

Gabriel Shapiro
October 2020

Beyond the Categories within the *Categories*

According to Aristotle in the *Categories*, not all truths are on a metaphysical par.

- (a) Socrates is a human,
and
(b) Socrates is wise

are equally true, but fundamentally different. The first is essential: it is part of the very nature of Socrates that Socrates is human. The second is accidental: Socrates is wise but wisdom is no part of the essence of Socrates.¹ What is more, in sentence (1) the predicate-term, “human”, corresponds to a substance—namely, the species, human. Whereas, in sentence (2), the predicate-term², “wise”, introduces an accident—namely, the quality, wisdom. These two distinctions between essential and accidental predication and between substances and accidents are among Aristotle’s most influential and enduring contributions to the history of philosophy, and they are, in their own right, cornerstones of Aristotelian and, recently, Neo-Aristotelian metaphysics.

Notwithstanding the august place in the history of philosophy of the substance-accident and essential-accidental distinctions, it is not clear how exactly Aristotle means to draw them. For example, Aristotle accepts the truth of claims like these:

- (c) Socrates is an individual³,
(d) human is a species,

¹ I will use “essential” and “accidental” as rough stand-ins for Aristotle’s technical “said of” and “present in” relations. This terminology is supported by the fact that the majority of commentators identify *said-of* predication with essential predication and *present-in* predication with accidental predication. See, for example, Owen (1967), Code (1985, 101 and 1986, 417), Frede (1987b, 73) Mann (2000, 23), Perin (2007, 127-8), and Shields (2014, 181-2). For a dissenting position and further discussion see Crivelli (2017). This position was also common in antiquity: see Ammonius *in Cat.* 31.6-12; Philoponus. *in Cat.* 38.38-9; Simplicius, apparently quoting Porphyry, *in. Cat.* 48.25-31; Anonymous, *in Cat.* 7.20-1. The view that I defend elsewhere in my dissertation is that the later distinction between essential and accidental predication—often expressed using the adverbial phrases “*kath’ auto*” and “*kata sumbebekos*”—cuts across the distinction between “said of” and “present in” predication. Still, thinking in terms of the essential and non-essential or accidental features of a thing is a rough but helpful heuristic.

² I follow the convention in Aristotle scholarship of using “predicate” for predicable entities rather than for grammatical or linguistic predicates. To talk about grammatical or linguistic predicates I use “predicate-term”. Concomitantly, I use “subject” for worldly bearers of predicates and “subject-term” for the linguistic or grammatical subject of a sentence.

³ In *Categories* 2, Aristotle distinguishes individuals, or entities that are “non-divisible and numerically one”, from non-individual or generic entities. I will follow the convention of using “universals” for the non-individuals. This convention of using “individual” and “universal” to capture Aristotle’s distinction has the advantage of concision but the disadvantage of suggesting that only the universals and not the individuals are predicable or predicable of several subjects. This connotation of “individual” and “universal” should be resisted: there are individuals that can be predicated and, on some views, there are individuals that can be predicated of several subjects.

and

(e) wisdom is an accident.

Indeed, claims like these about the metaphysical status of their subjects are ubiquitous in Aristotle's *Categories*. But it is not clear how they fit into Aristotle's distinctions.⁴ Are they essential like (a) or accidental like (b)? Do the predicate terms used to express them—"individual", "species", "accident"—introduce substances or accidents? How Aristotle understands truths of this kind will be the question of this paper.

In this paper, I give a partial answer to these questions by defending the view that terms like "species" and "individual" do not stand for substances or accidents. In particular, I advocate for an account of terms like "individual" and "species" according to which such terms introduce entities that are not part of Aristotle's ten-fold categorial scheme.

I am not the first to wonder about truths like c-e and terms like "species", "individual", and "accident". Although questions concerning the status of terms like "species" have not received sustained attention in modern scholarship on Aristotle's *Categories*⁶, they do have an ancient pedigree: virtually all of the ancient commentators on Aristotle's *Categories* addressed the issue.⁷ Tracing the history of *Categories* commentary on this point is a worthy undertaking, but it is not the focus of this paper. Rather, my two primary reasons for studying these terms are philosophical and internal to Aristotelian theoretical philosophy.

First, one cannot hope to fully understand the ontology of the *Categories* or its theory of predication—including the substance-accident the essential-accidental distinctions—unless one understands Aristotle's use of terms like "species" and "individual" as well as the truths involving them. What is more, these terms make up part of the core philosophical ideology of Aristotelian theoretical philosophy. Within the *Categories* and beyond, Aristotle's theoretical philosophy is full of crucial premises and key definitions expressed using these terms. To paraphrase the first lines of Porphyry's *Introduction*, one must know what, according to Aristotle, it is to be an individual, a universal, a species, a genus, and an accident in order to understand his theory of predication, his theory of

⁴ Consider just a few examples: in *Cat.* 2 (1a20-1b9) Aristotle distinguishes between *substances* and *accidents* and between *individuals* and *generic* entities, usually called "universals." For discussion see Frede (1987a). The terms of "individual", "universal", "substance", and "universal" each designate a metaphysical status in the sense I intend: they convey an item's place in the overall theory or its logical profile. So too do "species", "genus" (see, for example, *Cat.* 5.2b15-22), and "contrary" (see).

⁶ At least in the context of *Categories* scholarship, this is accurate. Ackrill's claim that Aristotle "does not explain the special role of words like 'species', 'predicate', &c., nor warn us against treating them, like 'animal' or 'generosity', as signifying items in categories" is more than most scholars say on the issue (Ackrill, 1963, 81). Frede (1987b, 33) makes a similarly passing remark about terms like "genus" and "accident" in a closely related context.

⁷ See Porphyry in *Cat.* 80.32-81.22; Ammonius, in *Cat.* 30.25-31.12; Simplicius in *Cat.* 52.9-18; Dexippus 26.12-27.2; and Olympiodorus 50.15-21. These ancient commentators appear to have been responding to a well-known objection to Aristotle's claim that *said-of* predication is transitive: according to this objection *human is a species* and *Socrates is a human*, so it should follow that *Socrates is a species*. The standard response they offered was that the fact that *human is a species* is accidental.

science, his logical or just about any part of Aristotle's theoretical philosophy (Porphyry, *Isagoge*, 1.1.3-15).

Second, in giving an account of these terms and the truths involving them we face a dilemma internal to the text of the *Categories*. Given the use Aristotle makes of terms like "individual" and "species" and given his correspondence theory of truth, it appears that Aristotle is committed to the existence of *individuality*, *species-hood* and the like. That is, it seems that he must accept that

(1) individuality, species-hood, and the like exist.

But this claim looks to be in tension with the doctrine of the *Categories*: were *individuality*, *species-hood* and the like to exist, they would not fit into the ontology of Aristotle's ten-fold categorial scheme. For one thing, they appear to apply too broadly: there are species and individuals in all ten of the categories. For another, they do not apply to substances in the right way: "individual" does not apply to secondary substances and "species" does not apply to primary substance. Thus, the doctrine of the *Categories* itself appears to commit Aristotle to the claim that

(2) individuality, species-hood, and the like do not exist.

There is much more to be said about each horn of this dilemma, and saying some of it will be the first task of this paper. The sections 2 and 3 below lay out in detail the case for the two horns of our dilemma. In section 4, I defend a resolution to our dilemma according to which individuality, species-hood, and the like do exist after all. My account of our problematic terms, if correct, has at least one notable upshot: that in the ontology of the *Categories* there are beings—existing things—outside the categories.

2.

I want to start by discussing an objection. Some readers of Aristotle will likely think that there is really no mystery here: the very idea that Aristotle accepts the existence of *species-hood*, *individuality* or the like is a non-starter. Instead, the terms "species" and "individual" are homonymous. Roughly, this means that these terms introduce different entities in different contexts and, therefore, they never correspond to *species-hood* as such or *individuality* as such.

On this way of thinking, the problem with accepting the existence of entities like *species-hood* and *individuality* is that if they were to exist, they would be trans-categorial—that is, they are *predicated* of subjects in several or all of the categories.⁸ This is a problem because it is widely agreed that Aristotle holds that

⁸ Note that, in my usage, being trans-categorial is not the same as belonging to several categories nor does it entail belonging to several categories.

(3) there are no *trans-categorical* entities.⁹

On this way of seeing things, the problem with *species-hood* and *individuality* is that, were they to exist, they would apply too broadly. According to Aristotle, red is a species, father is a species, and human is a species. But red, father, and human are members of different categories: red is a quality, father is a relative, and human is a substance. Thus, if *species-hood* as such is a genuine being—a real feature of things—then it would be trans-categorical. The same is true of *individuality*: there are individuals of each category, so were *individuality* as such to exist then it would be trans-categorical.

According to the present objection, we simply need to apply the notion of homonymy and the apparent puzzle is resolved. How does this work? According to Aristotle in *Categories* 1, homonymy arises when a single term, or “name”, applies to two items but “the account of the being corresponding to the name is different” (1.1a1-6). He illustrates this by claiming that the term “*zdo'on*” applies to the kind, human, and to the kind, painting but that the account that explains human’s being *zdo'on* is different from the account that explain painting’s being *zdo'on*. What Aristotle appears to have in mind is that “*zdo'on*” can refer to the kind, animal, or to the kind, image. Thus, “*zdo'on*” applies to human because human is a species of animal, and “*zdo'on*” applies to painting because painting is a species of image. Therefore, human’s being “*zdo'on*” and painting’s being “*zdo'on*” have different accounts. In general, then, if a single expression, *t*, corresponds to one predicate¹⁰ when it applies (truly) to *x* and another predicate when it applies (truly) to *y*, then *t* applies homonymously to *x* and *y*.

