However, since my primary aim is not to solve the traditional problem about the ontological status of universals, it will avoid the traditional labels "realism" and "nominalism".

The idea that Aristotle reduces knowledge of universals to knowledge of particulars underlies the interpretation that takes Aristotle to be committed (at least in *Metaphysics* M 10) to the position that knowledge of the universal is *merely* potential knowledge. This radical interpretation suggests that universals can be reduced entirely away.¹¹⁵ According to another possible interpretation, knowledge of the universal, while being something actual, is nonetheless less actual than knowledge of the particular. This type of interpretation is subtler and less radical, since it maintains that universal knowledge is potential knowledge of particulars, but insists that such knowledge is *fully* actual only when it is applied to particular cases. One could in this context invoke Aristotle's distinction between two sense of actuality – a distinction “analogous to possession of knowledge and exercise of it” (*De An.* B 1, 412 a23; see B 5). Accordingly, knowledge of the universal would correspond to knowledge possessed but not exercised or contemplated (i.e., an actuality which is also a *dynamis*), and knowledge of the particular would correspond to the exercise or contemplation of knowledge possessed. Contemplating thus represents a higher level actuality (traditionally called “second actuality”) than knowledge whose exercise the contemplating it. Consequently, one could argue that Aristotle reduces knowledge of universals to knowledge of particulars in requiring that universal knowledge needs to be applied to particulars in order to be fully actual.¹¹⁶

¹¹⁵ See, e.g., Brakas (1988), who argues that Aristotle's position in *Metaphysics* M 10 implies that “universal is something which is actually nothing” (p. 108). Since I have discussed (and criticized) the interpretation which takes particulars to be utterly unique and maintains that knowledge of the universal is merely potential knowledge in greater detail earlier, I will not pay more attention to it here.

¹¹⁶ This kind of understanding of Aristotle seems to underlie Leszl's (1972) interpretation of *Metaphysics* M 10 and Ferejohn's (1991) interpretation of the *Posterior Analytics*. Even though these authors do not invoke the *De Anima* distinction between different senses of actuality, they both think that in order to be fully actual potential knowledge must be applied to particular cases.

However, there are passages indicating that Aristotle does not think that the contemplation or exercise of universal knowledge *must* involve an application to particular cases. For example, Aristotle argues in *Prior Analytics* A 21 (67a33-7) that we may know the universal premise and the particular premise, but nevertheless fail to draw the particular conclusion, since we do not contemplate (*theôrein*) these premises together.¹¹⁷ This suggests that *both* universals and particulars can be actively contemplated, and that we can contemplate them *separately*. From this it seems to follow that the universal can be contemplated *without* applying it to a particular case.

Furthermore, I do not think we need to worry that the universal knowledge, if not applied to particular cases, would be empty or vacuous.¹¹⁸ In order to show that universal knowledge has meaningful content, we do not need to maintain that it cannot be exercised without applying it to particular cases. It is sufficient to take into account Aristotle's position that we acquire knowledge of universals by induction. Since universal knowledge is acquired from perceptions of particulars, it cannot be void and empty. The content of the universal knowledge is determined by the instances that formed the basis of the induction that generated it; they alone provided data for all further knowledge. This suggests, as I have argued earlier, that particulars and universals are not only ontologically but also epistemologically interdependent – we cannot acquire

¹¹⁷ See also *NE* 1146b35-1147a3; *An. Post.* 78a5-6. In general, I believe that in drawing a distinction between potential and actual knowledge in *Metaphysics* M 10 (and in the *Posterior Analytics*), Aristotle does not have in mind the *De Anima* distinction between different senses of actuality. Rather, he has in mind the distinction between knowing the universal (without knowing a definite particular instance of it) and knowing a particular instance of a universal of which we already possess knowledge. See also Heinaman (1981b), who criticizes the kind of interpretation, according to which universal knowledge must be applied to particular cases.

¹¹⁸ This worry seems to be the main motivation behind Leszl's (1972) interpretation. He says that the universal knowledge "would become void if not applied to particular cases since it formulates a sort of general rule which only awaits to be applied to particular cases" (p. 301).

knowledge of particulars without universals, and we cannot acquire knowledge of universals without particulars.

In light of the above considerations, I do not think that Aristotle reduces knowledge of universals to knowledge of particulars in the aforementioned ways, either holding that knowledge of the universal is *merely* potential knowledge, or that universal knowledge *must* be applied to particular cases in order to be fully actual. This does not mean, however, that Aristotle does not reduce universal knowledge to particulars at all. His position that universal knowledge is potential knowledge of particulars implies that knowledge of the universal is nothing other than knowledge of particulars. But it is important to notice that he reduces knowledge of the universal to particulars *of a certain sort*, to particulars *qua* instances of universals. This suggests that universals cannot be reduced away entirely – after all, particulars exist (and are knowable) as instances of universals. On the other hand, universals cannot enjoy any irreducible ontological status, since they cannot exist (or become known) without particulars instantiating them.

All this reveals an important difference between Aristotle's and Plato's approaches. Aristotle does not begin with what he takes to be the main motivation behind the Platonic theory of Forms, *viz.*, the Heracleitean view that “all sensibles (*aisthêta*) are always in flux and there is no knowledge of them” (*Met.* 987a31; 1087b13), which, then, leads the Plato to separate universals as objects of knowledge from particulars. Rather, he begins with the recognition that every particular belongs necessarily to a species and genus, and this is why we can have knowledge of particulars.¹¹⁹ Aristotle does not explain why particulars must fall under universals, or what unifies the many particulars in the species human being, for example. I do not believe Aristotle had any answer in the *Organon*

¹¹⁹ I agree with Cresswell (1975), who says that “the necessity of a thing's being what it is can be seen as what makes it unnecessary to postulate any further things to explain what the original thing is” (p. 240).

other than the obvious one that they are all humans. Things get more complicated in the *Metaphysics*, where particulars have internal structure: they are composites of matter and form. Consequently, particular's belonging to a species is not any more an unanalyzable fact, but can be explained in terms of its possessing a form. Aristotle's account of substance and form in the central books of *Metaphysics* will be the focus of the following two chapters.

4

Metaphysics Z and Forms

Aristotle's treatment of other causes is clear, but what he says about form has a certain obscurity.

Alexander of Aphrodisias¹²⁰

In the central books of the *Metaphysics* (Z-Θ), Aristotle regards form (*eidos*) as a primary substance. This immediately raises the problem of explaining how forms can be most real yet objects of knowledge. More precisely, it invokes the controversial issue of whether Aristotle's forms are particular or universal. If they are universal, then it is hard to see how they can be substances; but if they are particular, then it is not clear how they can be knowable. The controversy surrounding the status of forms is the single largest and most intricate interpretative question about Aristotle's *Metaphysics*. I will not attempt to give a comprehensive answer to this question which I am sure would be the size of the *Metaphysics* itself. I will focus on presenting a broad picture emerging from *Metaphysics Z* without delving into the labyrinth of controversial interpretive subtleties.

In the first part of the chapter, I will present and analyze the most important textual evidence for the view that forms are universal (i.e., somehow sharable by many particulars) and for the view that forms are particular (i.e., unique and peculiar to the particular things of which they are the forms). In the second part of the chapter, I will sketch four possible solutions to the puzzle concerning the status of form, and analyze in greater detail the view that particular forms are instances of universals. I take this view –

¹²⁰ *Commentary of Aristotle's Metaphysics, Book A* (19, 14-15).

which is suggested by and compatible with my interpretation in previous chapters – to be the best solution to the problems concerning the status of forms.

The Status of Forms in *Metaphysics Z*

Aristotle's *Metaphysics Z* is centered on the question "What is substance (*ousia*)?" As we have seen, in the *Categories* Aristotle answers this question by distinguishing between primary substances (basic subjects for all predication) and secondary substances (species and genera that are essentially predicated of them). He gives as examples of primary substances such things as this human being and this horse (2a13-14), but either ignores or fails to recognize the possibility of analyzing such things as compounds of form and matter. It is well known that matter is not mentioned at all in the *Organon*.¹²¹ Aristotle uses the word *eidōs* but not in contrast to the matter (usually translated as "form"), but rather in contrast to the genus (usually translated as "species") and occasionally¹²² to designate the Platonic Form.

In the *Metaphysics*, particular substances like humans and horses are analyzed in terms of matter and form. Aristotle starts to use the locution "substance of each thing" (*ousia hekastou*), which is absent from the *Categories*, and which seems to announce a shift to a new level of analysis. It suggests that he is now interested in the substance of

¹²¹ Matter makes its first appearance in the *Physics*, where Aristotle defines it as "the primary subject (*hypokeimenon*) of each thing, from which it comes to be, and which persists in the result" (A 8, 192a31). According to a widely known hypothesis, Aristotle introduces the concept of matter because of his worries about change; more precisely, because of his desire to explain substantial change. This hypothesis is developed in detail by Graham (1987, chap. 5) and criticized by Burnyeat (2001, chap. 5).

¹²² See, e.g., *An. Post.* A 11, 77a5; 22, 83a33; *Top.* Z 8, 147a6-9. The answer to the question of whether *eidōs* of the *Organon* differs from the *eidōs* of the *Metaphysics* depends to a large extent on the position one takes on the nature of *eidōs* in the *Metaphysics*. Those who think that *eidōs* is universal are usually willing to see a close connection between them. See, e.g., Woods (1993). Those who think *eidōs* is particular distinguish between two senses of *eidōs*, form and species. See, e.g., Frede and Patzig (1998). For a lucid discussion of different meanings and etymology of *eidōs*, see Novak (2005).

the substances that the *Categories* has indicated as primary.¹²³ Aristotle's use of *ousia* is thus ambiguous: he talks (i) of a particular substance, such as Socrates, as *a substance*, and also (ii) of the substance *of* the substance. Aristotle moves quite freely between these two senses in the central books of *Metaphysics* (which undoubtedly complicates the understanding of his views), but his primary concern in book Z appears to be with the substance *of* a thing. This is suggested by the way he introduces four candidates for the title of substance in Z 3. These candidates – essence (*to ti ên einai*), universal, genus and subject (which may, in turn, indicate matter, form, and the composite of both) – are introduced on the strength of the fact that they are thought to be the substance of each thing, *ousia hekastou*. Thus, it is reasonable to suppose that the question “What is substance?” is the question about the substance of composite substances.¹²⁴

Aristotle's preferred answer to this question in *Metaphysics* Z is clearly form, *eidōs*. The view that form is substance first appears in Z 3, is repeated in Z 7 and 9, 10 and 11, receives detailed treatment in Z 17 and H 2 – in several passages form is explicitly called “primary substance”.¹²⁵ It is less clear, however, what it means to say that form is primary substance. In the brief discussion of substance in *Metaphysics* Δ 8, Aristotle first characterizes substance as he does in the *Categories* (as that which is “not predicated of a

¹²³ However, although Aristotle does not use in the *Categories* the locution “the substance of”, the idea that primary substances have essences or substances is present in the *Categories*' claim that the secondary substances reveal *what* primary substances are.

¹²⁴ This supposition is developed and defended in great detail by Wedin (2005, chap. 5). Several authors have pointed out that the question “What is substance?” in *Metaphysics* Z is ambiguous between asking (i) for a list of things that are substances (“the population question”), or asking (ii) for an account, analysis, or explanation of what it means to be a substance (“the definition question”). They seem to think that the four candidates for the title of *ousia hekastou* are four reputable answers to question (ii). See, e.g., Furth (1988, 54-58), Witt (1989, 7-14), Burnyeat (2001, 12-14). I think the same kind of ambiguity can be found in Aristotle's discussion of these four candidates, i.e., the ambiguity between asking for the list of items that are “substances of” (e.g. universal; form, etc.) and asking “what it is to be the substance of” (e.g. to be predicated of many things; to be a cause, etc.).

¹²⁵ See the following passages (and their surrounding context): Z 3 (1029a26-33), Z 6 (1032a4-6), Z 7 (1032b1-3), Z 11 (1037a21-b7), Z 17. See also *De An.* B 1 (412a6-11, 19-21; 412b9-10).

subject but of which everything else is predicated”), but then tells us that *ousia* can mean also “that which, being present in such things as are not predicated of a subject, is the cause of their being” (1017b14-16). In *Metaphysics Z* 17, Aristotle tells us that form is “the cause by reason of which the matter is some definite thing; and this is the substance of the thing” (1041b6-9) and “the primary cause of its being” (1041b27). This suggests that form is primary substance in the sense of being the primary principle (or source, *archê*) and cause (*aitia*) of the being of particular substances, something that makes the substance to be what it is, and explains why it is such (i.e., why a given piece of matter is, or constitutes, a substance of a certain sort).¹²⁶

The view that a form is the substance of a thing, “a cause or principle of certain sort” (1041a9-10), prompts immediately the question of whether form is particular or universal. Indeed, Aristotle’s *aporia* in B 6 concerning whether the principles of things are particular or universal is often understood as an *aporia* concerning the status of forms as primary substances.¹²⁷ The status of Aristotle’s forms has been the most intensively disputed issue in the recent history of Aristotelian scholarship. The debate has been so heated partly because it touches the heart of Aristotle’s conception of substance (understanding whether form is particular or universal means knowing whether in the *Metaphysics* Aristotle regards substance as particular or universal), and partly because Aristotle’s solution to this puzzle is not easy to discern. As a matter of fact, *Metaphysics*

¹²⁶ I will not delve into the complicated issue concerning whether or not the idea that form is primary substance undermines the *Categories*’ idea that particular sensible substance is primary substance. I believe that particular substance’s being a primary substance in the sense of being an ultimate subject of predication is *not* incompatible with the idea that form is prior to the particular substance as a principle of its being. See also *Categories* 14b10-13. For a further discussion of the issue of whether Aristotle’s account of substance in the *Categories* is compatible with that of the *Metaphysics*, see Wedin (2005), but also Graham (1987).

¹²⁷ See, e.g., Witt (1989, chap. 5), Code (1984).

Z can be seen as aporetic, at least in so far as it presents conflicting lines of thought and leaves open the question of how to reconcile them.¹²⁸

Aristotle associates forms with universals when he talks about the definition and knowledge, and distinguishes between them when he denies that universals are substances. Accordingly, Aristotle's interpreters ascribe to him three theses or commitments which, as is easily realized, form an inconsistent set:

- (i) Substance is form;
- (ii) no universal is substance;
- (iii) form is universal.¹²⁹

Some believe that Aristotle is committed to all of (i)-(iii), and that the inconsistency is unavoidable.¹³⁰ But most believe that Aristotle does not hold all three theses in the triad and hence the inconsistency can be avoided. All interpreters agree on (i), so the dispute is focused on either challenging or denying (iii) or reinterpreting (ii) so that it is consistent with (iii).¹³¹ In what follows, I shall present the most important textual evidence for the view that forms are universal and for the view that they are particular, then sketch four possible solutions to the *aporia* concerning the status of Aristotle's form, and defend one of these solutions in greater detail.

¹²⁸ See, esp., Code (1984), Owen (1978).

¹²⁹ This is the most straightforward way of presenting the inconsistency, which relies on the assumption that "substance" (or "universal") is not ambiguous. As we will see, one way to avoid the inconsistency is to challenge this assumption, and argue that "substance" (or "universal") is ambiguous (so that, e.g. "substance" in (i) is not the same as substance in (ii)).

¹³⁰ For the charge of inconsistency, see Leshner (1971), Sykes (1975), and Graham (1987, chap. 9).

¹³¹ Proponents of particular forms, i.e., those who deny (iii), include Sellars (1957), Albritton (with reservations, 1957), Hartman (1976, 1977), Heinaman (1980, 1981b), Lloyd (1981), Frede (1987b), Frede and Patzig (1988), Irwin (2002 [1988]), Witt (1989), Spellman (1995). Opponents include Owen (1965b), Woods (1967, 1993), Modrak (1979), Furth (1988), Loux (2008 [1991]), Lewis (1991), Wedin (2005).

Forms are Universal

Although Aristotle never says that forms are universal, there are reasons to think that he is nonetheless committed to this view. Predictably, the main reason or intuition behind the view that forms are universal is that only as such are forms able to satisfy Aristotle's demands on knowledge and definition. Since he clearly takes forms to be knowable and definable, and since he maintains that knowledge and definition is of the universal, it seems to follow that forms are universal. This conclusion is suggested by his remarks to the effect that definition belongs to form and to the universal, and by his denial that particulars as such are definable.

I begin by considering *Metaphysics Z* 15, where Aristotle argues at length that particulars are indefinable (i) because of their matter, and (ii) on account of the very nature of definition. The first argument runs as follows:

For this reason also there is neither definition nor demonstration of sensible particular substances (*tôn ousiôn aisthêtôn tôn kath' hekasta*), because they have matter whose nature it is to be capable both of being and of not being. That is why all of them that are particular are perishable (*phtharta*). If demonstration is of what is necessary (*tôn anagkaiôn*)... clearly, then, there can be no definition or demonstration of such [perishable] things. (1039b27-1040a2)

This passage bears some similarity to *Posterior Analytics A* 8, where Aristotle argues that there is no scientific knowledge and demonstration of perishable things (*phthartôn*) without qualification, but only in a qualified way, "at a time and in a way". The above passage goes a step further and identifies a reason for their indefinability – perishable particulars are indefinable on account of their matter whose nature is such that it can both be and not be. Aristotle does not mention forms in *Z* 15, but his insistence that particulars

are indefinable because of their matter suggests that definition is of the form. This suggestion finds support from Z 10-11, where Aristotle (in discussing the question what parts of a thing are parts of its definition) makes several statements to the effect that definition contains parts of the form. For example, he says that the material parts of a thing “are parts of the composite whole (*synolou*) but not parts of the form and/i.e. (*kai*) of what has definition” (1035a21-22). The following statements are even more explicit: “only the parts of the form are parts of the definition, and this is the definition of the universal” (1035b31-36a2); “definition is of the universal and the form” (1036a28-29; cf. 1036a8). When we combine these statements with Z 15’s claim that the particular is indefinable because of its matter, the view naturally suggesting itself is that the definition is not of the particular substance as a whole, but of its form. And if form is to be the object of definition, it should be universal.¹³²

Other arguments in Z 15, however, are more general in character; they do not tie indefinability to matter, but concern any particular whatsoever. Aristotle suggests that every particular (whether Platonic Form or eternal particular like the sun) is indefinable on account of the very nature of definition:

Nor is it possible to define any Form (*idea*). For a Form is a particular and separate, as they [the Platonists] say. But its definition (*logos*) must consist of words, and one cannot

¹³² It is reasonably clear that Aristotle thinks that the *form* is defined without reference to matter, but is controversial whether he wants to exclude matter from the definition of the *composite* substance. In Z 11 we are told that it is “useless labor” on the part (presumably) of the Platonist to “reduce all things to forms and to eliminate the matter” (1036b22). Some things, Aristotle insists, are surely “a this in that” (*tot’ en tode*), which seems to imply that such things can be defined only by reference to the appropriate matter (1036b23-28). So, Aristotle’s position in Z 10-11 is not unambiguously clear. Although he suggests in Z 11 that the definition of some things (presumably of natural substances, for which it is essential to be composed of form and an appropriate kind of matter) includes a reference to matter, he ends Z 11 as if he has defended the position that definition is of the form. For a detailed overview of Aristotle’s arguments, as well as of scholarly positions taken on this issue, see Galluzzo (2006, 135-165). For a classical discussion of this issue, see Thomas Aquinas’ *De Ente et Essentia* (esp. chap. 2).

define by coining a word (for it would be unknown), but the words which are in use are common to all [of the things they denote], and so they must apply to something besides the thing defined. (1040a8-2)

As has been said, the impossibility of defining particulars is hard to realize when we are dealing with eternal things, especially those that are unique (*monacha*), like the sun or the moon. For people go wrong by adding the sorts of things (e.g. going round the earth or being hidden at night) after whose removal the sun would still exist... but also by mention of those [attributes] which can belong to another subject; e.g. if something else of this sort comes to be, clearly it will be sun; the definition (*logos*) is therefore common (*koinon*). (1040a27-b2)

Aristotle is apparently trying to explain why the fact that something is one of a kind (a unique member of a species), like a Platonic Form or an eternal particular like the sun, does not constitute a counterexample to the thesis that particulars are indefinable. Aristotle claims that an attempt to give a unique definition of a Form would be like inventing a new word (or giving it a name). Further, although it might happen that a definition *as a matter of fact* applies to just one thing, it would not be unique to this thing. Aristotle points out that even if we were able to produce a definition of a sun, it would not be unique; if another thing should appear that has all the stated attributes, the thing will be a sun. This suggests that the indefinability of particulars is a consequence of what definition is (rather than of some flaw in the proposed object of definition). It is impossible to give a unique definition of a particular because definition is *common*, and is always stated in words that have application to more than one thing. In other words, definition does not capture the particularity of a particular but always refers to a certain kind of thing.

Metaphysics Z 15 is often regarded as the main piece of evidence in favor of universal forms. Aristotle argues that particulars are indefinable because of the matter and because their particularity (the latter argument excludes also the definability of the Platonic Form). This does indeed suggest that the form, if it is to be the object of definition, should be universal. Nonetheless, this suggestion does not need to exclude the possibility of there being particular forms. Aristotle's argument that particulars are indefinable *qua* particulars (that the definition cannot capture the very particularity of a particular) surely suggests that forms are not definable *qua* particulars. However, I have argued in the previous chapter that concrete particulars, while not being knowable and definable *qua* particulars, are knowable in so far as they fall under universals. Accordingly, it is not unreasonable to suggest (I will return to this suggestion in the following chapter) that particular forms are knowable and definable *qua* instances of universal forms (*qua* specifically identical, as some authors like to say¹³³).

Another important piece of evidence in favor of the view that the substance (of a thing¹³⁴), and therefore the form, is universal is represented by Aristotle's discussion of essence (*to ti ên einai*, literally "the what it was to be") in *Z 4-5*. Aristotle shows no hesitation in affirming that the substance is (or alternatively, has) essence, which makes it quite clear that essence is a successful candidate for the title of substance. The reason why essence belongs to substance "either alone or especially and primarily" (1031a12-14; 1030b5-6) is that only substance cannot be analyzed in terms of "one thing being said

¹³³ See, e.g., Cresswell (1975).

¹³⁴ Aristotle's discussion of an essence is particularly good example of his wavering between two senses of "substance". He begins his discussion by referring to essence as one of the four candidates of substance proposed at the beginning of *Z 3*, which suggests that he is speaking about the "substance of" of a thing (although he does not use the locution "substance of"). But the rest of *Z 4-5* speaks about substance as something that is contrasted to other categories. I will follow Aristotle's lead and speak simply (and ambiguously) about "substance" without trying to determine in each instance what sense of "substance" Aristotle has in mind.

of another” (*mê tōi allo kat’ allou legesthai*, 1030a10). This excludes accidental compounds like “white human being”, which is analyzable in terms of white being said of human being. On closer inspection even accidents like “white” are analyzable in such terms, since white is said of something else, *viz.*, of something that is white. Aristotle draws a conclusion that “essence will belong to nothing that is not an *eidos* of a *genos*; it will belong to these alone, for these do not seem to involve predicating one thing of another by way of participation (*kata metochên*) or affection (*pathos*) or as an accident” (1030a10-14).

This conclusion is significant for at least two reasons. First of all, Aristotle’s emphasis that the *eidê*, to which alone essences are said to belong, are the *eidê of a genus* suggests that he has in mind something that is common to many things (species or species-form¹³⁵). Secondly, Aristotle’s discussion suggests that he is committed in the *Metaphysics* to the kind of essentialism that is implicit in the *Categories* and is developed in greater detail in the *Posterior Analytics* (e.g. A 4; A 22, 83b14-15). He is clearly contrasting species with accidents and accidental compounds. But is he also contrasting species with concrete particulars? Does he perhaps mean that human being has an essence but Callias does not? That is not likely. For one thing, Aristotle says nothing to this effect. For another, *eidos* of a genus seems most naturally to refer to something that may be predicated alike of Socrates and Callias. Aristotle’s point would

¹³⁵ I mean by species-form the form that is shared by all members of the species. Alternatively, one could take the species-form to be the form of the universal compound (compound of this matter and form, taken universally) that Z 10 (1035n27-31) and 11 (1037a5-10) identify with species, such as human being. I am not sure what to make of these two occurrences of the idea that universals (like particulars) are compounds of matter and form, taken universally. It seems that Aristotle introduces this idea in connection with the suggestion that the definition of *some* things should include reference to matter. But since it is unclear what precisely is Aristotle’s view on this issue (i.e., whether the definition of the composite substance should mention form alone or matter as well), it is also not clear how seriously one should take the idea that the universal is composed of form *and* matter. But see Driscoll (1982), who argues at great length that species differs from form, although form is universal.

seem to be, then, that species are not different from their instances of which they are predicated (Socrates *is* human being). Now, if essence deserves the title of substance, and essence belongs to species, then it seems to follow that species deserves the title of substance. As we will see, it will be difficult to reconcile this line of thought with Z 13's slogan "no universal is substance".

The third kind of evidence, which plays a crucial role in debates over the status of forms and cannot be ignored, concerns individuation (as we would today call it). As several authors have pointed out, Aristotle does not pay much attention to the problem of individuation.¹³⁶ In fact, he seems to say very little about individuation quite generally. But there are few passages suggesting that he thinks of matter as that which distinguishes one particular from others (in particular, from others of the same species). These passages ground the well-established view that one of the roles of matter in Aristotle's philosophy is to provide a principle of individuation. The star passage for matter as a principle of individuation is in *Metaphysics Z* 8:

And when we have the whole, such and such a form in this flesh and these bones, this is Callias or Socrates; and they are different in virtue of their matter (*heteron men dia tēn hylēn*), for that is different, but the same in form (*tauto de tōi eidei*), for their form is indivisible (*atomon*). (1034a5-8)¹³⁷

¹³⁶ See Galluzzo (2006, 70-74); Charlton (1972), who argues that Aristotle never posed such a problem at all. There has been some confusion over what the problem of individuation is supposed to be. In a well-known symposium on this topic in 1953, Lukasiewicz and Anscombe gave opposing answers to the question concerning the "source of individuality" for Aristotle, the former taking the side of form, the latter that of matter. But their fellow symposiast, Popper, pointed out that they were actually dealing with entirely different problems. Roughly, it can be said that Lukasiewicz was dealing with the problem concerning the unity of something: what makes the composite particular one thing, rather than a plurality? Anscombe was dealing with the problem concerning distinctness from other individuals: what makes one individual distinct from other (cospecific) individuals? I will follow the common practice of regarding "matter" as the answer to Anscombe's problem.

¹³⁷ The other star passage is in *Met. Δ* 6 (1016b31-32).