With this in mind we can see how homonymy might resolve the problem of *trans-categoriality*. Suppose, for example, that the term “species” is homonymous: for some subjects to which it truly applies “species” stands for one predicate and for others it

⁹ The ban on trans-categorical beings follows from a standard understanding of predication in the *Categories*. This standard view endorses the following four claims.

- (A) every predication is an instance of “said-of” predication or “*present-in*” predication.
- (B) The subject and predicate of *said-of* predications are members of the same category.
- (C) The subject of every *present-in* predication is a substance.
- (D) No being is a member of more than one category.

From these four claims it follows that there is no *x* that is predicated of items in more than two categories—*x*’s own and the category of substance. Thus, there are no entities that are predicated of items in several (more than two) or all of the categories. The standard view composed of these four claims has been advanced together as a package by Furth (1988), Ferejohn (1981), and Lewis (1991, 73-76). Often scholars endorse one or two of these claims while remaining silent about the other(s). So, for instance, claim A is endorsed by Code (1985 & 1986), Frede (1987a), Mann (2000), and Perin (2007, 134). Claim B is endorsed by Wedin (2000, 23-26) and Ackrill (commentary, 85-6; see also 75). Claim (C) is endorsed by Perin (2007, 133-5) and (see Kohl 2008 n. 22) and it is a corollary of the accounts of substance-hood present in Frede (1987, 59), Lewis (1991, 64), Furth (1988, 28-9), Perin (2007, 133) and Kohl (2008, 164). C is also strongly suggested by Ackrill (commentary, 75-6)—see Wedin (2000, 39). As far as I know, claim D is uncontroversial. There are also those who accept claim 3 on the basis of texts outside of the *Categories*. For this view in general see Kung (1986). Some take Aristotle to be making this claim at *EN* I.6 1096a23-9: see Shields (1998, 198-208 & Shields “Fractured Goodness” 2015, 96-97), but contrast Macdonald (1989, 156), Ackrill (1997, 201-211), and Kosman (1968).

¹⁰ For this use of “predicate” see note 2 above.

stands for a different predicate. In particular, suppose that when “species” truly applies to a substance, like human, it introduces one predicate—call this “substantial species-hood”—and when it applies truly to a quality, like red, it introduces a different predicate—call this “qualitative species-hood”. In general, we might suppose that when “species” applies truly to an item in category C, “species” corresponds to an predicate that applies only to items in category C—*species-hood_c*. On this view, the term “species” applies across categories and it always corresponds to some item or other, but there is no single item, *species-hood* as such, that is predicated across categories. Along the same lines, an analogous story is told story about “individual” and all other similar terms: the terms apply across categories, but they do not correspond to *trans-categorical* predicates.

This homonymy-based account of terms like “species” and “individual” and similar terms has the major advantage of using a notion—homonymy—that Aristotle explicitly theorizes in the *Categories* to resolve the very serious problem of *trans-categoriality*. One might press proponents of this account on this or that aspect of their account, but for present purposes I will grant that homonymy can resolve the problem of *trans-categoriality* as described above. I want to insist, however, that homonymy does not resolve our dilemma: even granting that “species”, “individual” and the like are homonymous in the way described, these terms remain highly problematic. My response to the objection there is no real problem concerning terms like “species” and “individual” once we appropriately apply the notion of homonymy is that, even if we grand that these terms are homonymous, there remains a serious puzzle concerning Aristotle’s use of them.

2.2

The core of the problem is this: Aristotle holds that all non-substances are predicated of at least one primary substance and at least one secondary substance. But “individual” does not apply to what Aristotle calls secondary substances and “species” does not apply to what Aristotle calls primary substances.

According to Aristotle in the *Categories*, there are ten classes or “categories” of beings. One of these is the class of substances, which includes particular objects—like you and I and Nala the Sheepdog--as well as their *species* and *genera*—generic objects like the kind, human, and the kind, animal. Aristotle calls the individuals in the category of substance “primary substances”; the generic substances he calls “secondary substances”. Besides the substances there are nine categories of accidents--the qualities, quantities, relatives, locations, times, and so on.¹¹ The substances and the accidents are not on a metaphysical par: according to Aristotle, substances are ontologically prior to everything else. What is more, the substances themselves are not on a par: primary substances are ontologically prior to everything else, including secondary substances.¹²

¹¹ In each of these nine accidental categories, there are both generic items and individual items. The nature of individual accidents has received a great deal of attention, but it should not detain us here. Citations.

¹² Add citations discussing ontological priority in this passage.

Aristotle's argument for the ontological primacy of primary substances runs via the claim that everything else is *said-of* or *present-in* primary substances. Indeed, he makes this claim twice in the course of his argument:

[T1] The all the others are either said-of primary substances as a subject or are present-in them as a subject. ... For all the other are either said-of them as a subject or are present-in them as a subject. (2b6-8)¹³

Everything else is *said-of* or *present-in* at least one primary substance. More formally: for all x such that x is not a primary substance there is some y , such that y is a primary substance and x is *said-of* y or x is *present-in* y . Since the technical *said-of* and *present-in* relations are predication entailing—that is, if x is *said-of* y then x is *predicated of* y and if x is *present-in* y then x is *predicated of* y ¹⁴—therefore, it follows from T1 that everything that is not itself a primary substance is predicated of at least one primary substance.¹⁵ Call this “**Fact One**.”¹⁶

Fact One appears to entail that *species-hood* does not exist. First, *species-hood* cannot be a primary substance: primary substances are not predicated of anything at all, but, were it to exist, *species-hood* would be predicated of human, red, and the other species. So, **Fact One** appears to entail that if *species-hood* exists, then it must be predicated of some primary substance. But none of the individual (or “primary”) substances are species—species in the category of substance are secondary substances. Therefore, *species-hood* cannot exist. Put another way, *species-hood* is not a primary substance itself nor is it an essential or accidental feature of any primary substance, but, by **Fact One**, all entities besides primary substances are essential or accidental features of some primary substance or other.¹⁷ Therefore, *species-hood* cannot exist.

So far I've spoken as if “species” is not homonymous, but, crucially, this argument runs equally well if we grant that “species” is homonymous. If “species” is homonymous in the relevant way, then there is no such thing as *species-hood* as such, but there is *substantial species-hood*, which applies to the species in the category of substance, and *qualitative species-hood*, which applies to the species in the category of quality. Since no primary substance is a species of any kind, it follows that no primary substance is a species in the category of substance and no primary substance is a species in the category of quality. Therefore, *substantial species-hood* and *qualitative species-hood* are not predicated of any primary substance. But, equally, they are not themselves primary substances because they are predicates and primary substances are not predicates. Therefore, it also follows from **Fact One** that *substantial species-hood* and *qualitative species hood* cannot exist. Granting the homonymy-based account of “species” does nothing to resolve or even

¹³ τὰ δ' ἄλλα πάντα ἤτοι καθ' ὑποκειμένων λέγεται τῶν πρώτων οὐσιῶν ἢ ἐν ὑποκειμέναις αὐταῖς ἐστίν. ... πάντα γὰρ τὰ ἄλλα ἤτοι καθ' ὑποκειμένων τούτων λέγεται ἢ ἐν ὑποκειμέναις αὐταῖς ἐστίν.

¹⁴ As I noted above, these relations are typically understood as essential predication and accidental predication (see n. 1 above). Even the minority of scholars who deny this, would accept that they are *predication entailing*; see Crivell (2017).

¹⁵ More formally: for all x such that x is not a primary substance there is some y , such that y is a primary substance and x is predicated of y .

¹⁶ Aristotle also makes this point at *Cat.* 5.2b15-22.

¹⁷ For x to be predicated of y , x must be a feature of y 's in some sense.

mitigate this problem.

What about “individuality”? Primary substance are not species, but they are individuals, so *individuality* does not run afoul of **Fact One**. But it does run afoul of what I will call “**Fact Two**”, which is asserted in the following passage. Aristotle argues for the ontological primacy of secondary substance over the accidents as follows:

[T2] And as the primary substance relate to all the others, so do the species and genera of the primary substance relate to all the rest. For all the rest are predicated of them. (*Cat.* 5.3a1-6)¹⁸

Here Aristotle says that the other items, by which he must mean all the non-substance items, stand to secondary substances (i.e. the species and genera of the category of substances) as all things stand to primary substances: each non-substance is predicated of some secondary substance. Let’s call the fact that all non-substances are predicated of some secondary substance “**Fact Two**.”

Fact Two appears to show that *individuality* does not exist. No secondary substance is an individual—the secondary substances are the species and genera in the category of substance, and Aristotle thinks that species and genera are not individuals. Since *individuality* is also not a substance,¹⁹ it would appear to follow that *individuality* does not exist at all. The same argument applies, *mutatis mutandis*, if we accept that “individual” is homonymous and introduces a different predicate for each category—e.g. *substantial individuality* for the substances, *qualitative individuality* for the qualities, and so on. *Substantial individuality* and *qualitative individuality* cannot be substances²⁰, but they are not predicated of any secondary substance—since secondary substances are not individuals. Therefore, by **Fact Two**, *substantial individuality* and *qualitative individuality* cannot exist.