Aristotle thus maintains that two particulars, Socrates and Callias, differ from one another in terms of their matter. Their form, by contrast, which is described as “indivisible”, is the same. This passage is often thought to offer insuperable difficulties for the view that forms are particular, since the believer in particular forms will need to say that Socrates and Callias are distinguished by each having a different form, yet Aristotle says that they are the same in *eidos*, and also that they are different because their matter is different. So the argument is that Socrates and Callias are the same in *eidos* because there are no distinct *eidê* that might serve to differentiate them.¹³⁸ I agree that this passage suggests that it is matter (rather than form) that individuates, i.e., distinguishes particulars of the same species from one another. But this does not exclude the possibility of there being particular forms. Rather, it raises the issue of what we mean by the particularity of forms. As we will see in greater detail later on, it is reasonable to suggest that Aristotle allows for numerically distinct instantiations of a universal form individuated by the material substance whose form it is, or by the matter in which it is realized – and these numerically distinct instances can be called particular forms.

This suggestion appears when we question what it means to say that forms are universal. Admittedly, Aristotle’s view that the form is substance does not make him a Platonist. He does not hold (and no one to my knowledge has tried to foist on him the view) that there are universal forms enjoying independent existence apart from the material substances of which they are forms. The form that Aristotle says is a primary substance is not, like a Platonic Form, separable from all matter (except, perhaps, in thought), and it cannot exist without being the form of some material substance.¹³⁹ But if form cannot exist as some uninstantiated universal, then the view suggesting itself is that

¹³⁸ This line of thought is taken from Woods (1993).

¹³⁹ I leave here (and in what follows) out of consideration the unmoved movers, separate forms.

the form exists as particular, and hence there must be (at least) particular (numerically distinct) instances of forms.

If we allow there to be particular instances of forms, then the contrast between the view that forms are universal and the view that forms are particular is not as exclusive or sharp as it is sometimes taken to be. As a matter of fact, the insight that forms exist only in particular substances that have them might have been the point of Wilfred Sellars' remark that "if anything is clear about an Aristotelian form is that its primary *mode of being* is to be a this..." (1957, 688; my italics). And Sellars is usually considered to be the initiator of the view that Aristotle's forms are particular. Before I will expand on this line of thought, I will consider the most important piece of evidence for the view that forms are particular.

Forms are Particular

The most important evidence in support of the view that forms are particular is usually considered to be *Metaphysics Z* 13's arguments for the conclusion that no universal is substance. It is noteworthy that this chapter, which has been the main battlefield for the debate over the status of forms, does not mention forms at all – the word *eidos* does not make a single appearance in the whole chapter (and in *Z* 14-16 it is used only to denote a Platonic Form). Nonetheless, since Aristotle holds that forms are substances, his thesis that no universal can be substance suggests that (as substances) forms should be particular. He develops several arguments in support of this thesis. I shall confine myself to three, which are by far the most important and controversial ones. The first argument runs as follows:

The universal also is thought by some to be in the fullest sense a cause and a principle; let us therefore attack the discussion of this point also. For it seems impossible for any of the things predicated universally (*tôn katholou legomenôn*) to be substance. For in the first place the substance of each thing is peculiar (*idios*) to it and does not belong to anything else; but the universal is common (*koinon*), since that is called universal which by nature belongs to many things. (1038b7-13)

It is clear that Aristotle intends this argument to rule out Platonic Forms as substances of things, but it also makes trouble for his own conception of the universal as that which by nature belongs to a plurality of things. If the substance of each thing must be peculiar to it, then it evidently cannot be universal, since “that is called universal which by nature belongs to many things”. From this it seems to follow that forms must be particular or, alternatively, that each particular must have its own form. However, it should be pointed out that Aristotle’s argument is an abstract one: that the substance of each thing (*ousia hekastou*) is peculiar to it. The conclusion that each particular must have its own form follows only on the assumption that by *hekastou* Aristotle means a concrete particular (rather than *infima species*).

Aristotle’s second argument is rather brief and runs as follows:

Further, substance is said to be that which is not predicated of a subject, but the universal is always predicated of some subject (*to de katholou tinos legetai aei*). (1038b13-15)

This argument appears to be a straightforward contrast. If universal is that which *is* always predicated of some subject, and substance is that which *is not* predicated of a subject, then universal cannot be a substance. This contrast between the subject and predicate is familiar from the *Categories*, and echoes Aristotle’s definition of the “universal” and “particular” in *De Interpretatione*: “By universal I mean that which is by

nature predicated (*katêgoreitai*) of many things; by particular, what is not” (17a38). No universal can be a particular – by definition. Although the view that particular things have particular forms does not follow directly from this argument, it seems to offer indirect support for this view. If substances cannot be predicates, then it appears that they cannot be universal.¹⁴⁰

Thirdly, Aristotle insists that a substance must be a “this something” (*tode ti*), whereas universal is a “such” (*toionde*):

From these considerations it is clear that none of the things that belong universally (*tôn katholou hyparchontôn*) is a substance, and also because none of the things predicated in common (*koinê katêgoroumenôn*) signifies a this something (*tode ti*). (1038b34-36)

[A] universal signifies a such (*toionde*), and not a this something... (1039a15)

This argument is, again, familiar from the *Categories* (3b10-22), where Aristotle argues that each primary substance signifies a “this something”, whereas a secondary substance signifies a “such” (*poion ti*) and, more precisely, a “substance of such a sort” (*poian tina ousian*). So in the *Categories*, a paradigm *tode ti* is a particular substance or, more generally, “whatever is one in number and indivisible” (3b12). Although *tode ti* figures as a leading mark of substance also in the *Metaphysics*, he does not explain it in terms of particularity.¹⁴¹ In fact, Aristotle never provides a clear explanation of this notion (it

¹⁴⁰ However, it should be pointed out that since this argument establishes that the substance cannot be a predicate, it makes trouble not only for universals (or universal forms), but forms in general. Aristotle often says that forms are predicated of matter. See, e.g., *Met.* H 2 (1043a5-6), H 3 (43b30-2), Z 13 (1038b5-7), Θ 7 (49a34-36); cf. Z 3 (1029a23-24), Z 17 (41a26-8, b4-9). Thus he commits himself to a two-tiered theory of predication, in which accidents are predicated of substance and substances, in turn, are compounds of form predicated of matter. But if form is predicated of matter, then it seems to follow that form cannot be a substance, whether one thinks of a form as universal (predicated of different chunks of matter) or particular (predicated of one chunk of matter). Several authors have tried to escape this difficulty by arguing that form is predicated of matter, rather than of particulars whose substance it is. See, e.g., Loux (2008).

¹⁴¹ See, e.g., Z 1 (1028a11), Z 3 (1029a28-30), Z 4 (1030a4-6). The main source of confusion is Z 4, where Aristotle first claims that substance is *hoper tode ti* (usually translated as “just what something is” but more literally “just what is a this something”), and then draws a conclusion that substances are *eidê* of genera.

seems to convey the idea of determinateness and perhaps of countability). Nonetheless, it seems that in contexts (like the above passage) where “this something” is contrasted with the “such”, Aristotle has in mind the contrast between the particular and the universal. If no universal is a “this something”, but every substance must be, then, once again, it seems to follow that Aristotle’s substances in the *Metaphysics* are particular.

What should we think of these arguments? Do they show that forms are particular? The first thing to point out is that all these arguments rely on a contrast between being a universal and being a substance (of each thing). Aristotle appeals to such a contrast also in his criticism of the Platonists, who placed universals outside the being (*ousia*, substance) of particular substances, and promoted them to the status of particular substances. The Platonic theory of Forms is Aristotle’s official target also in Z 13-16: he explicitly directs his arguments against those who think that “the universal is in the fullest sense a cause and a principle” (Z 13, 1038b7), “who believe in the Forms as separate substances” (Z 14, 1039a25), and “who are wrong in supposing that the one over many is a [separate] form” (Z 16, 1040b27). In fact, his discussion in these chapters can be read as Aristotle’s most thoroughgoing criticism of the view that treats universals as particular substances *beyond* particular substances.¹⁴²

But while it is clear that Aristotle contrasts substances with separate universals (Platonic Forms), it is not clear whether he wants to contrast them with his own universals. The answer to the latter question depends on how exhaustive and exclusive

This might suggest that he is willing to call *eidê* of genera “this somethings”. However, it is reasonably clear that although the phrase “this something” can be used to pick out both universals and particulars (e.g. this animal can pick out a certain sort of animal, or a particular animal of certain sort), it is primarily applied to particulars. For a further discussion, see Bostock (2003, 83-90).

¹⁴² I agree here with Lacey (1965), who contends that “what Aristotle ought to be saying in the *Metaphysics* is that terms like ‘man’ are not the name of an *ousia* in the sense in which one can talk of an *ousia* as an object, but are used to say what the *ousia* of an object is. But it seems to me that Aristotle never makes this completely clear (though he often approaches doing so and I think this is the view he is really aiming for)” (p. 66).

Aristotle intends this contrast to be. As I pointed out earlier, Aristotle's last two arguments (*viz.*, that universals are always predicated of some subject, and that they do not signify a "this something") are familiar from the *Categories*. But there he nonetheless maintains that universals are called "substances" (albeit "secondary") since they reveal what the primary substances are. This insight seems to be present also in *Metaphysics Z* 4-5, where Aristotle argues that the essence and definition belong only (or primarily) to *eidê* of genera. I have taken the idea that universals (species and genera) are embedded in the very being and essence (we could now say, *substance*) of particular substances to be the central point of Aristotle's essentialism. And this idea is hardly compatible with the suggestion that the contrast between the universal and the substance is intended to be exhaustive and exclusive. This suggestion would leave it very hard to see how universals could contribute to the being and knowledge of particular things or, more generally, how the substance (of each thing) could be knowable at all. We would inevitably face the *aporia* Aristotle formulates in *Metaphysics B* 6 in terms of principles. If the principles are universal, they will not be substances, but if they are particular, they will not be knowable. If there is a crude dichotomy between the universal and the substance, then the knowledge of substances will not simply be elusive, but impossible. It is noteworthy that Aristotle ends *Metaphysics Z* with this very recognition – the recognition that taking the slogan "no universal is a substance" literally leaves one at an impasse, *aporia*, because it makes knowledge of substances impossible.

These considerations, especially Aristotle's commitment to essentialism, suggest that he does not want to draw a sharp contrast between being a universal and being a substance (of each thing). On the other hand, however, it is also characteristically Aristotelian to deny universals the same kind of status as substances. For him, substances

(at least in the strict and primary sense) are particular. And this seems to apply not only to the primary substances of the *Categories* but also to the “substances of” of the *Metaphysics*. This latter point finds its strongest support in the first argument of Z 13 that the substance of each thing must be peculiar to it (and does not belong to other things), and in his insistence that the substance must be a “this something”. Is there a way to reconcile his essentialism with the slogan “no universal is substance”? In what follows, I will give a rough sketch of four different attempts of reconciliation or, alternatively, four interpretations of the claim “no universal is substance”.

1. Universals do not exist at all; forms are particular

According to one (and by far the most radical) line of interpretation, Aristotle intends to deny that *any* universal is substance. Forms as primary substances are particular, whereas universals (universal forms or universal kinds, either species or genera) lack any ontological status. Roughly put, they simply do not exist.¹⁴³

This line of interpretation preserves the basic insight of the *Categories* that the primary substances are particular, and accords with Aristotle’s insistence that the substance must be a “this something”. But it also involves a radical shift away from the *Categories* since Aristotle of the *Metaphysics* would now be denying that secondary substances have any status in the ontology at all.¹⁴⁴ Accordingly, this interpretation undermines Aristotle’s essentialism which takes particulars to be instances of universals (secondary substances) and thus implies that there *are* universals having instances. As we

¹⁴³ This line is taken most strongly by Frede and Patzig (1988), who hold that Aristotle rejected the notion of a species-form and that this represents his final emancipation from Platonists. They think that we can still say that particulars are the same in form, but this means nothing more than that their forms are exactly alike. Thus their view comes close to what is usually called “resemblance nominalism”.

¹⁴⁴ This interpretation thus implies that Aristotle applied the word *eidos* to two radically different types of things: particular forms (in the *Metaphysics*) and substantial kinds (in the *Categories*).

have seen before, Aristotle's essentialism underlies his epistemology. He holds that particulars are knowable and definable in so far as they are capable of falling under universals. Consequently, an interpretation which construes forms as unique particulars in their own right (rather than as instances of universals) makes it hard to see how there could be knowledge of such particular forms.

There seem to be, on this interpretation, two ways of handling the problem concerning knowledge. One obvious way to solve the problem is to insist that particular forms are knowable after all. Aristotle appears to identify forms with essences (and essences are ontological correlates of definitions); but if particular forms can be said to have (or to be) essences, then they can be said to have definitions.¹⁴⁵ The problem with this solution is that it would foist upon Aristotle an account of knowledge and definition, which is radically different from the account he explicitly adheres to. If there were a form that is somehow unique to some sensible particular, say Callias, then the definition corresponding to that form, or essence, would apply uniquely to Callias – it would define him, which is precisely what Aristotle says cannot be done (e.g. Z 15).

Another way to solve the problem is to maintain that knowledge is of universals, but universals exist only in thought, as abstractions of some sort. As is well known, Aristotle regards mathematical objects as abstractions which do not have a separate existence from sensible particulars but which may nevertheless be separated by thought.¹⁴⁶ One could

¹⁴⁵ For an identification of essence and form, see Z 7 (1032b1-2), but also Z10 (1036a16-19), Z 11 (1037a33-b4), H 3 (1043b2-4). This type of solution is developed (but eventually rejected) by Code (1984). It seems that all those who maintain that *Metaphysics* M 10 commits Aristotle to the position that knowledge of the universal is *simply* potential knowledge (whereas actual knowledge is of the particular) should be willing to accept this type of solution. I have discussed and criticized this kind of interpretation of M 10 in previous chapter.

¹⁴⁶ Aristotle at least once describes mathematical objects as things that “exist by abstraction” (*aphairesei ontôn*) (*De An.* Γ 4, 429b18), and in *Met.* M 2, he concludes that things “from abstraction” are neither substances nor in sensible substances and that therefore they “either do not exist at all or exist in some way (*tropos tina*) but not in an unqualified way” (see 1077b6-17). Since abstraction is an act of thought, it suggests that the existence of mathematical objects must in some way be dependent on thought.

argue that abstraction has a much broader application than merely to mathematics, and that universals can likewise be regarded as abstractions. However, this would go beyond what we find in Aristotle, since he does not seem to link mathematical abstractions with universals. There are few passages in Aristotle – most notably, *De Anima* B 5 (417b18-28) and *Posterior Analytics* B 19 (100a5-9) – indicating that universals exist in the soul. But these passages do not appear to commit Aristotle to the view that universals exist *only* in the soul, and they do not figure in his attempts to solve or address the *aporia* concerning the status of principles (or forms).¹⁴⁷

2. Some universals are substances; forms are universal

At the other extreme, there is an interpretation according to which forms are universal (or, alternatively, forms *are* species), and hence Aristotle does not intend to deny that *any* universal is a substance. On this line of interpretation, the form or essence of the particular is shared by all particulars of the same species. This idea – i.e., a universal form shared by all members of the same species – is in scholarly literature often called the species-form.

This interpretation implies that Aristotle reverses in the *Metaphysics* the order of priority defended in the *Categories*. The secondary substances (or at least the species) of the *Categories* are now promoted to the status of primary substances, so there is a “renewal of sympathy” with Plato on this score.¹⁴⁸ This line of interpretation is easily

¹⁴⁷ The view that universals are thought-dependent is defended, most notably, by Lloyd (1981). Lloyd thinks that universals are “mental generalizations” of particular forms, committing Aristotle thus to the view that could be labeled as “conceptualism with real basis”. The view that universals exist *only* in the soul is criticized, to my mind definitely, by Tweedale (1987) and Heinaman (1982). I have considered the difficulties with the view that forms are abstractions also in my “Alexander of Aphrodisias’ Account of Universals and its Problems” (forthcoming). The main difficulty is to explain what guarantees that the abstraction does not become (fictitious) invention.

¹⁴⁸ This line of interpretation was particularly popular in 1960s and ’70s. See, most notably, Owen (1965b), Woods (1967), but also Driscoll (1981). The expression “renewal of sympathy” with Plato is taken from Owen (1965b, 137).

compatible with Aristotle's requirements for knowledge and definition, but it is rather difficult to reconcile it with his arguments in Z 13 for the conclusion that no universal is a substance.

One way to reconcile the view that forms are universal with the slogan that no universal is a substance is to appeal to Aristotle's essentialism and suggest that Aristotle wants to exclude as substances only those things that can be analyzed in terms of "one thing being said of another" (Z 4, 1030a10). This requirement excludes accidents, the Platonic Forms, and perhaps also genera. But it does not exclude species, which can be said to be peculiar to the thing in that it determines the very being of the thing of which it is predicated. Socrates, for instance, is not a particular that can be first picked out and then have "human being" predicated of him – his being a particular substance *is* his being human. So being human is inextricably tied up, we might say, with his being. The genera, on the other hand, do not determine the being of a thing as intimately as species – Socrates is an animal only because he is a human being, and his remaining the same animal *is*, for him, remaining the same human being. This interpretation thus implies that Aristotle did not really mean to argue in Z 13 that *no* universal is a substance. Rather, he intends to rule out genera as substances but allows that species can be substances.¹⁴⁹

The problem with this interpretation is that it makes Aristotle's arguments in Z 13 lose much of their force. Although there is some evidence that in Z Aristotle is willing to distinguish between species and genera,¹⁵⁰ one might fairly ask why he would rely upon

¹⁴⁹ This type of interpretation is developed by Ross (1997 [1924]) and, most notably, by Woods (1967). See also Lear (1987) and Albritton (1957), who argue that the whole discussion in Z 13 is carried out on the level of universals, i.e., Aristotle wants to deny that genera can be substances *of* species. Another possible way to reconcile Z 13's thesis with the view that forms are universal is to argue that Aristotle equivocates on "substance". The sense of "substance" in which a species-form is a substance is not that in which no universal is substance. See, e.g. Lacey (1965, footnote 142), and Loux (2008, chap. 6).

¹⁵⁰ See Z 12, for example, where Aristotle appears to maintain that the genus does not exist independently of the form and should be thought of along the lines of matter (1038a5-9).

such a distinction and, nevertheless, neglect to mention it in Z 13. Further, Aristotle does say that *no* universal is a substance: “For it seems to be impossible for *any* of the things which are predicated universally to be substance” (1038b8-9); “*nothing* universal is substance” (1038b35); “*nothing* common is substance” (1040b23; cf. 1040b23, 1041a4, 1042a21, 1060b21, 10871a2, 1087a12).¹⁵¹ But having said all that, it is also worth noting that Aristotle’s conclusion does not resound as an inconvertible truth. His language is also cautious: “For it *seems* impossible (*eioke gar adynaton*) for any of the things which are predicated universally to be substance” (1038b8-9).

Thus, neither (1) the interpretation that forms are particular nor (2) the interpretation that forms are universal seems to be fully satisfactory. The prospects of finding a *fully* satisfactory interpretation is, of course, controversial.¹⁵² But it seems that on these lines of interpretation we need to give up too much; the problems with these interpretations are precisely the ones Aristotle has outlined in his formulation of an *aporia* in *Metaphysics* B 6. If forms are particular and universals lack any status, then there is a danger of having to conclude that no knowledge of them is possible. If they are universal, then it is hard to see how they could be substances (and peculiar to the thing). However, in addition to these extreme interpretations, we can also distinguish between two more subtle interpretations.

3. Universals exist, but as accidents; forms are particular

According to one (more subtle) line of interpretation, Aristotle intends to deny that *any* universal is substance, but this does not mean that universals lack any ontological status.

¹⁵¹ For a detailed criticism of this type of interpretation (esp. Woods’ interpretation), see Leshner (1971) and Heinaman (1980).

¹⁵² Code (1984), in particular, argues that any solution to the puzzle over the status of forms needs to give up something and contradict some passages.

Rather, universals (species and genera) exist as accidents of some sort (or “accidental properties” as we would nowadays call them).

Although Aristotle criticizes the Platonists for separating universals from particulars, he does not thereby appear to deny the existence of universals. Thus it seems that he wants to claim both that the universals exist, and that they are not substances. Hence he seems committed to saying that universals exist somehow but not as substances. Given that for Aristotle there is a category distinction between substances and accidents, one could conclude that universals exist as accidents of some sort. Now, accidents are always accidents *of* something. Their existence requires there to be something to which they attach from outside, something that is distinct from them (the existence of white, for example, requires there to be something else that is white).

Similar reasoning can be extended to cover universals; their existence requires there to be something else to which they attach as accidents. Now, one could argue that the “something else” to which the universal belongs as an accident is a form, and that the distinction between forms and universals is clear when we consider that a form can exist in only one particular. If there were only one human being in existence, for example, the form of human being would exist; but human being as species with many members would not, since you cannot have a species (or genus) unless you have something existing in many. Hence, universal exists only if form has more than one instance. But since the form can exist without having many instances (it can exist in only one particular), it is accidental to the form whether or not it is universal.

The idea that universal (or, we might want to say, universality) is accidental to whatever it is that is universal was first introduced by Alexander of Aphrodisias, and became very influential in later tradition. In fact, I believe his account of universals had

major consequences for future direction of the discussion of the status of Aristotle's forms and of the traditional problem of universals. I will consider Alexander's account in the following chapter and suggest that although it offers an attractive solution to Aristotle's problem of *katholou*, it eventually raises more problems than it solves.

4. Universals are secondary substances; particular forms are instances of universals

Another more subtle line of interpretation maintains that particular forms are instances of universals (species or species-forms). It seems that most authors defending the view that forms are particular would not accept the extreme view that forms are particular and universals lack any status, but a more modest view that particular forms are instances of universal forms.¹⁵³ The classic version of this view is formulated by Rogers Albritton: "Since what Aristotle calls 'the form' of a particular thing is sometimes certainly the universal form of its species (e.g. at 1034a58), the doctrine [of particular forms] is better stated as follows: A particular material substance not only shares with others of its species a universal form but has a particular form of its own, an instance of that universal form, which is not the form of any other thing" (1957, 699-700). Further, it seems that (at least) some authors defending the view that forms are universal would allow there to be numerically distinct instances of form, thus committing themselves to the existence of particular forms in this sense.¹⁵⁴ Hence the position that forms are instances of universals appears to be a sort of a middle position between the view that forms are particular and the view that forms are universal.

¹⁵³ See, e.g., Albritton (1957), Hartman (1977), Irwin (2002 [1988]), Tweedale (1988), Sharples (2005).

¹⁵⁴ For this suggestion, see Gill (2005).

Now, the idea that the particular form is an instance of the universal (e.g. this particular instance of the human form is the form of a particular human being) implies that there are universals, i.e., universals exist. How do they exist? If we take seriously Aristotle's arguments in *Z* 13 then it seems to follow that they cannot exist as particular substances. And as we will see in the following chapter, it is hard to maintain the view that universals are mere accidents. The third alternative that naturally suggests itself is that universals exist as secondary substances. Aristotle is committed to this position in the *Categories*, and although he does not use the terminology of "secondary substance" in the *Metaphysics*, it is not unreasonable to think that does not give up the idea of secondary substances. The view that universals are secondary substances would help to explain why Aristotle says both that they are substances (e.g. *Z* 4) and that they are not substances (e.g. *Z* 13).

This interpretation does not imply that Aristotle's position in *Metaphysics Z* involves a radical shift away from the *Categories*. Rather, it suggest that the basic insight of the *Categories* – viz., that being a particular involves being an instance of a universal (a "this something"), and being a universal involves being instantiated ("particularized") – is operative also in the *Metaphysics*. This line of interpretation offers, in my mind, the best way to minimize the problems surrounding the status of forms. In so far as particular forms are instances of universals, they are knowable and definable; and they also fulfill the requirement for being a substance, namely, being a "this something". Nonetheless, this interpretation has not found much (explicit) support among Aristotelian scholars.¹⁵⁵ We may presume that one reason for this is that it is not easy to make sense of the idea

¹⁵⁵ But see Irwin (2002 [1988]), who is one of the few authors, who develops this type of interpretation in greater detail. He suggests that Aristotle gives up the phrase "secondary substances" for universal substances because it should refer not only to universal (but also to matter, for example).

that particular forms are instances of universals. Does it mean that forms are somehow both particular and universal? Or does it mean that there are two sorts of forms, particular and universal? I will focus on these issues in the following section.

Particular Forms as Instances of Universals

If there are indeed particular forms that are instances of universals (species-forms), and if particular forms are substances of particular sensible substances such as Socrates and Callias, then we can rewrite our original triad in the following consistent manner:

- (i) The particular form of Socrates and Callias is their primary substance;
- (ii) if something is universal, then it is not a (primary) substance;
- (iii) the species-form of Socrates and Callias is universal.

On this interpretation, then, inconsistency can be avoided by rejecting the assumption that forms must be *either* universal *or* particular, that is to say – by noting that the dichotomy between the universal and particular is not exhaustive. The substance of each thing (*ousia hekastou*) is a particular form, which is not completely unique but an instance of a species-form. The particular form is both the substance of the thing and definable since it shares its definition with the species-form whose instance it is.

This line of interpretation raises at least three questions. Firstly, one might wonder whether Aristotle is really committed to the existence of particular forms. So far, I have discussed only Aristotle's arguments in *Z* 13, and these can be regarded as inconclusive evidence, especially if we take into account the fact that the word *eidos* does not occur at all in this chapter. Secondly, it is not obvious what philosophical sense we can make of particular forms that are instances of universals. How can forms be both particular and universal? And thirdly, if forms are somehow both particular and universal, we might

wonder whether Aristotle becomes subject to some of the criticisms which he had earlier raised against the Platonists.

The strongest evidence for the view that Aristotle is committed to particular forms in the *Metaphysics* comes from Λ 5:

For it is the particular that is the principle (*archê*, cause) of particulars; human being is the principle of human being universally, but there is no universal human being, but Peleus is the principle of Achilles, and your father of you, and this B of this BA... And the causes of things which are in the same species (*eidei*) are different, not in species, but because different particulars have a different cause (*aition*) – your matter and form (*sê hylê kai to eidos*) and moving cause, and mine – but these are the same in universal definition (*tôi katholou de logôi tauta*). (1071a20-29)

The claim that you have a form that is yours and I have a form that is mine suggests that we each have our own, particular, forms. Thus, Aristotle seems to be saying that every particular substance has a particular form of its own. But there is a sense, even in Λ , in which a form is universal and predicable of many substances. Most plainly, the expression “the same in *eidos*” as it is used at 1071a27, as well as the claim that our forms are the same in definition, implies that particular substances may share a species-form. Thus this passage also suggests that the particular form is an instance of a universal (species-form). Aristotle does not here actually say that the particular form is primary substance, but this is what we would naturally suppose if we add two claims from *Metaphysics Z*, namely, that a primary substance is form and no universal is substance. Since no universal is substance, the universal form that the particular forms instantiate cannot be a primary substance.