Fact One and **Fact Two** together show that even if we adopt the homonymy-based approach, we are not out of the woods. The homonymy-based account of terms like “species” and “individual” posits the existence of entities that appear to be inconsistent with **Fact One** and **Fact Two**. While we should take the problem of trans-categoriality seriously, there is a still harder problem: Aristotle’s use of terms like “species” and “individual” appear to introduce features that do not related in the right way to substances. For convenience, let’s call item x “independent” when (i) x is not a substance and (ii) either x is not predicated of any primary substance or x is not predicated of any

¹⁸ ὡς δέ γε αἱ πρώται οὐσίαι πρὸς τὰ ἄλλα πάντα ἔχουσιν, οὕτω τὰ εἶδη καὶ τὰ γένη τῶν πρώτων οὐσιῶν πρὸς τὰ λοιπὰ πάντα ἔχει· κατὰ τούτων γὰρ πάντα τὰ λοιπὰ κατηγορεῖται. (*Cat.* 5.3a1-6)

¹⁹ There are several reasons that *individuality* cannot be a substance. First, if it were a substance, it could not be predicated of any accident, yet it is. Second, if it were a substance it would be an individual itself, an *infama* species, or a genus. It cannot be an individual because it is predicated of other things and individual substances are not predicated of anything; it cannot be a genus because then it would be predicated of the species that fall under it and those species would have to be individuals, which is, of course, impossible. And it cannot be a species, because then all individual substances would share a species—which they certainly do not.

²⁰ See the previous note. For *substantial individuality* see the second reason there.

secondary substance. The hard problem is that Fact One and Fact Two appear to show that Aristotle appears to hold that

(2*) there are no independent entities,

but terms like “species” and “individual” appear to introduce independent entities.

With this understanding of the problem in hand, we can identify several other problematic terms, which Aristotle relies on in the *Categories*. “Genus” and “differentia” are two clear examples: Aristotle uses these terms throughout the text but no primary substance is a genus or a differentia. “Contrary” is similarly problematic: according to Aristotle, none of the substances are contraries, but he uses the term regularly in the *Categories*. Since no primary substance is a universal and no substance at all is an accident, it would appear that the concepts *universal* and *accident* face our problem of independence. Finally, the crucial terms “primary substance” and “secondary substance” are themselves problematic: no secondary substance is a primary substance and no primary substance is a secondary substance. So, if there is a feature of *being a primary substance*, then it is independent; and if there is a feature of *being a secondary substance*, then it is independent. This final point shows that the problems of *trans-categoriality* and *independence* are distinct problems: they do not apply to the same range of terms. There is no problem of trans-categoriality facing the term “primary substance” and “secondary substance” since these terms apply only to items in the category of substance. But, as we have just seen, these terms do raise the problem of independence.

3.

But maybe there is nothing to worry about here after all. Why not think that Aristotle is simply an anti-realist about *individuality*, *species-hood*, *universality*, *contrariety*, and the others? Why think that individuality, species-hood, and the like exist?

In this section, I motivate

(1) Individuality, species-hood, and the like exist, and
 (1*) there are independent entities.

3.1

To warm you up to 1 and 1* a bit, I will begin outside of the *Categories*, where there is good reason to think that Aristotle accepts the existence of items like *species-hood* and *contrariety*. For example, in *Metaphysics* Γ.2 Aristotle argues that metaphysics, the science of being, studies the *per se* properties (καθ' αὐτά πάθη) of unity and being (see Γ.2.1004b4-8), and that the scientific study of these properties involves knowledge of their essences (τὸ τί ἐστὶ) (Γ.2. 1003b33-36). These properties include the different (τό ἕτερον/ἕτερότης) and contrariety (ἢ ἐναντιότης), though as we learn elsewhere, were contrariety to exist it would be *independent*: substances are not themselves contraries. Later, when Aristotle summarizes the results of his discussion he adds that “priority, posteriority, genus, species, whole and part, and others like these” are studied by the science of being because they are among the “things that belong” (τῶν ὑπαρχόντων) to being qua being (Γ.2.1005a13-18). As we have seen, if *genus-hood* and *species-hood* exist,

then they are independent: they are not themselves substances and they are not predicated of primary substance.²¹ These are, therefore, strong candidates for counting as genuine cases of independent beings because they (i) have essences, (ii) are *per se* properties, (iii) are studied by a science. What is more, in Γ.3 (), Aristotle gives a demonstration of the theorem that the Principle of Non-Contradiction is the most knowable of principles, and this demonstration makes ineliminable use of the terms “contrary” and “contradictory”.²² I will not defend this point in detail in this paper, but it is at least highly plausible that

if x has an essence, then x is a being,
 if x is a property (*pathe*), then x is a being,
 if x is a feature studied by a science, then x is a being, and
 if t is a term in a demonstration, then t corresponds to a being.²³

If this is so, then in *Metaphysics* Γ Aristotle is committed to claim 6, and, by implication, claim 6%. What really matters for present purposes, however, is whether Aristotle endorses 6 and 6% *within* the *Categories*. In the rest of this section, I turn to that question.

3.2

As a first indication from within the *Categories* that Aristotle is a realist about terms like “species” and “individual” comes from philosophical work that Aristotle expects these terms to do for him. Consider, for example, just two passages in which Aristotle uses “species” and “genus”:

[T3] The species in which the things primarily called substances belong—these and the genera of these species—are called “secondary substances”. For instance, the particular human belongs in the species, human (ἐν εἴδει ὑπάρχει), and animal is the genus of this species. (*Cat.* 5.2a16-19)²⁸

In T3, Aristotle appears to define secondary substance in terms of the notions of species and genus: the secondary substances are the species and genera to which the primary substances belong. According to Aristotle, the species of individual substances and the genera of those species, have a claim, albeit a secondary claim, to the title of “substance”. He goes on to argue that each species in the category of substance is “more a substance” than the genus to which it belongs.

[T4] Again, the primary substances because they underly all the others and all the others are predicated of them or are present-in them—for this reason they are called substances most of all. And as the primary substances relate to the others, also the species relates to the genus. For the species underlies the genus. For the

²¹ The notions of whole and part is ambiguous. If Aristotle has in mind only material parts it might be the case that whole and parts are all substances. But he may well have in mind conceptual or formal parts, in which case there are whole and parts in every category.

²² See Code (1986b) and Barnes (2012).

²³ See *Post. An.* A.11 77a5ff and Barnes (1994) discussion *ad loc.*

²⁸ δεύτεραι δὲ οὐσίαι λέγονται, ἐν οἷς εἶδουσιν αἱ πρῶτως οὐσίαι λεγόμεναι ὑπάρχουσιν, ταῦτά τε καὶ τὰ τῶν εἰδῶν τούτων γένη· οἷον ὁ τις ἄνθρωπος ἐν εἴδει μὲν ὑπάρχει τῷ ἀνθρώπῳ, γένος δὲ τοῦ εἶδους ἐστὶ τὸ ζῶον. (*Cat.* 5.2a16-19)

genera are predicted of the species, but the species do not reciprocate with respect to the genera. And, therefore, for these reasons (ἐκ τούτων) the species is more substance than the genus. (*Cat.* 5.2b15-21)²⁹

It is difficult to say precisely what Aristotle has in mind when he uses the phrase “more a substance” (μᾶλλον οὐσία). Clearly, beings that are “more substance” than others are metaphysically superior in some sense and they deserve the title “substance” to a higher degree, but “more substance” does not simply *mean* “deserves to be called substance” or “is metaphysically superior”. For present purposes, however, what matters is the argument that Aristotle gives for this conclusion. The core of the argument are two claims. (a) Primary substances are most of all substances because they underly all other things in the sense that all other things are predicated of them. (b) Each species underlies its genus, in the relevant sense, but the genus does not underly the species. From this it follows that each species in the category of substance stands to its genus as primary substances stand to everything else; and, therefore, that each species in the category of substance is “more a substance” than its species.

These passages make clear that Aristotle is prepared to rely on the terms “species” and “genus” in introducing the core concepts—e.g. secondary substance—of his theory. He also relies on the truth of general metaphysical principles about species and genera—e.g. if S is a species and G is its genus, then S underlies G—in making arguments for central results of his theory. Clearly, then, Aristotle thinks that the terms “species” and “genus” track substantive and informative similarities between entities: to borrow Platonic language, these terms carve nature at the joints. This makes it attractive to think that these terms get at metaphysically important underlying features.³⁰ The species all share the feature of being a species, or *species-hood*; the genera share the feature of being a genus, or *genus-hood*.

What is more, the argument in T4 appears to be meant to *explain* why species in the category of substance are “more substance” than their genera. The substance-hood of primary substance is *explained* by its status as an subject of predication. By showing that species are subjects of predication for their genera, it appears that Aristotle is *explaining* why species in the category of substance are “more substance” than their genera. But Aristotle, at least in some places, thinks that *explanatory* terms correspond to genuine entities.³¹ Thus, if in T4 Aristotle thinks that the fact that human is a species and animal

²⁹ ἔτι αἱ πρῶται οὐσίαι διὰ τὸ τοῖς ἄλλοις ἄπασιν ὑποκεῖσθαι καὶ πάντα τὰ ἄλλα κατὰ τούτων κατηγορεῖσθαι ἢ ἐν ταύταις εἶναι διὰ τοῦτο μάλιστα οὐσίαι λέγονται· ὡς δέ γε αἱ πρῶται οὐσίαι πρὸς τὰ ἄλλα ἔχουσιν, οὕτω καὶ τὸ εἶδος πρὸς τὸ γένος ἔχει· – ὑπόκειται γὰρ τὸ εἶδος τῷ γένει· τὰ μὲν γὰρ γένη κατὰ τῶν εἰδῶν κατηγορεῖται, τὰ δὲ εἶδη κατὰ τῶν γενῶν οὐκ ἀντιστρέφει· ὥστε καὶ ἐκ τούτων τὸ εἶδος τοῦ γένους μᾶλλον οὐσία. (*Cat.* 5.2b19-22)

³⁰ T3 and T4 make up part of the account of substance that Aristotle develops in *Categories* 5. According to this account, substance-hood is associated with being an ultimate subject for predication. Since, all species underly their genera in the sense that the genus is predicated of its species but the species are not predicated of their genus, it follows that the species in the category of substance have a better claim to the status of substance than do genera of the same category. Still, both species and genera of the category of substance underly the accidents, so the species and genera of primary substances do have a claim, albeit a secondary one, to being substances. For this reason, Aristotle calls them “secondary substances”.