There are also other passages in *Metaphysics* where Aristotle talks as if particulars have their own forms and essences.¹⁵⁶ And there are a small number of passages, where Aristotle explicitly calls form a *tode ti*,¹⁵⁷ which suggest that the form must be particular, rather than universal.

The main difficulty with the talk of particular forms (and with the view that forms are particular in general) is to explain what philosophical sense we can make of particular forms. It is easier to understand how concrete particulars retain their particularity whilst yet being marked out as being of a certain kind than to understand how forms can be of the same kind (include only those features that are shared by all particulars belonging to the same species) and yet remain distinct particulars (peculiar to things to which they belong). How do these particular forms differ? The most obvious and straightforward answer seems to be that they differ numerically: I am numerically different from you, and, accordingly, my form is numerically different from yours.¹⁵⁸ This raises a further question: what accounts for the particularity (or, numerical difference) of our forms? Here the most obvious and straightforward answer is that they differ on account of being joined to (or predicated of) different bits of matter. After all, Aristotle says in Z 8 that composite substances like Socrates and Callias differ from one another on account of the matter. Similar reasoning might be applied also to their forms, i.e., each composite substance may be said to have its own form but the particularity of such a form entirely depends on the matter the form is joined to.¹⁵⁹ The particularity of

¹⁵⁶ See, e.g., *Met.* Z 4 (1029b15).

¹⁵⁷ See *Met.* H 1 (1042a28-29), Δ 8 (1017b23-26), Θ 7 (1049a35-36), Λ 3 (1070a11); cf. Z 12 (1037b27), Z 3 (1029a27-30). However, at least once Aristotle speaks of the form as a “such” in *Met.* Z 8 (1033a21-26).

¹⁵⁸ However, whether the forms of particulars belonging to the same species are *only* numerically distinct or differ qualitatively as well is a matter of dispute among the proponents of particular forms.

¹⁵⁹ This account of the particularity of forms is developed by, e.g., Tweedale (1988); Hartman (1977). Alternatively, one could suggest the forms of Socrates and Callias differ by virtue of their being the forms

forms is thus not due to anything intrinsic to them (intrinsically all forms of the same species share the same essential features), but rather to matter to which they are joined.

Several authors have found this answer unsatisfactory since it ascribes to forms a weak sense of particularity.¹⁶⁰ One could object that this account of the particularity of forms entails that forms are not strictly speaking particular (they are not particular in themselves or essentially), but only *particularized*, i.e., made particular by the matter. Alternatively, one could complain (following James Lesher, for example) that this account merely shows that “the form *exists* only in the individual substances which have it” (Lesher 1971, 177) and this is compatible with the view that forms are universal. Indeed, it seems that many (of especially 1970s) opponents of the attribution of particular forms to Aristotle assume that the “particular form” must include material particularities (features that are not shared by all members of the same species). However, I do not think we need to make this assumption in order to show that forms are particular in the relevant sense. For being “numerically one” involves being particular for Aristotle, and thus it is not unreasonable to suggest that forms can be particular in the sense of being *numerically* different between Socrates and Callias, but yet universal (common to many particulars) in the sense of excluding material peculiarities below the level of species. I believe that this is the view Aristotle is committed to (at least in the *Metaphysics*), but I do not think this view is as weak as some claim.

of different composite substances. The composite substance, on this view, functions just as matter does in relation to the composite. This view is considered by Witt (1989, chap. 5).

¹⁶⁰ See, esp., Graham (1987), Lesher (1971), Woods (1967; 1993). A stronger sense of particularity of forms is defended by, e.g., Frede and Patzig (1988), who seem to think that the particularity of forms is a brute fact, which stands in no need of further explanation (this view, we could say, is hard to reconcile with Aristotle’s instance that it is matter that individuates). See also Irwin (2002, 248-55), who argues that particular forms themselves contain a bit of matter of the right functional type (this view, one could say, blurs Aristotle’s distinction of matter and form).

Firstly, too much emphasis on the uniqueness of forms (on the idea that forms themselves must include individual particularities say) would make it hard to see how they could be knowable and definable. In *Metaphysics* Λ 5, Aristotle insists that our particular forms are the same in definition. This suggests that as far as essential definition goes, each form of one and the same species (or, alternatively, each instance of the species-form) is the same as any other form of that species, just as every particular human being is the same as every other so far as the definition is concerned. The above account of particularity of forms can accommodate Aristotle's demands on knowledge and definition. According to this account, forms of the same species (or, instances of the same form) differ from one another only in terms of the matter they are joined to. So, when we talk about my form and yours, we do not talk about anything essentially different.

Secondly, our talk of particular forms (of my form and your form) is not a mere *façon de parler*, since the form never actually exists except in a particular instantiation. Since forms can *only* exist as enmattered (save for *nous*, which I shall ignore here) they can *only* exist as particularized in the sense here defended. There are no universal forms in their own right, no universal human being or *auto anthrôpos* (as Aristotle puts it) in addition to particular human beings. When we define "the human form" or "the form of human", although we do not define the form of any particular human (in particular), we are not defining the form of some universal human. When we talk about "the human form", we talk about the particular instantiations of a form, although these instantiations are indistinguishable as far as their definition is concerned.

Thirdly, the interpretation according to which particular forms are numerically distinct instances of universals is compatible with the principle that (for Aristotle) every

particular is a “this something”, a particular of a certain kind. Indeed, the desire to attribute to forms (if they are to be particular) some kind of strong ontological independence from universals might well have its origin in the desire to attribute to concrete particulars some kind of strong ontological independence from universals. However, as I have argued before, particulars have only a weak kind of ontological independence from universals, and the same holds also of particular forms. Particular forms (like concrete particulars themselves) are “this somethings”, where “something” picks out the universal, and “thisness” depends on the matter to which they are joined.

The above account of the particularity of forms helps to minimize the tension between the two apparently opposed insights, *viz.*, that substances must be “this something” and hence particular, and that they must be definable and hence universal. Indeed, Aristotle begins his discussion of substance in *Z* 1 by requiring that a substance be both a “this something” (*tode ti*) and “what it is” (*ti esti*) (1028a11-15). This suggests that he is not willing simply to reject one at the expense of the other.

This leads us to the third question I mentioned at the beginning of this section, *viz.*, does Aristotle become subject to some of the criticisms which he had earlier raised against the Platonists? His standard complaint against the Platonists is that they turned universals into separate substances, but no universal can be a separate substance. As Aristotle explains in *Z* 16, the Platonists were right in making Forms separate, if indeed they are substances, but they were wrong in supposing that a separate Form is “the one over many” (1040a25-30). Aristotle present this objection also in *Metaphysics* M 9:

For they [the Platonists] treat forms both as universals and again, at the same time, as separate (*chôristas*) and as particulars (*tôn kath' hekaston*). But it has been argued before that this is impossible. Those who said that the substances were universals combined

these things in the same thing because they did not make them [the substances] the same as sensibles. (M 9, 1086a33-35)

Aristotle's main objection to the Platonists is that they failed to make Forms the same as sensible things (1086a36). They treated Forms as universals and, at the same time, as separate substances, which is tantamount to saying that they treated Forms as particulars *beyond* their particular instances. Aristotle's own position evades this objection, since he does not separate universals from their instances. Accordingly, he does not turn universals into particular substances, which, as he says, is an "impossible" combination. However, he does not thereby lean to the other extreme and separate particulars from universals, i.e., he does not think that particulars can exist independently of their essential features. He thinks that every particular (whether a particular substance like this human being, or the particular form of this human being) is a particular *something* or other. There can be no particular, and hence no particular form either, that is not the form of some kind or other. Stated otherwise, just as there is no Socrates apart from there being a *particular human being* (who is, at the same time, a certain animal, etc.), so there is no form of Socrates apart from being a *particular human form*.

Hence, there is no deep problem of how what is most real can also be most knowable, assuming that particulars are most real and knowledge is of the universal. There is no deep problem, since the relationship between the concrete particular and its species (or between the particular form of the concrete particular and its species) is not correctly thought of as a relationship between two quite separate things. Rather, as I have suggested in previous chapters, their relationship can be thought of as that of mutual ontological dependence. Particulars cannot exist without being particulars of a certain sort, and universals cannot exist without being instantiated (or "particularized").

In the following chapter, I will consider Alexander of Ahrodisias' views on universals. His views are worthy of attention since he seems to be the first author who separates being a form (and, by implication, being a particular) from being a universal. Thus he forces to the surface the underlying difficulties in Aristotle's position, and invokes the traditional problem about the ontological status of universals.

5

Alexander of Aphrodisias' Solution*

The previous chapters were discussing Aristotle and his take on the problem of how what is most real can also be most knowable. We now skip some six hundred years to discuss the solution that emerges from the writings of Alexander of Aphrodisias to Aristotle's problem of *katholou*. Alexander, who was known to later generations as "the Commentator" (until Averroes took over that title), wrote at the end of the second century AD and the beginning of the third. His views on universals became very influential in later tradition (his influence can be found in Porphyry and Boethius, and among the Arabic philosophers and the Scholastics).¹⁶¹ Although Alexander's contribution is not yet generally recognized, his views on universals influenced the future direction of the discussions of both Aristotle's problem of *katholou* and of the traditional problem of universals (i.e., the problem about the ontological status of universals).

Alexander seems to be the first post-Aristotelian philosopher who explicitly defends a distinction between what it is to be a form (*eidos*) and what it is to be a universal (*katholou*). He thinks that this distinction is clear when we consider that the universal attaches to a form as an accident, and thus he commits himself to what I refer to (following Martin Tweedale) as the "accidentality thesis". In the first part of the chapter, I will outline this distinction (and the underlying "accidentality thesis"), as I understand

* A few parts of this chapter are reproduced in a paper which has been accepted for publication in the *Journal of the History of Philosophy*.

¹⁶¹ See Tweedale (1993, 1984). Tweedale (1993) uses the label "Aphrodisian" to indicate a tradition of interpretation of Aristotle on universals, which begins with Alexander of Aphrodisias. He argues that Avicenna and Duns Scotus worked within the Aphrodisian framework of interpretation.

it. By distinguishing being a universal from being a form, Alexander seems to offer a solution to the problem of *katholou*, which not only accounts for the definability of particulars, but also ascribes to them a strong ontological independence. However, as we will see in the second part of the chapter, his solution invokes more problems than it solves. In fact, I believe that the consideration of Alexander's views on universals helps to understand why Aristotle's views evade the seriousness of the problem of *katholou* and of the traditional problem of universals. In the last part of the chapter, I will discuss Aristotle's neutrality with regard to the ontological status of universals.

Alexander's "Accidentiality Thesis"

My presentation of Alexander's distinction between being a form and being a universal relies on *Quaestiones* 1.11 and 1.3, where this distinction is introduced and developed in greatest detail. My primary focus will be on *Quaestio* 1.11, which is probably Alexander's most important and influential text on universals.¹⁶² Its aim is to give an explanation of what is meant by the assertion in the first book of Aristotle's *De Anima* that "animal, universal, either is nothing or is posterior" (402b7). Alexander's explanation, however, goes far beyond Aristotle's intention in the *De Anima*. He tries to understand what is meant by this claim in general and takes up a definite position of his own on the whole question of universals.

Alexander explains that in saying that "animal, universal, either is nothing or is posterior", Aristotle added "universal" to "animal" to indicate "animal" as a genus. A genus remains Alexander's paradigm of a universal, even though elsewhere (e.g. *Quest.*

¹⁶² *Quaestio* 1.11 was translated into Arabic around 900, so it is quite possible that it was known to Avicenna, since he defends a position that is recognizably similar to that of Alexander's. Through Avicenna Alexander's views influenced medieval thinkers, especially Thomas Aquinas. See Pines (1961), who proposes that *Quaestio* 1.11 was seminal for later medieval discussions in the West.

1.3) he identifies also species like human being with the universal. His emphasis on genera and species as paradigm examples of universals definitely contributes to the long tradition of discussing the problem of universals in terms of Aristotle's secondary substances (rather than of accidents say).

Alexander begins his explanation of *De Anima*'s assertion by claiming that the universal ("animal") is not merely nothing but something (some being, *ti on*), for "it is not the case that, being nothing, it is universal and a genus and predicated of many things" (*Quaest.* 1.11, 23, 21-23).¹⁶³ Alexander thus relies on Aristotle's definition of a universal as "that which is by nature predicated of many things" and rejects the idea that the universal lacks any status in ontology – that it is simply nothing. If it is to be predicated of many things, a universal must be something. So when Aristotle said "either nothing" he meant, Alexander explains, that a universal is not a thing in its own right (*pragma ti kath' hauto*), being in the primary or proper sense (*kyriōs*), but rather an accident of that thing.