³¹ For example, in *Posterior Analytics* (A.11 77a5-9), Aristotle tells us that demonstrations—or explanatory deductions—do not require Platonic forms or separate universals. However, demonstrations and explanatory middle terms, do require that universals exist—that is, there must be “something—one

is its genus explains the fact that human is more substance than animal, then there is some reason to think that “species” must introduce an entity.

One might resist this line of thinking by arguing that in the *Categories* Aristotle is not presenting a theory, arguing for conclusions, or trying to give explanations. Broadly, on this reading of the *Categories*, Aristotle does not, in this text, engaged in the science of being or metaphysics at all.³² Rather, on this reading the *Categories* is a guidebook for dialectic: it sets out some of the basic rules and presuppositions for the practice of dialectic. If this is so, then we will want to know whether any of these guidelines rule on when a term—like “species” and “individual”—should be thought to correspond to an entity—like *species-hood* and *individuality*.

3.3

As I mentioned above, Aristotle’s theory of truth provides the most powerful evidence for thinking that Aristotle should, for instance, accept individuality and species-hood as beings. The argument runs roughly like this: Aristotle appears to hold that

(**TRUTH**) a simple, affirmative, predicative sentence is true just in case the being revealed by the subject term and the being revealed by the predicate term combine.

This principle entails that for every true simple, affirmative, predicative sentence, there is an entity corresponding to the predicate-term.

Aristotle also accepts the truth of the following simple, affirmative, predicative sentences

- (a) “human is a species”
- (b) “animal is a genus”
- (c) “Socrates is an individual” and
- (d) “ignorance is a contrary.”

Therefore, he must accept that “species”, “genus”, “individual” and “contrary” each correspond to beings. Therefore, that *species-hood*, *genus-hood*, *individuality*, and *contrariety* exist. The same sort of argument applies to other problematic terms like “accident”, “universal” and “secondary substance”; so, *accident-hood*, *universality*, and *the feature of being a secondary substance* exist as well. Spelling out this argument and defending its premises is the focus of the remainder of this section.

3.3.1

The first point I want to make in favor of the argument sketched above is that Aristotle

identical item—which holds of several cases non-homonymously” (“τι ἐν καὶ τὸ αὐτὸ ἐπὶ πλείονων εἶναι μὴ ὁμώνυμον”; 77a9, Barnes trans.). The suggestion seems to be that middle terms in *explanatory deductions* introduce universals, entities that can apply to several subjects.

³² This position is forcefully defended in Menn (1995).

accepts the (literal) truth of simple, affirmative, predicative claims involving our problematic terms. In T4, we saw that Aristotle argue that species are more substance than their genera by appealing to the claim that species underlie their genera. He illustrated this thought by pointing out that human is a species and that animal is a genus. This passage clearly indicates that Aristotle would accept the truth of the sentences “animal is a genus”, “human is a species” and “a species underlies its genus”. In *Cat.* 2 Aristotle justifies the claim that there can be individuals that are *present-in* a subject by asserting that “the particular literacy is among the items present in a subject” (*Cat.* 2.1b6-9). This argument is nonsense if one does not take Aristotle to accept the truth of “the particular literacy is an individual”.

As I noted above, some have taken the *Categories* to be a preparatory work aimed at presenting guidelines for dialectic rather than a work of metaphysics, in which Aristotle attempts to give explanations and arguments for his views. But this is no reason to think that Aristotle is not fully committed to the literal truth of the claims that he makes in the *Categories*. He does not hedge or preface his remarks with some indication that he does not mean his claims literally or assert them earnestly. While Aristotle may not be presenting a full theory in the *Categories*, he is making claims that he takes to be true, including those that involve our problematic predicates.

3.3.2

What is to be said in favor of attributing to Aristotle a correspondence theory of truth? In particular, what reason do we have for attributing to Aristotle a theory according to which a simple, affirmative predicative sentence is true *only if* its subject term corresponds to being and its predicate term corresponds to a being.

There is strong evidence from the text of the *Categories* itself that Aristotle thinks that linguistic truths are explained by underlying matters of fact. As he writes in *Categories* 12, 14b15-22:

[T5] For the existence of a human reciprocates according to the implication of being with respect to the truth about this sentence. For if a human exists, then the truth of the senses by which we say that a human exists is true, and indeed it reciprocates—for if the sentences by which we say that a human exists is true, then a human exists. But the true sentence is in no way the explanation of the existence of the object (τὸ πρᾶγμα), but the object appears somehow to be the explanation of the sentence being true. For because of the being of the object (τὸ πρᾶγμα) the sentence is either said to be true or to be false.³⁶

³⁶ τὸ γὰρ εἶναι ἄνθρωπον ἀντιστρέφει κατὰ τὴν τοῦ εἶναι ἀκολουθησιν πρὸς τὸν ἀληθῆ περὶ αὐτοῦ λόγον· εἰ γὰρ ἔστιν ἄνθρωπος, ἀληθὴς ὁ λόγος ᾧ λέγομεν ὅτι ἔστιν ἄνθρωπος· καὶ ἀντιστρέφει γε, – εἰ γὰρ ἀληθὴς ὁ λόγος ᾧ λέγομεν ὅτι ἔστιν ἄνθρωπος, ἔστιν ἄνθρωπος· – ἔστι δὲ ὁ μὲν ἀληθὴς λόγος οὐδαμῶς αἴτιος τοῦ εἶναι τὸ πρᾶγμα, τὸ μέντοι πρᾶγμα φαίνεται πως αἴτιον τοῦ εἶναι ἀληθῆ τὸν λόγον· τῷ γὰρ εἶναι τὸ πρᾶγμα ἢ μὴ ἀληθὴς ὁ λόγος ἢ ψευδὴς λέγεται.

Aristotle thinks that “a human exists” is true *because* a human exists. It is very unlikely that Aristotle thinks that this is a special feature of sentences about existence—that is, it is very unlikely that he thinks that the truth (or falsity) of sentences of the form “ x exists” are grounded in the fact that x exists (or does not), but that sentences of other sorts are not true (or false) in virtue of the underlying reality. It is much more likely that Aristotle thinks that all true sentences are true because they appropriately correspond to reality and all false sentences are false because they do not.

Indeed, in the *Categories*, Aristotle has the ingredients for an explanatory account of the truth of simple predicative sentences. Much of the first five chapters of the *Categories* is concerned with how to understand the truth of sentences like these:

- (a) “Socrates is human”,
- (b) “literacy is (a) knowledge”, and
- (c) “Socrates is literate”.

It is uncontroversial that each of these would, according to Aristotle in the *Categories*, express a *predication* in which a predicate-term, (“human” “knowledge” “literate”) applies truly to an object (the substance, Socrates; the quality, literacy). What is more, Aristotle would say that in each case there is an underlying relation between two objects. Sometimes Aristotle uses the language of “predication” to speak generically about the relationship between the two objects that makes a simple predicative sentence true.³⁷ In such moods he would say that the object “revealed” by (or corresponding to) the predicate-term is *predicated of* the object revealed by (or corresponding to) the subject-term). Thus, Aristotle has the ingredients for a correspondence account of the truth of the simple predicative sentences like a-c: such a sentence is true just in case the item revealed by the predicate-term is predicated of the object revealed by the subject-term.

Given all this, it is not surprising that it has become commonplace among interpreters of the *Categories* to hold that, in the *Categories*, Aristotle has in mind a theory according to which a simple predicate-term “P” applies truly to an object, x , just in case (and because) the being corresponding to P combines in the right way with with the object, x , to³⁸ form the relevant situation or “combination”. Sometimes (see Code, 1986) commentators express this thought, as I have done here, in terms of applying or predicating a term of an object. Sometimes (see Furth, 1988; and Ferejohn, 1981) this view is expressed in terms of the truth conditions for simple, affirmative, predicative sentences. The core of the idea is the same: it is widely thought that a central goal of the *Categories* is to offer an account, or the outlines of an account, of the relationships between worldly things that underwrite and explain the truth of these simple applications of predicate-terms to subject-terms.

³⁷ For example, at *Cat.* 5.2a19-34 and 5.2b37-3a6.

³⁸ There are privative simple terms—like “dead” or “blind”—referring to privations (see *Cat.* 10 xxxx). I do not mean to claim that this extends to *negated* terms, like “not alive” or “not sighted”.

In either formation, this standard understanding of Aristotle's theory entails the principle that concerns us here. That is, it follows from the view described above that

If "P" applies truly to some x, then "P" corresponds to some being.

This (partial) theory of truth is corroborated by and expanded upon in *Metaphysics* Θ.10:

[T6] Since being and not being are spoken of in one way according to schemes of the categories; in another way according to their potentiality or actuality or the opposites [viz. the opposites of capacity and actuality]; and in another, controlling, way [according to] truth and falsity. And this [viz. truth and falsity] exists in virtue of³⁹ combination or separation [τῶ συγκεῖσθαι ἢ διηρηθῆσθαι] concerning the worldly items [ἐπὶ τῶν πραγμάτων]; it follows that one is correct [viz. thinks truly] who thinks what is separated to be separated and the combined thing to be combined, while one errs who thinks the opposite of how the worldly items fare. (1051a34-b5, using Jaeger's OCT text)⁴⁰

It is the third way of *being*—i.e. being true or false—that interests Aristotle in this chapter. Just as we saw in *Categories* 12, Aristotle thinks that truth and falsity obtain in virtue of an underlying worldly situation. Here Aristotle adds that, in particular, these worldly situations are *combinations* or *separations*. One thinks truly when believes things to be combined (or separated), which are indeed combined (or separated). What does this mean? Aristotle's example later a few lines down illustrates the point: "if you are pale, this is not because we think truly that you are pale; but we are correct when we say this because you are pale" (1051b6-9).⁴¹ The illustration suggests that the combination is, in this case, between you and pallor and that you combine with pallor just in case you are pale. When we believe you and pallor to combine—i.e. we believe that you are pale—then we are correct just in case you and pallor do indeed combine.⁴²

On this reading, it is worldly items which combine (or separate) and thereby underwrite the truth or falsity of corresponding thoughts and statements. Now, it is true that elsewhere Aristotle talks about expressions and their mental counterparts combining to form truth-evaluable statements and thoughts (De. Int. xx, *Metaphysics* E.4 ?). But here

³⁹ Reading "τῶ" with Ross and Jaeger.

⁴⁰ Ἐπει δὲ τὸ ὄν λέγεται καὶ τὸ μὴ ὄν τὸ μὲν κατὰ τὰ σχήματα τῶν κατηγοριῶν, τὸ δὲ κατὰ δύναμιν ἢ ἐνέργειαν τούτων ἢ τάναντία, τὸ δὲ [κυριώτατα ὄν] ἀληθὲς ἢ ψεῦδος, τοῦτο δ' ἐπὶ τῶν πραγμάτων ἐστὶ τῶ συγκεῖσθαι ἢ διηρηθῆσθαι, ὥστε ἀληθεύει μὲν ὁ τὸ διηρημένον οἰόμενος διηρηθῆσθαι καὶ τὸ συγκεῖσθαι, ἔψευσται δὲ ὁ ἐναντίως ἔχων ἢ τὰ πράγματα. (1051a34-b5, using Jaeger's OCT text).

⁴¹ οὐ γὰρ διὰ τὸ ἡμᾶς οἶεσθαι ἀληθῶς σε λευκὸν εἶναι εἰ σὺ λευκός, ἀλλὰ διὰ τὸ σε εἶναι λευκὸν ἡμεῖς οἱ φάντες τοῦτο ἀληθεύομεν.

⁴² This reading harmonizes with Aristotle's comments in the *Categories* about truth and combination at *Cat.* 4. 2a4-10: each member of the categories "is said itself by itself in no affirmation, but by combination with each other an affirmation comes to be; for all assertion seems to be either true or false, but of the things said according to no combination, none is either true or false, for instance human, white, runs, wins".

Aristotle clearly has in mind the worldly combination (and separation) of things that explain the truth of statements and thoughts, which may themselves be formed by linguistic or mental combination (or separation). We might put his point as follows: the linguistic or mental combinations and separations—which form thoughts and statements—are background conditions for the truth and falsity of thoughts and statements, but it is the worldly combination (or separation) between entities that explain their truth and falsity.

If this reading is correct, then Aristotle is saying that,

the thought that *A is B* is true iff *A* combines with *B*,
where combination is a worldly relation between entities (*pragmata*).

Aristotle does not say much about worldly combination, and, in particular, he does not tell us whether the relata of worldly combination must exist. But it is quite hard to see how *pragma* could combine without existing.⁴³ So, it is fair to assume that according to the theory put forward in $\theta.10$ (for simple affirmative thoughts and statements of the form *A is B*), if the thought that *A is B* is true, then *A* and *B* exist.

This means that there is evidence both within and from outside of the *Categories* for the thesis that if the thought *A is B* or the statement “*A is B*” are true, then the item corresponding to *B* exists. Since Aristotle accepts that “Socrates is an individual” is true, his theory of truth commits him to accepting the existence of *individuality*—and the same applies to *species-hood*, *genus-hood*, *universality*, *contrariety* and the other problematic entities we have been considering.

4. Resolution

So far, we have seen reasons for attributing to Aristotle both the claim that

(1) *individuality*, *species-hood*, and the like exist,

and, therefore, by implication, that

(1*) there are independent entities.

We have also seen evidence for attributing to Aristotle claim that

⁴³ One reason to think that Aristotle thinks that combination carries existential import is that $\theta.10$ (and θ as a whole [check this and look at Beere]) build on the theory of combination and truth put forward in Plato’s *Sophist*. This is especially clear from the lines that follow Aristotle’s illustration, where Aristotle refers quite clearly to *Sophist* 251d5-e1 & 252d12-e7 in endorsing the Platonic view that certain things must combine, others cannot combine, and still others can combine or fail to combine. For Plato the relata of combination are forms or kinds, paradigmatic cases of *beings*. If Aristotle is developing rather than co-opting Platonic theoretical apparatus, then we should expect the relata of *combination* to be beings for him as well.

(2*) there are no independent entities,

and, therefore, by implication, that

(2) *individuality, species-hood, and the like* do not exist.

In this section, I lay out a way to resolve these dilemmas. The resolution that I prefer, accepts (1) and (1*). The core of my suggestion is that (2*) is false for entities outside of the categories and that *individuality, species-hood, and the like* are just such entities. On this view, *individuality, universality, and property-hood* exist, but they consist in or are defined in terms of combinations of other items, while items in the categories are simples, in the sense that they are not defined in terms of combination.

4.1 Extra-Categorial Beings

The resolution that I will propose turns on three thoughts. (1) The items we have been discussing, such as opposition and the feature of being a genus, are defined in terms of predication.⁴⁴ (2) The categories are meant to include items that can combine to form predications but are not themselves predications or defined in terms of predication. (3) the ban on independent entities applies only to items *within* the categories. Together these claims entail that the items we have been discussing are non-problematically extra-categorial: they are not meant to be members of any of the categories. In this section, I will first discuss (3) briefly before turning to (2) and then to (1) in more detail.

What basis is there for restricting 2*—the ban on independent entities—to items within the categories? Recall that the ban on *independent* entities derives from the following two passages:

[T1] The all the others (τὰ δ' ἄλλα πάντα) are either said-of primary substances as a subject or are present-in them as a subject. ... For all the other are either said-of them as a subject or are present-in them as a subject. (2b6-8)⁴⁵

[T2] And as the primary substance relate to all the others (τὰ ἄλλα πάντα), so do the species and genera of the primary substance relate to all the rest (τὰ λοιπὰ πάντα). For all the rest are predicated of them. (Cat. 5.3a1-6)⁴⁶

⁴⁴ More formally, we can say that an item *x* is **predication-defined** iff there is a (real) definition of *x* that contains a term referring to predication, said-of. We might want to capture cases in which an item is not itself **predication-defined** but is defined in terms of some item(s) which are themselves **predication-defined** or which are themselves defined in terms of some items which is **predication-defined**, and so on. Thus, let's stipulate recursively that *x* **involves definition** iff *x* is predication defined or *x* is defined in terms of some item, *y*, and *y* **involves predication**. The notion that I am interested in is that of **involving predication**. My suggestion is that our troublesome bunch of items all **involve predication** and that the members of the categories do not **involve predication**.

⁴⁵ τὰ δ' ἄλλα πάντα ἦτοι καθ' ὑποκειμένων λέγεται τῶν πρώτων οὐσιῶν ἢ ἐν ὑποκειμέναις αὐταῖς ἐστίν. ... πάντα γὰρ τὰ ἄλλα ἦτοι καθ' ὑποκειμένων τούτων λέγεται ἢ ἐν ὑποκειμέναις αὐταῖς ἐστίν.

⁴⁶ ὡς δέ γε αἱ πρώται οὐσίαι πρὸς τὰ ἄλλα πάντα ἔχουσιν, οὕτω τὰ εἶδη καὶ τὰ γένη τῶν πρώτων οὐσιῶν πρὸς τὰ λοιπὰ πάντα ἔχει· κατὰ τούτων γὰρ πάντα τὰ λοιπὰ κατηγορεῖται. (Cat. 5.3a1-6)

Above, we took T1 to express the claim that everything that is not a primary substance is *said-of* a primary substance or is *present-in* a primary substance. On this reading, “all the others” (τὰ δ' ἄλλα πάντα) ranges over all entities whatsoever, i.e. all extant beings. But this is not obvious. Aristotle does not clarify the range of quantification for his claim and the context suggests another option. Given that Aristotle has just presented his tenfold scheme of categories (4.1b25-10) and means, in this passage, to distinguish the substances from the members of the other categories, it is natural to read “all the others” to mean “all the other items in the categories.” If this is right, then T1 expresses the claim that each entities in the categories that is not primary substances is predicated of some primary substance.

The same can be said concerning T2 and its use of “all the others” (τὰ ἄλλα πάντα): it is entirely consistent with the text and makes good sense in the context to take “all the others” to range over items in the categories. What is more, Aristotle’s phrase “τὰ λοιπὰ πάντα” means quite literally “the things remaining” and it strongly suggests that he has some list or class in mind from which he has excluded the substances. The salient class, of course, are the members of the ten categories, which are described in Chapter 4 as the items “said on the basis of no combination”⁴⁷ and “said itself-by-itself in no affirmation” (4.1b25 and 4.2a4-5). On this reading, T2 asserts that each entity *that is in a category* and is not a substance is predicated of some secondary substance. If this is so, then there is no ban on independent entities as such, and we should reject

2* there are no independent beings.

Instead, we should attribute to Aristotle the weaker claim that there are no independent beings *within* the categories. In what follows, I argue that *species-hood* and *individuality* and the like avoid this ban: they are not members of any category, they are *extra-categorical* beings.

To make this proposal somewhat more concrete, consider the introduction of the official list of ten categories in *Cat.* 4:

[T7] Each of things said on the basis of no combination (τῶν κατὰ μηδεμίαν συμπλοκὴν λεγομένων) signifies either substance or quantity, or quality, or relative, or location, or time, or being in a position, or having, or doing, or being affected. (*Cat.* 4.1b25-7)⁴⁸

There is substantial controversy about this passage, especially concerning whether the description “things said on the basis of no combination” is meant to refer to a class of simple linguistic expressions or to a class of simple objects. What is clear is that for the purposes of specifying the items classified by his categories Aristotle would count

⁴⁷ Or, perhaps, the items signified by expressions said on the basis of no combination. See below for more discussion.