The conclusion that the universal (or the genus, or animal as genus) is an accident of the thing in the primary sense goes beyond what Aristotle himself says *expressis verbis*. But the origin of Alexander's explanation is Aristotelian. Its origin can be found in Aristotle's frequent criticism that the Platonists, in positing Forms, turned universals into particular substances and in his reluctance to attribute the same status to universals as to particular substances. If universals exist but not as particular substances, it is indeed tempting to draw the conclusion that universals are some sort of accidents. It is controversial whether Aristotle would have accepted this conclusion (I will return to this

¹⁶³ I rely for the most part on English translations published in the *Ancient Commentators on Aristotle* series (gen. ed. Richard Sorabji), but I have revised them and, where necessary, retranslated words and entire sentences.

issue shortly). But it is clear that Alexander is committed to what Tweedale calls the “accidentality thesis”, *viz.*, the idea that the universal is an accident of whatever it is that is universal.¹⁶⁴ This thesis is a cornerstone of his account of universals, underlying the distinction he draws between the form and the universal:

That of which the universal (*to katholou*) is an accident (*symbebêken*) is some thing (*pragma ti*), but the universal is not some thing in the proper sense, but something that is an accident of that thing. For example, animal is something and reveals (*dêlôtikon*) some nature (*physis*), for it signifies (*sêmeinei*) an animate being with sensation – and this in its own nature is not universal. (*Quaest.* 1.11, 23, 25-29)

This passage is significant in that Alexander calls the thing in the proper sense (to which the universal belongs as an accident) a “nature” (*physis*). *Quaestio* 1.11 is sometimes understood as saying that universals attach to concrete particulars.¹⁶⁵ This understanding of *Quaestio* 1.11 would commit Alexander to the sort of bare particular view that I have discussed in previous chapters and according to which particulars enjoy ontological priority over universals (in the sense that they can exist independently of universals essentially predicated of them). However, a closer reading of *Quaestio* 1.11 (and the above passage, in particular) suggests that the thing to which the universal belongs as an accident is not in the first place the concrete particular or the concrete particulars, but rather the nature or form of a given particular.

¹⁶⁴ See Tweedale (1993, 79). In his commentary on Book B of *Metaphysics*, Alexander attributes this “thesis” to Aristotle himself: “For universals have their being in the manner of accidents, as Aristotle will say further on” (233, 20-21). Although Aristotle does not say in *Metaphysics* B that universals are accidents, he does say that they are not substances.

¹⁶⁵ See Tweedale (1984), who shows that this was a common understanding of Alexander’s position in *Quaestio* 1.11 among later Commentators (and also among some modern authors), and that this “may well be the source of Alexander’s reputation for anti-realism among the ancients” (p. 290).

Elsewhere Alexander characterizes “nature” as the “source of change”.¹⁶⁶ But in *Quaestio* 1.11 (as well as in 1.3) “nature” seems to be equivalent with “form” and indicates a source or cause of being: something that makes the thing to be what it is.¹⁶⁷ Alexander’s point seems to be that although a universal “reveals” or “signifies” a form (e.g. “an animal” reveals “an animate being with sensation”), the form in itself is not universal. This implies that the form is *prior* to the universal. Therefore, the universal either is nothing or is posterior because the universal is accidental to the form of a given thing and an accident is posterior to that of which it is an accident.

Alexander offers the following argument to show that form is prior to universal:

That the animal as genus (*genos zōon*) is posterior to the thing is clear. For given the existence of (an) animal, it is not necessary for the animal as genus to exist (for it is hypothetically possible that there is just one animal...). But if the animal as genus should exist, it is necessary also for (an) animal to exist. If an animate being with sensation were done away with, animal as genus would not exist (for it is not possible for what is not to exist in many), but if animal as genus were done away with, it is not necessary for animate being with sensation to be done away with, for it could exist, as I said, even in one thing. And it is for these reasons that he said: “either is nothing or is posterior.” (*Quaest.* 1.11, 24, 8-16)

This passage suggests that a nature or form is prior to the universal because a form can exist without the universal, but not *vice versa*. Thus the sort of priority Alexander

¹⁶⁶ See *Quaestio* 2.18.

¹⁶⁷ In his commentary on Book Δ of *Metaphysics*, Alexander states that the fundamental sense of nature is form, and argues that form is the intrinsic source of both change and being of natural things. In his *De Anima*, Alexander specifies that although a living thing’s form or nature is its soul, “soul is not merely a nature”, for “there are many non-living things which, as everyone agrees, have a nature but do not have a soul” (31, 24-26). Thus “nature” has a broader meaning than “form”. However, since Alexander does not distinguish them in *Quaestiones* 1.11 and 1.3, I will proceed to use “nature” and “form” interchangeably.

attributes to forms is ontological, i.e., the priority according to which one thing is prior to another, when the former can exist without the other, but not *vice versa*.¹⁶⁸ Alexander argues that if there were only one animal in existence, the animal nature (“animate being with sensation”) would exist, but animal as genus with many members would not. Alexander’s argument is thus based on the hypothetical cases involving the existence of only one particular member of a species. Further, the argument evidently assumes that the existence of the animal as genus requires the existence of more than one animal, but not *vice versa*, since “it is hypothetically possible that there is just one animal”. Thus, Alexander thinks that the distinction between the form and the universal is clear if we consider that the form can exist in only one particular, whereas the existence of a universal (animal as a genus) requires the existence of more than one particular. And since a form can exist in only one particular, it is accidental to that form whether it has more than one instance. Hence it follows that the universal is accidental to the form.¹⁶⁹

Alexander uses similar argument also in *Quaestio* 1.3 to show that the form of human being need not be common to many particulars. However, his argument there adds an important qualification concerning definitions:

Therefore, definitions are not of things that are common as common (*tôn koinôn hōs koinôn*), but of those thing to which it attaches as an accident (*symbebêken*) that they are common. For even if there were only one human being in existence the definition would be the same. For it is not the definition of it because it is present in many [particulars],

¹⁶⁸ Alexander explains in his commentary on Book Δ of *Metaphysics* that things prior in this sense are “those whose removal involves the removal of other things but that are not themselves removed when others are” (387,5-6).

¹⁶⁹ I will follow here Alexander’s lead and say that the universal is accidental to the form. Since being a universal lies in belonging or being common to many things, it would be more natural to say that universality is accidental to the form. But Alexander repeatedly puts this point by saying that the genus, or the animal as a genus, or the universal is accidental to the form. This raises problems for understanding the ontological status of his universals, which I will discuss in the following section.

but because the human being is human being in accordance with a nature of this sort, whether there are several sharing in this nature or not. (*Quaest.* 1.3, 8, 12-17)

Alexander argues that even if there were only one human being in existence, the form of human being (“mortal rational animal”) would exist, though the universal (human being as a species with many members) would not. Further, Alexander insists that if there were only one human being in existence, this human being would still be definable. This is so because the definition is of the form and it is accidental to the form whether it has one instance or more than one. In other words, the definition is not of what is common *as* common, for the form that is defined is the same regardless of the number of its instances. This argument implies that the form includes only essential features that can be shared by all members of the species (and not material particularities), but makes the point that the form need not be shared by many things in order to be definable. We may presume that the same point holds also of the form of animal: it no less exists as a definable nature when there is only one animal in existence than when there are many.

Quaestio 1.3 thus suggests that in distinguishing between being a form and being a universal, Alexander also distinguishes between being essential and being universal. If there were only one human being in existence (Socrates say), that particular human being would exist without human being existing as a species with many members; but within Socrates, the essential nature of human being would still exist and be definable.

Alexander’s distinction between being a form and being a universal seems to offer a solution to Aristotle’s problem of *katholou*, which not only accounts for the definability of particulars but also attributes to them a strong kind of ontological independence. Hence his solution might appear to be more satisfactory than the one I have developed and attributed to Aristotle in previous chapters. According to my interpretation, concrete

particulars are always particulars of a specific sort and hence they have only a weak sort of ontological independence. More precisely, I have suggested that particulars are ontologically independent in the sense of not having any instances, but not in the sense of being capable of existing independently of universals essentially predicated of them.

According to Alexander, universals are posterior to forms (to which they belong as accidents) and hence they are also posterior to particulars, since it is “hypothetically possible” that there exists just one particular. Consequently, Alexander attributes to particulars a strong kind of ontological independence. On his view (and he evidently takes his view to be in line with Aristotle’s view), particulars enjoy *ontological priority* over universals, i.e., they are capable of existing without there being universals. He can hold this view because he distinguishes the nature of a given particular from the universal. The particular human being, for example, cannot exist without her own form or nature which makes her to be what she is (to wit, a human being) but her existence does not depend on there being human being as a species with many members (for she might well be the only human being in existence). Since Alexander preserves the insight that particulars are always of a specific kind, he can also account for their definability – particulars are definable because of their form (although form need not be universal). Thus it seems that Alexander’s solution allows particulars (and within them forms) to be both ontologically prior to universals and definable. In the following section, I will analyze Alexander’s solution in greater detail by outlining the assumptions it relies on and discuss the problems it invokes.

Alexander’s Solution and its Problems

Alexander’s solution (involving the “accidentality thesis” and the distinction between the form and the universal) relies on two important assumptions. These assumptions

concern (i) Aristotle's standard definition of a universal and (ii) the ontological character of genera and species (Aristotle's "secondary substances").

First of all, Alexander takes up a definite position on Aristotle's definition of the universal as "that which is by nature predicated of many things" (*De Int.* 17a36). In fact, he seems to be the first one to bring out the ambiguity implicit in this definition and to make it central to his account of universals. There are two possible interpretations of the assertion that the universal is predicated of *many* things. It might mean that for something to be a universal (i) it must be *actually* predicated of more than one thing, or (ii) it must be such that it *can* be predicated of more than one thing. On interpretation (i), for a given universal to exist it must be *multiply* instantiated. So if just one human being exists, then the universal, human being, does not exist. Its existence requires the existence of more than one particular human. On interpretation (ii), a given universal need not be multiply instantiated in order to exist. So if just one particular exists, it does not follow that the universal does not exist because the universal is such that it *can* exist in a plurality of things (even if there is, now, only one in existence).

Alexander accepts, in a way, both of these interpretations yet applies them to different things. He accepts (i) and assumes that a universal is something that is *actually* predicated of many things, i.e., it is predicated of more than one particular. He also accepts (ii), since he holds that a form is such that it *can* be common to many particulars, even though in virtue of its own nature it need not belong to more than one.

Alexander's account thus indicates that the term "universal" is ambiguous between (i) that which is actually predicated of many things (universal *as* universal), and (ii) that which can be so predicated (to which being a universal attaches as an accident). These

two senses of the universal do not necessarily coincide: what *can* be universal need not be universal.

It is controversial which one of these two interpretations Aristotle himself would accept, and Aristotelian scholars who have paid attention to this issue divide equally between the two interpretations. Some think that the existence of Aristotle's universal requires (i) actual plural instantiation, others that it requires (ii) possible plural instantiation (the latter seems to be the majority view, if we can speak of the majority view at all in this case).¹⁷⁰ I am inclined to think that Aristotle would not be much concerned with this issue, since he seems to take it for granted that in the sublunary world universals have plural instances – species with only member, if there were such things at all, would be exceptionally rare.

However, there are few considerations which suggest that if pressed on this issue Aristotle would demand actual plural instantiation on doctrinal grounds (and not only because species with only one member are exceptionally rare). A possible problem with the interpretation according to which universal *can* be predicated of many things is that it does not make it necessary for universals to be instantiated in order to exist. If we hold that a universal is one which, by nature, is such that it *can* belong to many things, then it is not clear why we should assume that it must be actually predicated of something at all. If a universal *may* hold of a plurality of things, even if there is currently only one in existence, why should we not allow that some such universals can exist without belonging to any particular at all? Thus, this interpretation opens a back door to

¹⁷⁰ Scholars who adopt interpretation (i) are Irwin (2002) and Fine (2008). Scholars who defend interpretation (ii) include Modrak (1979), Sharples (2005), Sorabji (2005). Sorabji writes: "This point, dependence on the existence of more than one particular, goes beyond Aristotle, for Aristotle's definition of universals at *Int.* 17a29-40 requires only that a universal is *shareable*, whereas Alexander's is actually *shared*" (2005, 150).

Platonism according to which universals can regardless of whether or not they are instantiated.

Indeed, this problem also lurks behind Alexander's account of universals. Although Alexander is usually considered to be a loyal follower of Aristotle, he goes beyond Aristotle in his understanding of the Platonic position. Aristotle seems to think that the Platonic theory of Forms is (supposed to be) a theory of universals, but Alexander finds the distinction between the form and the universal already in Plato's philosophy. In his commentary on book A of the *Metaphysics*, Alexander claims that "Plato supposed that definitions are of natures of another sort and not of any particular sensible thing nor of the universal... and these natures to which definitions belong, he called "Forms"" (50, 7-15). The position Alexander attributes to Plato does not appear to be that different from his own position in *Quaestio* 1.3: "definitions are not of things that are common as common, but on those things [i.e. natures] to which it attaches as an accident that they are common" (8, 12). In other words, the objects of definitions are not strictly universals but forms which need not be universal though they can be. Although Alexander would not admit that definitions are of some separate natures, he does not explain what precisely the relation is between forms and particulars and why forms cannot exist uninstantiated (given that the form is such that it *may* exist in many things, though it does not need to).¹⁷¹

That the requirement of *possible* plural instantiation does not make it evident why the universal must be actually instantiated might well be one reason why Aristotle would reject Alexander's distinction between two senses of a universal. Since for Aristotle the existence of a universal requires actual instantiation (he rejects the existence of

¹⁷¹ For a longer discussion of this difficulty, see my "Alexander of Aphrodisias' Account of Universals and its Problems" (forthcoming).

uninstantiated universals), it is natural to suppose that it requires actual (rather than possible) plural instantiation. This point is brought out by Terence Irwin (2002): “For the definition [of a universal] either requires possible plural instantiation or requires actual plural instantiation; but if it supports the claim about actual instantiation, it cannot merely require possible plural instantiation, but must be taken to require actual plural instantiation” (p. 80). Further, the claim that the universal can exist in only one thing does not appear to be much different from the claim that the universal signifies a particular thing. However, Aristotle repeatedly says that the universal does not signify a “this something” (*tode ti*), some numerically one thing, which also appears to suggest that Aristotle’s universals have necessarily plural instances. There are also other considerations suggesting that Aristotle would be reluctant to adopt Alexander’s distinction between two senses of the universal, but in order to discuss these considerations we need to first consider the second assumption underlying Alexander’s account.