⁴⁸ Τῶν κατὰ μηδεμίαν συμπλοκὴν λεγομένων ἕκαστον ἤτοι οὐσίαν σημαίνει ἢ ποσὸν ἢ ποιὸν ἢ πρός τι ἢ ποῦ ἢ ποτὲ ἢ κείσθαι ἢ ἔχειν ἢ ποιεῖν ἢ πάσχειν.

predication—as well as the special predicational relations *said-of* and *present-in*—as forms of “combination”. Thus, he would exclude predications—like, Socrates is wise—and the sentences used to express predications—like “Socrates is wise”—from his categories. Such complexes are not members of any category, but consist in combinations of items in his categories or terms for items in the categories.⁴⁹

Predications or sentences expressing predications are Aristotle’s favored examples of things that are said *κατὰ συμπλοκὴν* and, therefore, are not in any of the categories; but this leaves open the possibility that there are further items that Aristotle would exclude from the categories on the basis of being said *κατὰ συμπλοκὴν*. Indeed, linguistically, there is scope for a broad reading of “λέγεται κατὰ συμπλοκὴν” that includes items other than predications and sentences. The adverb “κατὰ” suggests that several sorts of things might count as “λέγεται κατὰ συμπλοκὴν”: this use of “κατὰ” can reasonably be translated “on the basis of”, “according to”, or, in this context, “with”.⁵⁰ In all of these meanings of the adverb, the phrase “κατὰ συμπλοκὴν” would plausibly apply to items that are not themselves predications or sentences. For example, the predicate expression “is predicated of Socrates” is plausibly “said with combination” because it mentions combination; it is plausibly “said according to combination” because it tracks instances of combination; and it is plausibly said “on the basis of combination” because it applies in virtue of some combination. But “is predicated of Socrates” is not itself a predication or a sentence expressing predication.

There is also positive linguistic evidence to think that there are several ways in which something might be “λέγεται κατὰ συμπλοκὴν”. As I noted, Aristotle begins *Cat.* 4 with the phrase “of things said on the basis of **no** combination, each ...” (Τῶν κατὰ **μηδεμίαν** συμπλοκὴν λεγομένων ἕκαστον ...). The word here for “no” is “μηδεμίαν” which means “not any” or “not one”; in this context, its use strongly suggests that there are more than one salient kind of combination.⁵¹ If this is so, then Aristotle excludes items said on the basis of any of these kinds of combinations. Of course, both of these linguistic points

⁴⁹ The thought that the members of the categories and the terms for them are, respectively, *constituents* of predications and sentences expressing predication and not themselves predications or sentences is supported by two comments. A few lines later in *Cat.* 4, Aristotle says that each of the items in the categories “is said itself by itself in no affirmation, but it is by means of combination of these things in relation to each other that affirmation comes about” (ἕκαστον δὲ τῶν εἰρημένων αὐτὸ μὲν καθ’ αὐτὸ ἐν οὐδεμίᾳ καταφάσει λέγεται, τῇ δὲ πρὸς ἄλληλα τούτων συμπλοκῇ κατάφασις γίγνεται). Aristotle appears to be saying that the members of the categories and the terms we use for them are *constituents* rather than products of linguistic and predicational combination, and that at least some of the products of linguistic or predicational combination are sentences and predications, respectively. This also appears to be what Aristotle is getting at when he illustrates the thought that “of things said some are said on the basis of combination and some without combination” with the examples “human runs, human wins” for things said on the basis of combination and “human, ox, runs, wins” for things said without combination. These comments make clear that predications—as well as instances of the *said-of* and *present-in* relations—are not in any of the categories but are composed from items in the categories.

⁵⁰ “With” is not a standard translation of “kata” used by Aristotle in this way, but in this context there is a special case to be made for it: in Chapter 2 Aristotle contrasts “κατὰ συμπλοκὴν” with “ἄνευ συμπλοκῆς”, which means “without combination”.

⁵¹ Discuss further: it indicates that there is more than one salient combination or kind of combination. What is to prevent it from meaning “not a single combination” rather than “not any kind of combination”.

are consistent with the thought that Aristotle may have a more specific relationship in mind when he uses “κατὰ”—he may have in mind a particular way or set of ways of being said *with* or *on the basis of* or *according to* combination—but the language of the passage does not require or even suggest that he only has in mind predications or sentences.

Besides these linguistic considerations, there is also philosophical pressure to accept that several kinds of cases are excluded from the discussion because they “are said on the basis of combination” (λέγεται κατὰ συμπλοκὴν). Ackrill is responding to this pressure when he argues that Aristotle

ought not to intend only indicative sentences (or only sentences) to count as expressions involving combination. For in Chapter 4 he says that every expression without combination signifies an item in some one category; this implies that an expression like 'white man' which introduces two terms from two categories is an expression involving combination (Ackrill, 1963, 73).

Akrill’s challenge is that if we take “things said on the basis of combination” to refer only to sentences then we will be forced to conclude that all non-sentential expressions introduce items in the categories. But, according to Ackrill, “pale human”, “sitting Socrates”, and “not-white” do not introduce items in any of the categories. Ackrill’s point is strengthened by the fact that Aristotle does sometimes recognize composite entities or “accidental unities” like *sitting Socrates* and *musical Koriscus* (*Physics* I.6, 190a19-21; *Metaphysics* Δ.6. 1015b17) as well as negative properties like *not white* (Δ.7. 1017a18-19, Λ.1.1069a22-3).⁵² These items do not seem to fit into any of the categories. The case of “not white” is especially strong: the Δ.7 and Λ.1 passage just cited, Aristotle contrasts *not white* with the items in the categories while explicitly counting it as an entity. Finally, all of the problem cases we have been discussing in this paper provide further reason to read “things said on the basis of combination” broadly.

The cases we have been discussing—like, individuality and the feature of being a genus—are even more pressing than *not white* and *sitting Socrates*. If we can find a place for *sitting Socrates* and *not white*, then we can harmonize the ontology of the *Categories* with that of other Aristotelian works. But, if we can find a place for *individuality* and *the feature of being a genus* in the ontology of the *Categories*, then we can make sense of Aristotle’s discussion of these items in the *Categories* itself. These examples provide strong philosophical pressure for construing the crucial phrase, “of things said on the basis of combination”, broadly in such a way as to include them.

One natural way to construe “λέγεται κατὰ συμπλοκὴν” broadly is to take it to include not only items which are themselves combinations—sentences or predications—but items that are defined in terms of combinations. Suppose that individuality is defined as *the feature of not being said-of any subject*. Then the phrase “the feature of not being *said-of*

⁵² See discussion in Matthews (1982 and 1992); SM Cohen (2008 and 2013).

any subject" refers to individuality, and though this phrase is not itself a combination, it involves a kind of combination—namely, the *said-of* relation. If this is right, then there is a clear sense in which individuality and "individual" are said "on the basis of combination": when individuality applies to Socrates, it applies in virtue of the *predications* about Socrates.⁵³

There remain two crucial questions. First, are the troublesome items that we have been discussing, like *individuality*, defined in terms of predication or some kind of predication? Second, why would Aristotle exclude such items from his categories—that is, what project is Aristotle engaging in if he is not categorizing all beings?

I think that the answer to the first question is yes, the troublesome items are all have definitions that mention predication, *said-of* or *present-in*. To warm you up to this thought, consider the following rough, informal glosses, which are not meant to be proper to accounts or definitions:⁵⁴

- (i) to be an individual is to be not *said-of* anything.
- (ii) to be a universal is to be *said-of* something.⁵⁵
- (iii) to be a species is to be *said-of* some individuals and not *said-of* any universals.
- (iv) to be a differentia is to be *said-of* some individuals and exactly one species.
- (v) to be a genus is to be *said-of* some individuals and several species.
- (vi) to be a primary substance is to be neither *said-of* nor *present-in* any subject.
- (vii) to be a property is to be *present-in* some substance.
- (viii) to be an opposite is to be one of a pair of predicates that have the same range of possible subjects but cannot be predicated of the same subject simultaneously.

Although these are not definitions, I hope that you will find them to be intuitive and explanatory characterizations of the entities in question (under Aristotle's conception of them). If so, then they make clear roughly how one might try to give definitions for these seven troublesome entities in terms of predication or the predicational relations, *said-of* and *present-in*. If it is true that all of the troublesome items we have been discussing and

⁵³ There is also a clear sense in which individuality is said "according to combination": its applications track or accords with combination. It is said "with combination" in the sense that when we predicate individuality of some subject we make a claim what combines with what.

⁵⁴ I have not put these in the form proper to definitions—where the subject is expressed by a name or noun-phrase—in part because doing so makes them harder to read and in part because I want to signal that these are not meant to be definitions.

⁵⁵ The idea that universal is defined in terms of predication is supported by *De Int* 7.17a38-17b1.

none of the items in the *Categories* are defined in terms of predication, then these items turn out not to be an entirely heterogeneous bunch: there is something significant and philosophically illuminating that they share. My proposal will be that the feature of being defined in terms of predication or predicational ties explains why Aristotle does not include these items in any category.

In what follows, I will take it for granted that categorial items—entities in the categories like human, Socrates, color, and literacy—are not defined in terms of predication.⁵⁶ Instead, I will focus on fleshing out and further motivating my suggestion that items like *individuality* are defined in terms of predication. Admittedly, Aristotle does not give definitions of all of these troublesome items, but, where he does appear to carefully characterize or define one of them, he mentions predication, *said-of* or *present-in* in his definition or characterization.