Secondly and relatedly, Alexander’s account relies on a certain understanding of the ontological character of genera and species, which he (following Aristotle) identifies with universals. It is not easy to determine Aristotle’s views on this issue. His negative and polemical remarks (e.g. that they do not signify a *tode ti*) suggest that he does not want us to conceive of them as concrete things. But other than that, the ontological character of secondary substances remains obscure and very difficult to cash out using contemporary terminology. In particular, they seem to escape the distinction we make today between collections of particulars and properties. Aristotle often speaks of particulars as if they were members of species and genera, which might suggest that a secondary substance is some sort of a collection of particulars (perhaps something like a

class).¹⁷² But he also says that the secondary substances *reveal* what the primary substances are, which might suggest that they are some sort of property (for it is not evident how a class could reveal the nature of a particular). Although we can evidently speak about the property of being a human being (or being human), the natural examples of properties are accidents like being white. But Aristotle is careful to point out that secondary substances are not simple properties like being white.¹⁷³

Now, it seems that Alexander conceives of universals (species and genera) as properties (i.e., corresponding to the species human being, for example, we have, as a property, being human). This conception of a universal plays an important part in his argument, since the existence of a property does not need plural instances (as Aristotle himself admits when he draws in the *Categories* a distinction between particular and universal accidents). Thus this conception helps (or enables) Alexander to draw a distinction between forms and universals: he construes the form as a property (or a cluster of properties) which can have only one instance. When the property of being human, for example, happens to have more than one instance, then we can speak of a human being as a species.

Now that we have discussed the most important assumptions underlying Alexander's solution to Aristotle's problem of *katholou*, we can turn to the question of how satisfactory his solution is. It is my contention that Alexander addresses several

¹⁷² For example, Aristotle says that primary substances "exist in" or "belong to" (*hyparchein en*) secondary substances (*Cat.* 2a14-16). If we conceive of species and genera as classes, then we need to modify the modern understanding of a "class". For classes are typically defined extensionally, but Aristotle's universals are not purely extensional classes. If Aristotle thinks of secondary substances as classes (i.e., classes that are defined extensionally), then it is not clear how they can survive changes in the particulars falling under them, or how they can *reveal* what the particulars are.

¹⁷³ Aristotle struggles to maintain the distinction between secondary substances and properties in *Categories* 5, where he claims that secondary substances signify a "such" (*poion ti*, "quality"), but then immediately adds that they do not signify a "such" in the same way as accidents like white do; for "white signifies nothing other than a such" whereas species and genera signify a "substance of such a sort" (3b10-21).

difficulties latent in Aristotle's views, but in the end he succeeds more in forcing these underlying difficulties to the surface than in providing a solution to them.

First of all, Alexander argues that if there is only one particular in existence, then this particular would nonetheless be knowable and definable, since the definition is of the form, and it is accidental to the form whether or not it is universal. For example, if there is only one particular human in existence, then, although there is no ground for (actual) universal predication, this particular human would still have a definable nature. But what does it mean to say that this particular human (the only one in existence) is nonetheless knowable and definable? Could we have any actual knowledge of her (or, more precisely, of her form), or is she knowable only in principle? If she is knowable only in principle (so that in order to be actually knowable she must have universals actually predicated of her), then this argument does not show that particulars existing without universals can nonetheless be knowable and definable. If she is an object of actual knowledge (so that we have actual knowledge of her definition, although the definition applies as a matter of fact only to her), then it would be hard to see the role of universals in scientific knowledge. If particulars are known without universals, then why do we need universals in the first place? Further, Alexander's view that the knowledge and definition are of forms (which need not be universal) implies that Aristotle's oft-repeated claim that knowledge is of the universal should be reinterpreted as the claim that knowledge is of that which *happens* to be universal.

Secondly, the main advantage of Alexander's solution might appear to be that it helps to explain what philosophical sense we can make of particular forms. Alexander argues that forms are ontologically prior to universals, which suggests that forms are particular in the sense of being capable of existing without being universal (i.e., having

many instances). Indeed, he insists that it is accidental to forms whether they have one instance or more than one. However, this apparently straightforward attribution of ontological priority to forms leaves it very hard to see what precisely is the status of forms. Alexander cannot allow his forms to be (essentially) universal, since they may exist in only one particular. This suggests that forms are particular. On the other hand, he cannot say that they are (essentially) particular either, since they will exist in many instances sometimes. Hence, he must be committed either to the view that (i) the form is neither universal nor particular, or (ii) that the form, e.g. the property of being human, is sometimes particular (when it has only one instance) and sometimes universal (when it has more than one instance). However, it would be even more difficult to explain in what sense forms could be neither universal nor particular than to explain in what sense they could be particular. The second view seems to introduce to his ontology rather peculiar entities – properties that are sometimes particular and sometimes universal. Aristotle escapes this awkward consequence since he does not attribute to particulars any strong kind of ontological independence from universals (which would make it necessary to draw a sharp distinction between them). Thus, it seems that it is Alexander's (not Aristotle's) account which sharply raises the question of whether forms are particular or universal (or perhaps neither).

Further, by distinguishing forms from universals, Alexander's account invokes the problem about the ontological status of universals. *Quaestiones* 1.11 and 1.3 suggests that universals depend for their existence on the existence of particulars. More precisely, a universal exists if a form has at least two instances. However, it is not clear how we are supposed to understand its existence. Alexander's "accidentality thesis" indicates that he wants to keep forms distinct from universals – being a universal attaches to being a form

only as an accident from outside, so to speak. This suggests that the universal must be an “extra” entity – perhaps something that somehow pops into existence when a form happens to have more than one instance and stops existing as soon there is no longer more than one thing.¹⁷⁴ On the other hand, my earlier suggestion that Alexander’s forms appear to be peculiar entities that are sometimes universal and sometimes particular indicates that universals are not “extra” entities. Rather, forms themselves are sometimes universal (when they have more than one instance) and sometimes particular (when they have only one instance). Be this as it may, it is at least clear that Alexander’s account of universals has a realist side. The requirement of more than one instance does not make universals thought-dependent, since the existence of more than one particular does not (or so it seems to me) depend on our recognition.

Nonetheless, Alexander occasionally makes claims that appear to turn universals into something thought-dependent. In his commentary on Aristotle’s *Topics*, he clearly rejects the idea that genera are “mere thoughts without existence” like the centaur (355, 12-14). But although they are not merely fabrications of human imagination, they seem to somehow depend on thought. In *Quaestio* 1.3, for example, he says that if the human nature, “the mortal rational animal is taken apart from the material circumstances and differences it becomes (*ginestai*) common” (8, 1-4). In a passage from the *De Anima*, Alexander speaks of things that are common or universal as “becoming common or universal”, and adds that “if they are not thought, they no longer are, so when they are separated from the intellect that thinks them they perish, if their being (*einai*) is in being thought” (90, 6-8). This suggests that universals cannot exist (at all) without being

¹⁷⁴ This suggestion is made by Tweedale (1984), who compares Alexander’s universal to a Matthews-style “kooky object” (“accidental entity”) that comes into existence and stops existing as multiple particulars come and go.

thought, i.e., apprehended by the intellect.¹⁷⁵ These statements raise difficult questions. *What* is it that depends on the intellect for its existence? Are thought-dependence and existence in many things two (alternative) ways of being a universal?

Alexander's views are no doubt subtler than these excerpts suggest, but they are enough to show that he, unlike Aristotle, started to struggle with the problem concerning the ontological status of universals. Indeed, in several places he comes close to explicitly formulating "the problem", and it has been suggested that Porphyry (who is usually regarded to be the first to announce "the problem") takes his formulation of the problem over from Alexander.¹⁷⁶ But whether or not this is true, it is at least clear that Boethius takes over Alexander's take on the problem. It is Boethius' commentary, rather than Porphyry's *Isagoge* itself, which made Porphyry's questions famous. And when Boethius presents his solution to the problem in his second commentary on the *Isagoge*, he claims to be following Alexander of Aphrodisias. So Alexander plays an important role in the development of the problem of universals. His contribution does not lie simply in the fact that he more or less explicitly formulated the question of whether universals are real or exist in thought alone. His contribution runs deeper, and lies eventually in the distinction he draws between being a universal and being a form. Since Aristotle thinks that universals are embedded in the very nature of particulars, he does not face this question in all its seriousness. In the last section, I briefly discuss Aristotle's approach to the problem about the ontological status of universal.

¹⁷⁵ Furthermore, in *Quaestio* 2.28 Alexander goes as far as to say that a genus taken as a genus is a "mere name", not a thing that underlies, and it is common only in thought (*noeisthai*), not in reality (*hypostasis*). For a further discussion of the ontological status of Alexander's universals and the problem it raises, see my "Alexander's Account of Universals and its Problems" (forthcoming).

¹⁷⁶ For Alexander's formulation of the problem, see (esp.) *in Top.* 355, 12-14. According to de Libera (1999), "that Porphyry depends on Alexander for the very formulation of "his" problem is ... beyond discussion" (p. 49)

Aristotle and the Ontological Status of Universals

In order to understand and appreciate Aristotle's views on universals, it is important to take into account the context in which he philosophizes. In Aristotle's day, the contemporary teaching treated Forms as things in their own right and distinguished them sharply from sensible particulars. Platonism, as Aristotle understands it, has Forms standing entirely apart from concrete particulars participating in them, leaving it hard to see how they could possibly contribute to the being and knowledge of particular things (*Met.* A 9, 991a12-14). It is not surprising that such a sharp distinction invokes difficult questions concerning the existence and ontological status of Forms – the questions concerning the existence and range of Forms were disputed among the Platonists themselves.¹⁷⁷

Aristotle takes the theory of Forms to be a theory of universals, but Aristotle's *katholou* is not simply a synonym for the Platonic Form (*idea, eidos*). It is easy to miss this point, since talk of universals is today often understood as talk of some independent or additional entities, posited by some metaphysicians (usually called "realists") and not by others. So, in contemporary usage, the term "universal" is associated with something like the Platonic Form. This association, however, is quite misleading when applied to Aristotle's *katholou*. He is very careful to disassociate his *katholou* from the Platonic Form. He says repeatedly that universals are not, strictly speaking, substances (they do not signify "this somethings") and that they are not separate from sensible particulars. Since Aristotle is very much concerned with rejecting the existence of separate Forms, he is evidently aware of the problems concerning the existence and ontological status of

¹⁷⁷ On this point, see Gerson (2005, chap. 6). I have avoided speaking about Plato's own views, but it should be pointed out Plato raises many of the problems himself in the *Parmenides*.

universals. Nonetheless, he nowhere tries to prove the existence of his universals (at least not in the way the Platonists try to prove the existence of Forms).¹⁷⁸ Most significantly, his positive remarks on universals remain neutral with regard to their ontological status (and escape the standard divide of realism and nominalism). It is difficult to determine the precise reasons for his neutrality but it is clear that since Aristotle is aware of the ontological problem, his neutrality cannot simply be the result of ignorance. Instead, Aristotle might think that his rejection of separate Forms gives him certain immunity against these ontological questions. He might think that the ontological status of universals is not particularly worrisome as long as we do not separate them from particulars and treat universals as things in their own right, extending to them an irreducible ontological status.

As far as I know, none of Aristotle's commentators have tried to develop a positive account of his neutrality. His commentators instead concentrate on the question concerning the ontological status of his universals. Indeed, it is hard to avoid this question, given that the concept of universal has long been understood in association with the "problem of universals". Furthermore, this problem might appear to be particularly worrisome in the context of Aristotle's philosophy because Aristotle remains painstakingly non-committal with regard to the ontological status of universals.

Nonetheless, I do not think the reason why Aristotle's commentators have focused on, and disputed over, the ontological status of his universals lies simply in his neutrality on the topic, though this plays a role. Above all, this dispute seems to rely on the widely accepted view that Aristotle commits himself to a dualism of particulars and universals,

¹⁷⁸ See *Met.* A 9 (990b9-17), where Aristotle mentions five arguments for the existence of Platonic Forms, which are discussed in greater detail in *Peri Ideôn*, portions of which are preserved by Alexander in his commentary on *Metaphysics* A.

which differs from the Platonic dualism only in that he denies that universals could exist independently from particulars of which they are predicated. The most important motivations for attributing to Aristotle a Platonic dualism of particulars and universals come from his standard definitions of the “universal” and “particular” in the *De Interpretatione*, and from his account of primary and secondary substances in the *Categories*.

Aristotle’s standard definitions (“By universal I mean that which is by nature predicated of many things; by particular, what is not”) seem to set up some sort of distinction between particulars and universals. If universal is that which is predicated of many things and particular is that which is not, then it follows (by definition) that what Aristotle calls “universal” and what he calls “particular” cannot be strictly identical. No universal can be a particular (or *vice versa*), since no universal can be both predicated *and* not predicated of many things. From this it is easy to draw a further conclusion that the distinction between particulars and universals is absolute (both exclusive and exhaustive), and hence Aristotle, like Plato, treats particulars and universals as irreducibly distinct kinds of things. This is a natural conclusion to draw in light of contemporary discussions. On the contemporary conception, the alternative between universals and particulars is seen as absolute, and it is often assumed that this is the case with Aristotle’s distinction as well.¹⁷⁹ However, it should be pointed out that Aristotle defines particular in the *De Interpretatione* only negatively and his positive discussions indicate that the particular stands in a peculiarly intimate relation to the universal (which cannot be characterized as a kind of dualism).

¹⁷⁹ See, e.g., Sykes (1975), who argues that Aristotle’s definitions of “universal” and “particular” commit him to “a dichotomy between particular and universal which appears to be both exclusive and exhaustive” (p. 313).

Another (and perhaps the most important) reason for attributing to Aristotle a Platonic dualism goes back to his *Categories*. Aristotle's discussion in the *Categories* throws some light on the ontological commitments that lie behind his standard definition of the "universal" as "that which is by nature predicated of many things". In the *Categories*, Aristotle argues that everything that is predicated of some subject is ultimately predicated of some primary substance, and famously concludes that "if the primary substances did not exist it would be impossible for any of the other things to exist" (2b5). This conclusion indicates that Aristotle takes the opposite position to Platonists with regard to the ontological dependence of universals: while universals cannot exist without or independently of particulars, Forms can. However, according to the traditional interpretation, their disagreement runs even deeper and concerns the issue of ontological priority. Aristotle's conclusion that universals cannot exist independently of particulars is traditionally understood as implying that particulars *can* exist independently of universals predicated of them. Hence particulars enjoy ontological priority over universals, i.e., universals cannot exist without particulars but not *vice versa*. Consequently, Aristotle turns the Platonic position "upside down": whereas the Platonists ascribe an ontological priority to universal Forms, Aristotle attributes it to concrete particulars. This well-established interpretation is, I believe, the main reason for attributing to Aristotle a dualist position. It implies that both Plato and Aristotle separate two things, the one of which can exist without the other. The only difference is that, while the Platonists separate universals from particulars (they hold that universal Forms can exist without particulars, but not *vice versa*), Aristotle separates particulars from universals (he holds that particulars can exist without universals, but not *vice versa*). The latter separation, however, has a result similar to the Platonic separation – it immediately

brings to the forefront questions concerning the existence and ontological status of universals.

I have argued that Aristotle's conclusion that universals cannot exist without particulars does not imply that particulars can therefore exist without universals. More precisely, I have developed an interpretation according to which particulars and universals are ontologically interdependent, i.e., it is no more possible for particulars to exist without universals than it is for universals to exist without particulars. This interpretation suggests that although Aristotle does not turn the Platonic position "upside down", he definitely changes it, and he does so in a more radical manner than is traditionally thought. The traditional interpretation holds that particulars can exist independently from universals, thereby committing Aristotle to a dualism (i.e., the view that there is an exhaustive distinction between particulars and universals, so that the one can exist without the other). My interpretation, on the other hand, holds that particulars and universals are ontologically interdependent, and their ontological interdependence implies that "particular" and "universal" (or "primary substance" and "secondary substance") cannot be labels for irreducibly distinct types of things. Aristotle thinks that for a particular *to be* it has to be *something* and universals provide the *something* that the thing is. However, universals add nothing "extra" to particular things; they are no extra entities. Rather, they are embedded in the very nature and being of particulars: the universal is *what* the particular is. Hence, we could say that talk of particulars and universals (or, primary and secondary substances) is really a shorthand way of talking about universalized particulars and particularized universals.

Thus, Aristotle does not commit himself to a dualism of universals and particulars. Universals are part of the essential being of particulars and this might well be the reason

why Aristotle does not feel the need to prove the existence of universals. Their existence is as obvious as the existence of particular things. After all, we do not – at least, not until we have been influenced by post-Cartesian philosophy – assume that the existence of particular physical objects needs to be proved in some special way.

Nonetheless, although Aristotle does not want to set up an exhaustive distinction between universals and particulars, he does not go to the other extreme and identify universals with particulars. Accordingly, while “interdependence” is not a dualism it is not a strict identity either. Strict identity is governed by the principle (often called “Leibniz’ Law”) which can be loosely expressed by saying that if A and B are identical, then whatever is true of the one is true of another. But it does not seem to be the case that whatever is true of a particular is true of a universal, and *vice versa*. This is suggested by Aristotle’s definitions of the “universal” and “particular”: universals are said of many things, whereas particulars are not. Stated otherwise, while universals may have different instances, it makes no sense to speak of different instances of particulars. Furthermore, if the universal is strictly identical with the particular, then it seems to be no less of a “this something” than the concrete particular itself. And this would make Aristotle’s view as “impossible” as the view of the Platonists who treated universals as particulars *beyond* their particular instances (cf. *Met.* M 9, 1086a31-b11). That the separation of universal Forms from particulars turns Forms themselves into particular substances is one of Aristotle’s most important criticisms of Platonism, which predates the contemporary criticism according to which realists tacitly assimilate general terms to proper names (they assume that general terms signify some particulars entities). This criticism suggests, again, that universals cannot be strictly identical with particulars.

The above considerations indicate that Aristotle is trying to work out a middle position between dualism and strict identity. On the one hand, Aristotle does not want to attribute to universals an irreducible ontological status. The universal could not exist as a thing in its own right; there are no universals *per se*. On the other hand, he wants to give to universals a weak sort of ontological status which cannot be reduced *entirely* to the status of particulars, but which does not entail independent existence from particulars. Aristotle's motivation for attributing to universals a weak ontological status (and perhaps for coining the word *katholou* in the first place) appears to be mainly epistemological. He wants to allow there to be knowledge of universals, which is potentially knowledge of particulars (and not of some "extra" entity), but which is not knowledge of any particulars in particular. So although knowledge of the universal is not about a definite thing (it is not tied to one particular), the knowledge of particulars is potentially there. Therefore, when we talk about universals, we do talk about particulars and not of some "extra" entity – in such talk we assert something of each of them, not of some other thing in addition to or apart from them.¹⁸⁰ Since universal knowledge involves the ability to know any of the particulars that fall under the universal, it is comparable to a template that can be filled by any of the particulars of a relevant sort. As Tweedale puts it: "The universal knowledge is like a check that can be cashed by anyone who can show that they meet certain qualifications. Science is made up of such checks" (1988, 513).

It is difficult to give a positive account of the precise nature of the distinction that holds between particulars and universals. I have appealed to the notion of interdependence which can be seen as a middle ground between dualism and strict

¹⁸⁰ See *An. Post.* A 11 (77a5-9), where Aristotle claims that knowledge and demonstration does not require there to be Forms, or things apart from (*para*) the many, but it requires there to be something that holds of (*kata*) many. See also Tweedale (1987), who argues that Aristotle is committed to "tenuous realism", i.e., he views universals as real entities but lacking numerical oneness.

identity. The notion of interdependence (that I take to be at work in Aristotle) is similar to Duns Scotus' notion of formal distinction. Formal distinction is a real distinction (i.e., a distinction which exists independently of thought) but it is not a distinction between two things (*res*), one of which can exist even when the other does not. Rather, it is a distinction between two aspects of a thing (Scotus calls them "formalities" and "realities", *realitas*) which are really the same but definitionally independent from one another. So, formal distinction enables us to distinguish between aspects (within one thing) which are really the same but which need not be such that what is true of one must be true of another.¹⁸¹

Scotus' formal distinction appears to be particularly appropriate in the context of Aristotle's philosophy, since it allows us to say (as Aristotle evidently wants to say) that the only independently existing things are particular things – but particular things of a certain sort, "this somethings". These particulars are both most real and most knowable, but within them we can distinguish between two aspects (that of a "this" and that of a "something") and consider particulars either in respect of their particularity or as falling under universals. Indeed, Aristotle seems to be the first philosopher to recognize and to exploit the nowadays widely recognized point that the way something is described or referred to makes a crucial difference to the truth and falsity of what is said. He starts to

¹⁸¹ Scotus' formal distinction was fiercely criticized by William Ockham. His criticism turns on the point that contradictory predicates or properties cannot be simultaneously true of aspects that are really the same. Scotus could escape the criticism by firmly insisting that contradictory predicates cannot belong to aspects that are *in no way* distinct, but they can belong to aspects really the same but formally distinct. Nonetheless, Ockham's criticism raises the question concerning the "robustness" of formal distinction: aspects of the same thing must be ontologically robust enough to serve as property bearers but not robust enough to be reduced to things in their own right. Translations of the most important texts concerning Scotus' formal distinction and Ockham's criticism of it can be found in Tweedale (1999).

use the “as such” (*hêi, qua*) locution, which plays a crucial role in understanding his views on scientific knowledge.¹⁸²

Aristotle’s commitment to the position that the particular is always a particular of a certain sort (e.g. the particular horse is always a horse) might strike us as trivial, but I strongly deny that its triviality is unenlightening. It should make us think twice before we engage ourselves in the longstanding dispute over the ontological status of Aristotelian universals. From Aristotle’s perspective, there does not appear to be any particularly deep problem about the ontological status of universals (e.g. his species and genera). On his view, what particular horses have in common is their being horses, nothing more or nothing less. Nothing less, since Aristotle does not think that particular horses have nothing in common except that they are *called* (or thought of as) horses – they are called horses because they *are* horses. And nothing more, since Aristotle does not think that what they have in common is somehow *over and above* the fact that they are all horses. Particular horses are horses in virtue of themselves (one can go on to explain what it is to be a horse, but this does not require the introduction of any additional entities). To hunt for something beyond the fact that all particular horses are horses is to go to an ontological wild goose chase.

¹⁸² As I have argued in Chapter Three, science cannot regard the particular in all its non-repeatable particularity and uniqueness (particular *qua* particular), but it can regard the particular under a definite aspect that it shared with other particulars.

CONCLUSION

I have explored Aristotle's solution to the problem of how what is most real can also be most knowable. This problem is generated by two of his philosophical commitments: (i) particulars are most real, and (ii) universals are most knowable (since knowledge is of the universal). I have suggested that these would lead to a serious problem only if it is assumed that Aristotle, like Plato, is committed to a strong dualism of particulars and universals. And since Aristotle's commentators typically think that these commitments generate a serious or perhaps insoluble problem, they attribute to Aristotle a Platonic distinction between the particular and the universal.

According to my interpretation, Aristotle's solution to the problem lies in minimizing the distinction between the particular and the universal. In order to characterize their intimate relationship I have invoked the notion of interdependence, arguing that, for Aristotle, particulars and universals are both ontologically and epistemologically interdependent. Their close relationship is often overlooked due to the traditional interpretation, according to which Aristotle attributes to concrete particulars an unqualified ontological priority (thus treating particulars as things that are capable of existing independently of the universals predicated of them). I have challenged this interpretation by arguing that particulars cannot exist without universals essentially predicated of them. The concrete particular is not a bare particular but a particular of a certain sort, a "this something" (*tode ti*), where universals provide the "something" – they are embedded in the very being and nature of the particular.

Further, I have argued that corresponding to the ontological interdependence there is also an epistemological interdependence between particulars and universals. Aristotle thinks that particulars are not knowable and definable *qua* particulars, i.e., they are not

knowable in all their particularity. But they are knowable *qua* particulars of a certain sort (*qua* falling under universals). More precisely, I have argued that Aristotle distinguishes between unqualified scientific knowledge, which is of the universal, and qualified scientific knowledge, which is of the particular. Although unqualified scientific knowledge is of the universal, it does not exclude (but rather implies) knowledge of particulars – knowledge of the universal is (as Aristotle puts it) *potential* knowledge of particulars. When this knowledge is “actualized”, we have qualified knowledge of particulars. Since particulars (*qua* a certain sort) can be known in the qualified sense, the statements about them *are* part of scientific knowledge. I have also discussed Aristotle’s views on *epagôgê* (induction), suggesting that knowledge of universals is acquired from the perception of particulars. My interpretation suggests that particulars and universals are epistemologically interdependent because particulars cannot be scientifically known without universals under which they fall; and universals cannot be scientifically known without particulars which fall under them (since our scientific knowledge of universals begins with the perception of particulars).

I have also discussed the problem of the status of Aristotle’s forms in the central books of the *Metaphysics*, where form is regarded as a primary substance. This invokes the problem of explaining how forms can be both real and most knowable (the so-called Zeta Problem). I have discussed four different solutions to the problem of whether forms are universal or particular, and I have analyzed in greater detail the view that particular forms are instances of universals. In particular, I have suggested that forms are particular in the sense of being numerically distinct (each concrete particular has its own numerically distinct form) and yet universal in the sense of including only those (essential) features that are shared by all particulars of the same sort. My interpretation of

Aristotle's position in the *Metaphysics* is compatible with the idea of interdependence between particulars and universals. For Aristotle, a particular (whether a concrete particular like Socrates, or the particular form of Socrates) cannot exist without being a particular of a certain kind, and a universal cannot exist without being instantiated (or "particularized").

In the last chapter, I considered the solution to Aristotle's problem of *katholou* that emerges from the writings of Alexander of Aphrodisias. His solution lies in a distinction between being a universal and being a form and in his "accidentality thesis" (i.e., the idea that being a universal is accidental to the form that can be universal). This distinction enables him to account for the definability of particulars, while attributing them ontological priority over universals. Nonetheless, Alexander's account raises several problems (including the problem of the ontological status of universals). Aristotle's account evades these problems, since he does not attribute to forms (and, by implication, particulars) any strong ontological independence. There is for Aristotle no deep problem of how what is most real can also be most knowable, since for him the most real things are "this somethings" which entail within themselves both particularity and universality.

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