Consider Aristotle's brief discussion of individuality at the end of *Cat.* 2 at 1b6-9:

And without exception (*ἀπλῶς*), the things that are individuals and one in number are said-of no subject, but nothing prevents some from being *present-in* a subject—for literacy is among the things *present-in* a subject.⁵⁷

Strictly speaking, this passage can be read as merely offering a characterization of the individuals—namely, that if something is an individual then it is *said-of* no subject. But this passage is widely thought to present Aristotle's account of individuality: on this view,

(1) to be an individual just is to be *said-of* no subject.⁵⁸

Put another way, individuality is the feature of being *said-of* no subject. As Frede has argued, this is a highly attractive account of individuality. [Spell out some reasons for liking it.] If it is not Aristotle's account of individuality, then Aristotle does not give us

⁵⁶ What about the items in the categories? Are they defined in terms of predication? Aristotle does not give explicit definitions of any items in his categories in the *Categories*; but it is generally agreed that his definitions would have looked roughly like this:

(ix) human just is rational animal.

(x) literacy just is knowledge of letters.

(xi) pure white just is maximally luminous white.

Aristotle likely thinks that for each of the items in the *Categories* there is a definition of genus + differentia form of the sort expressed by ix-xi. In definitions of this form, the *definiens* is composed from a genus-term and a differentia-term. In these cases, the genus-term is a noun and the differentia term is an adjective or adjectival phrase. More importantly, at least in these examples the *definiens* of these items do not mention *predication* or a *predicational tie*. This last point is important. Aristotle might give a definition using a sentence expressing a predication, like “human is rational animal”, but this does not mean that the definition of human involves predication in the intended sense. What matters for our purpose is whether the *definiens*, or defining expression, of a definition mentions predications. Since “rational animal” does not mention predication or one of the more specific predicational ties—namely, *said-of* and *present-in*—then this definition of human does not involve predication in the intended sense.

⁵⁷ ἀπλῶς δὲ τὰ ἄτομα καὶ ἐν ἀριθμῷ κατ' οὐδενὸς ὑποκειμένου λέγεται, ἐν ὑποκειμένῳ δὲ ἔνια οὐδὲν κωλύει εἶναι· ἢ γὰρ τις γραμματικὴ τῶν ἐν ὑποκειμένῳ ἐστίν.

⁵⁸ *Cat.* 2.1b6-9

any such account in the *Categories*. For these reasons, I will follow the majority of commentators and accept that Aristotle is defining individuality in this passage. For our purposes, this is significant because it shows that since individuality is defined in terms of the *said-of* relation, one of the forms of combination.

If this account of individuality is correct, then it suggests that Aristotle endorse a related account for the items that contrast with individuality—namely, universality, the feature of being a species, the feature of being a genus, and the feature of being a differentia. In particular, it suggests that

(2) to be a universal is to be *said-of* something.

On this view, the divisible or universal items—those contested with the individuals—are just the ones that are *said-of* some subject or other. This looks to fit Aristotle's examples. Human is *said-of* Socrates, and it is a universal. Two footed is *said-of* human and two-footed is a universal. Knowledge is *said-of* literacy and literacy is a universal.

If we again follow the majority of commentators and accept this account of universality, then we are in position to define species:

(3) to be a species is to be a universal and not *said-of* any (other) universal.

In the technical sense of "species", the species are the most specific universals in the sense that they are *said-of* individuals only (see T4). Human and Sockeye Salmon are species in the category of substance: they are *said-of* the individual humans—Socrates, you and the rest of us—and the individual Sockeye Salmon respectively. Human is not *said-of* animal nor is it *said-of* rational or any other universal. The other universals are the genera or differentiae, and each genus and differentia is *said-of* some universal. A genus is *said-of* the several species that fall under it; for example, the genus, animal, is *said-of* human, tiger and the other species of animal. A differentia is *said-of* the universal that it helps define—if rational is the differentia that helps define the species, human, then rational is *said-of* human.

This approach can be extended to define the feature of being a genus and the feature of being a differentia, though the definitions turn out to be somewhat more complex because they must be distinguished from each other. Above, I suggested

(4) to be a differentia is to be *said-of* some individuals and exactly one species.

(5) to be a genus is to be *said-of* some individuals and several species.

This is not quite right because works only for the least general differentiae and genera—like, animal and rational. Presumably, there is a differentia and genus that define *animal*. They will be *said-of* all the species that *animal* is *said-of*. There is a way to extend this style

account to cover all genera and differentiae no matter how general, but I will not bog us down with the details here. I discuss these accounts of being a genus and being a differentia in chapter 4, page xx of the dissertation.

Granting that these definitions of genus and differentia can be articulated in a satisfactory way, we have made significant progress towards supporting the claim that our troublesome bunch of entities are defined in terms of combination. As we have seen, there is good reason to think that individuality is defined in terms of *said-of*. Since individuality is contrasted with universality, there is reason to think that universality can also be defined in terms of the *said-of* relation. The same holds for the feature of being a genus, the feature of being a species, and the feature of being a differentia. And indeed, I have shown that there is at least one attractive way to flesh out these four definitions. Since *said-of* is a form of combination, this shows that there is reason to think that Aristotle would accept that individuality, universality, the feature of being a genus, the feature of being a species, and the feature of being a differentia are defined in terms of combination.

Turning next to property-hood and primary substance-hood, consider Aristotle's opening remarks about substance in *Cat.* 5 at 2a11-13:

What is called substance both in the most governing sense and primarily and most is what is neither *said-of* a subject nor is *present-in* a subject.

Οὐσία δέ ἐστιν ἢ κυριώτατά τε καὶ πρώτως καὶ μάλιστα λεγομένη, ἢ μήτε καθ' ὑποκειμένου τινὸς λέγεται μήτε ἐν ὑποκειμένῳ τινί ἐστιν

This at least looks like it is an informal definition of substance—or rather, what Aristotle later calls “primary substance” (3a8-9)—and it is widely read as such [add citations]. That is, it appears that Aristotle is asserting,

(6) to be a primary substance is to be neither *said-of* nor *present-in* any subject.

There are at least circumstantial textual reasons in favor of this reading: this characterization appears at the very start of the section on substance, just where we would hope to find a definition. Aristotle also begins the *Categories* with a series of definitions—of homonymy, synonymy and paronymy. When Aristotle turns to discuss relatives and qualities, he begins his discussion (chapter 7 and 8, respectively) with what appears to be an informal definition. In the case of relative, while Aristotle refines his initial definition he makes clear that it was meant as a definition (*horismos*) of relative. In general, Aristotle's strategy in the *Categories* seems to be to start his discussions, where possible and appropriate, by giving a definition of the central subject of study.

If we accept this account of primary substance-hood, then it is plausible that Aristotle would accept the following definition of property-hood:

(7) to be a property is to be *present-in* some subject.

This account is also widely accepted, and it is highly attractive.⁵⁹

This leaves opposition. Unlike the other troublesome entities we have just discussed, opposition is not closely linked to the notions of individuality or primary-substancehood. This independence means that if we do find that it is defined in terms of combination, then this fact provides independent supporting evidence for the hypothesis that all of the troublesome entities are defined in terms of combination—i.e. predication, *said-of* or *present-in*.

Jonathan Barnes provides very helpful starting point for discussing by offering definitions of Aristotle's three notions of opposition, which Barnes calls "contrariety".

Contrariety has a long, but not unambiguous, history. It is useful to distinguish among three relations, each of which Aristotle seems to have thought of as a type of contrariety. In the following definitions, the 'range' of a property is, roughly, the class of objects to which it can be ascribed without commission of a category mistake. First:

(D1) Two properties are contraries₁ if and only if they have the same range and nothing which possesses one of them can possess the other, ...

Then:

(D2) Two properties are contraries₂ if and only if they have the same range, and nothing which possesses one of them can possess the other, and anything in their range must possess the one of them or the other, ...

Thirdly:

(D3) Two properties are contraries₃ if and only if they have the same range, and nothing which possesses one of them can possess the other, and any other property with the same range is between the two of them, ...

Contrariety₁ might be called incompatibility: paradigm contraries₁ are red and green, hot and cold. Contrary₂ predicates might be called contradictory predicates: typical contraries₂ are odd and even, guilty and innocent. Contrariety₃ might be called polar opposition: examples of contraries₃ are black and white ... (Barnes, *Logical Matters* Vol. II, pg. 355).

Aristotle's subtle and complex discussion of opposition in *Cat.* 10-11 does not contain an explicit definition of opposition or the subclasses of it that Aristotle identifies. But what Aristotle does say conforms fairly closely to Barnes's account—note that Barnes's account is not advertised as an account of opposition in the *Categories*, although it comes close. There are two major difference worth noting. First, in the *Categories*, Aristotle does not explicitly discuss what Barnes calls "incompatibility", or type 1 contrariety. He does use a generic notion of opposition in chapters 5, 6, 7, and 8 (citations!), so this generic opposition corresponds to what Barnes defines in D1.

⁵⁹ See Frede (1987a) and Matthews (2008) for discussion.

Second, Aristotle contrasts “opposites with an intermediate”—e.g. red is intermediate between white and black—and “opposites without an intermediate”—e.g. even and odd have no intermediate. But in the *Categories*, Aristotle does so in a slightly different way than Barnes.

In particular, Aristotle never claims that for opposites with an intermediate “any other property with the same range is between the two” opposites. Rather, Aristotle contrasts opposites with an intermediate and those without an intermediate along the following lines:

if F and G are opposites without an intermediate, then, for every x that is a member of the range of F and G, necessarily x is F or x is G,

Whereas,

if H and J are opposites with an intermediate, then, for every x that is a member of the range of H and J, it is not necessary that x is H or x is J.⁶⁰

For example, while every number is, necessarily, either even or odd; there are surfaces that are neither white nor black, but blue or green instead.

These differences, while significant, do not touch the core of Barnes’s account: opposition is a matter of which properties can be predicated of which subject. Therefore, although the details of Barnes’s account of Aristotelian opposition might need to be tweaked to fit the *Categories*, something along the lines of Barnes’s account almost certainly lies behind Aristotle’s discussion of opposition in *Cat.* 10-11.⁶¹ And if this is right, then (generic) opposition is also defined in terms of predication roughly as follows:

(8) to be an opposite is to be one of a pair of predicates that have the same range of possible subjects but cannot be predicated of the same subject simultaneously.

Thus, all eight of the troublesome entities that we have discussed have attractive Aristotelian definitions in terms of combination and these definitions are grounded—to a greater or lesser degree—in the text and the conceptual resources of the *Categories*. If there are other entities that pose similar problems but that we have not discussed, we should be cautiously optimistic that they too can be defined in terms of combination.

⁶⁰ In fact, Aristotle’s distinction is more subtle because recognizes that there might be some item that is necessarily white—e.g. snow. Since snow is necessarily white, trivially it is also necessarily white or black. To confront this problem Aristotle adds a clause: If H and J are opposites with an intermediate, then for every x that is a member of the range of H and J, it is not necessary that x is F or x is G, **or either necessarily x is H or necessarily x is J.**

⁶¹ A further difference between Aristotle’s discussion of opposition and Barnes’s is that Aristotle explicitly makes use of the notion of predication in describing the different kinds of opposites. For example, he writes that “the things of this sort (viz. properties with an intermediate) among the opposites are such that necessarily, one or the other of them belongs in the items which they come to be in or are predicated of—of these there is no intermediate” (ὅσα δὲ τῶν ἐναντίων τοιαῦτά ἐστιν ὥστε ἐν οἷς πέφυκε γίγνεσθαι ἢ ὧν κατηγορεῖται ἀναγκαῖον αὐτῶν θάτερον ὑπάρχειν, τούτων οὐδὲν ἐστιν ἀνὰ μέσον) (11b38-12a2).

4.2 Final Speculations

In 4.1, I argued that (1) the items we have been discussing, such as individuality and the species-hood, are defined in terms of predication and (2) the categories are not meant to include items defined in terms of predication. Together these claims show that the items we have been discussing are non-problematically extra-categorical: they are not meant to be members of any of the categories. But they raise further questions. Why does Aristotle exclude items defined in terms of predication from his roster of categories? What is Aristotle up to in distinguishing his ten categories if he thinks that there are beings that do not fit into any of them? Does Aristotle's argument for the priority of primary substance apply to these entities as well even though some are not predicated of substances (opposition, property-hood) and others are not predicated of primary substances (universality, the feature of being a genus, etc.)?

Aristotle does not explain what he is up to in the *Categories*, why he proposes his ten-fold categorial scheme, or even how precisely his argument for the priority of primary substance is meant to work. Any attempt to answer these questions will have to engage in some degree of speculation. Still, an interpretation that forecloses all reasonable and philosophically attractive answers to these questions is at a serious disadvantage. Therefore, it is important to see that my interpretation has something to say to these questions. I want to show that there is a reasonable and philosophically attractive set of answers to these questions available on the interpretation of the *Categories* that I have just proposed.

Here is one such set of answers. When he writes the *Categories*, Aristotle is engaged in the project of identifying the grounds for simple predicative truths—like *Socrates is wise* and *literacy is (a) knowledge*. This is not a project of Aristotle's invention. Aristotle follows Plato in thinking that certain truths are more fundamental than others: that certain truths obtain in virtue of others. According to Plato, the basic truths—those that explain all the others—all have three ingredients. All of the basic truths involve two forms and the relationship of combination. Thus, all basic truths take the form:

F combines with G (where F and G are Forms).

For example, *Motion combines with Difference*. According to Plato truths like this one metaphysically explain more familiar truths like, *Motion is different* (see *Sophist*, 255e3-256b4 and 256d11-e3).

While Aristotle also engages in the same broad project of identifying the basic truths, he disagrees with Plato in two crucial respects. First, he thinks that *combination* comes in two kinds and that, therefore, the basic truths come in two different forms:

A is *said-of* B, and
C is *present-in* D

All of the other truths—all of the other predications—obtain in virtue of some truth or set of truths of these two basic forms.

Second, Aristotle thinks that the beings that are combined in the basic facts are not Plato's Forms but primary substances and the entities, or predicates, that combine with them. Some of these entities are part of the very essence of the primary substances—for example, human is part of the essence of Socrates. Some of them indicate what a substance it is like, or how much it is, in relation to what it is, where it is, etc. All of these are either *said-of* or *present-in* a primary substance.

These basic predications metaphysically explain further, non-basic, predications. For example, human is *said-of* Socrates grounds *human is a universal*. The predication pattern of white and black ground the fact that *white and black are opposites*. When Socrates is not pale this is because the basic facts do not include pale is *present-in* Socrates. If this is right, then Aristotle only includes certain beings in his list of categories because only these are the items he thinks combine with each other to form the fundamental truths—truths which explain all the others. Negative predicates, like not-white, and items defined in terms of predication are not included in the categories because they only get predicated in virtue of some combination or set of combinations among the items in the categories.

Aristotle does not need to worry about arguing that primary substances are prior to beings defined in terms of predication, because it is obvious that the beings defined in terms of predication are posterior to primary substances. Items defined in terms of predication have being only if there are combinations of entities in the categories and there are combinations of entities in the categories only if there are primary substances.

This picture allows for extra-categorial entities and trans-categorial entities. Trans-categorial predications are real—animal is a genus, height is a genus, and knowledge is a genus—but they are not fundamental. They are not *said-of* or *present-in* predications. Opposition and individuality and the feature of being a species are real and they are all extra-categorial beings. But since they are defined in terms of predication, they exist only because of the combinations of items in the categories.

Bibliography

- Ackrill, J. L. (1997). "Aristotle on 'Good' and the Categories" in *Essays on Plato and Aristotle*. Oxford University Press. (201-211)
- Ackrill, J. L. (ed.) (1963). *Categories and de Interpretatione*. Clarendon Press.
- Barnes, Jonathan (2012). "The Law of Contradiction" *Logical Matters*. Clarendon Press. (353- 363)
- Barnes, Jonathan (ed.) (1994). *Posterior Analytics*.
- Code, Alan (1986b). Aristotle's Investigation of a Basic Logical Principle: Which Science Investigates The Principle of Non-Contradiction? *Canadian Journal of Philosophy* 16 (3):341-357.
- Code, Alan. (1985) "On the Origin of some Aristotelian Theses about Predication" in Bogen and Mcguire (eds.) *How things Are*. D. Reidel.
- Code, Alan. (1986a) "Aristotle: Essence and Accident" Grandy, Richard E. & Warner, Richard (eds.) (1986). *Philosophical Grounds of Rationality: Intentions, Categories, Ends*. Oxford University Press.
- Cohen, S. Marc (2008). Kooky objects revisited: Aristotle's ontology. *Metaphilosophy* 39 (1):3–19.
- Cohen, SM. (2013). "Accidental Beings in Aristotle's Ontology" in Keyt, David ; Anagnostopoulos, Georgios & Miller, Fred D. (eds.) (2013). *Reason and Analysis in Ancient Greek Philosophy: Essays in Honor of David Keyt*. Springer. (pg. 231-42)
- Crivelli, Paolo (2017), "Being-Said-Of in Aristotle's 'Categories'". *Rivista di Filosofia Neo-Scolastica*, (3):531-556
- Ferejohn, Michael T. (1981). Aristotle on Necessary Truth and Logical Priority. *American Philosophical Quarterly* 18 (4):285 - 293.
- Frede, Michael (1987a). "Individuals in Aristotle" in *Essays in Ancient Philosophy*. Oxford University Press.
- Frede, Michael (1987b). "Categories in Aristotle" in *Essays in Ancient Philosophy*. Oxford University Press.
- Furth, Montgomery (1988). *Substance, Form, and Psyche: An Aristotelean Metaphysics*. Cambridge University Press.
- Kohl, Markus (2008). Substancehood and Subjecthood in Aristotle's *Categories*. *Phronesis* 53 (2):152 - 179.
- Kosman, L. A. (1968). Predicating the Good. *Phronesis* 13 (1):171-174.
- Kung, Joan (1986). Aristotle on "Being Is Said in Many Ways". *History of Philosophy Quarterly* 3 (1):3 - 18.
- Lewis, Frank A. (1991). *Substance and Predication in Aristotle*. Cambridge University Press.
- Mann, Wolfgang-Rainer (2000). *The Discovery of Things Aristotle's Categories and Their Context*. Princeton University Press.
- Matthews, G.B. (2008). "Aristotelian Categories". In Anagnostopoulos, Georgios (ed.). *A Companion to Aristotle*. Wiley-Blackwell.
- Matthews, Gareth B, (1992). "On Knowing How to Take Aristotle's Kooky Objects Seriously." Paper presented at the Pacific Division meeting of the APA, Portland, March 27, 1992.
- Matthews, Gareth B. (1982). "Accidental Unities." In *Language and Logos*, edited by Malcolm Schofield and Martha Nussbaum, 223–40. Cambridge: Cambridge University Press.

- Menn, Stephen (1995). Metaphysics, Dialectic and the Categories. *Revue de Métaphysique et de Morale* 100 (3):311 - 337.
- Perin, Casey (2007). Substantial universals in Aristotle's categories. *Oxford Studies in Ancient Philosophy* 33:125-143.
- Shields, Christopher (1998). *Order in Multiplicity: Homonymy in the Philosophy of Aristotle*. Oxford University Press UK.
- Wedin, Michael V. (2000). *Aristotle's Theory of Substance: The Categories and Metaphysics Zeta*. Oxford University Press.