

SUBSTANCE AND INDEPENDENCE IN ARISTOTLE

Individual substances are the ground of Aristotle's ontology. Taking a liberal approach to existence, Aristotle accepts among existents entities in such categories other than substance as quality, quantity and relation; and, within each category, individuals and universals. As I will argue, individual substances are ontologically independent from all these other entities, while all other entities are ontologically dependent on individual substances. The association of substance with independence has a long history and several contemporary metaphysicians have pursued the connection.¹ In this chapter, I will discuss the intersection of these notions of substance and ontological dependence in Aristotle.

Ontological dependence plays a central role in Aristotle's metaphysics of properties, as well as in his philosophy of mathematics, philosophy of mind and elsewhere. As I will note, he typically uses separation and priority terminology to refer to a notion of ontological dependence: one thing is ontologically independent from a second just in case the first is both separate from, and prior to, the second. To give just a few examples of Aristotle's use of such terminology: in addition to the claim that individual substances are ontologically independent from universals and entities in categories other than substance, Aristotle also holds that individual properties are inseparable from that in

¹ See, for example, Hoffman and Rosencrantz (1991), Lowe (2005), Gorman (2006) and Schnieder (2006). For discussion, see Koslicki (*forthcoming b*).

which they are present;² he asserts that the active intellect is separate from the body;³ he describes mathematicians as separating mathematical objects in thought,⁴ and he criticises the Platonists for wrongly separating the Forms.

I will not discuss in this chapter the full variety of applications of the notion of ontological dependence in Aristotle. Instead, I will be primarily concerned with its role as a characteristic mark of individual substances. Independence is but one of several such marks. For example, an individual substance is demonstrable and indefinable, lacks a contrary, does not admit of degree and persists through qualitative changes. But I will not discuss in detail these other features of substance here. Rather, my main concern will be the narrow intersection of Aristotle's notions of substance and ontological dependence. I will canvass a few contemporary formulations of ontological dependence and discuss some of the interpretative difficulties in ascribing any of these formulations to Aristotle's characterization of individual substances as ontologically independent. My aim is not to resolve fully these difficulties but to locate the topics of substance and independence relative to certain other controversies in Aristotle studies. However, I will sketch a position. In particular, elsewhere I have speculated that Aristotle is both a primitivist and a pluralist with respect to ontological dependence,⁵ and I will develop this line of interpretation a bit further later in the chapter.

1. Individual Substance Primacy

² For discussion, see Corkum (2009).

³ For discussion, see Corkum (2010).

⁴ For discussion, see Corkum (*forthcoming a*).

⁵ Corkum (2008: 82).

Aristotle's concern in the *Categories* is, in part, to provide a linguistic classification. He distinguishes between two kinds of relations that may obtain between a predicate and a subject: cases such as where 'coloured' is predicated of a subject and cases such as where 'human' is predicated of a subject. However, Aristotle also reads off this linguistic classification an ontology. Distinctively—compared to, say, Quine's characterization of ontological commitment as the value of the variables in a language indispensable for science—not only does the choice of subjects and predicates commit us to corresponding entities but the predicative relations among terms commits us to a *structured* ontology. He distinguishes among, on the one hand, substances such as Callias or Socrates and, on the other, entities in various categories such as quality, quantity and relation; I will call these latter items non-substances. And Aristotle distinguishes between individuals and universals within each category. The two kinds of relations between a predicate and a subject reflects these ontological distinctions. In the case of 'coloured' being predicated of a subject, the predicate refers to a non-substance and, paradigmatically, the subject refers to a substance.⁶ In such cases, the non-substance is *present in* the subject. In the case of 'human', the predicate refers to a universal and is *said of* a subject.

Paradigmatically, the subject and the predicate in these cases fall within the same category. The *present in* and *said of* predicative relations seem then to be used for cross- and infra-categorical predications, respectively.⁷ Aristotle appears at times careless with the use-mention distinction. He will indifferently say that the expression or the referent

⁶ I discuss the ascription to Aristotle of the view that predicates refer in Corkum (*forthcoming b*).

⁷ I qualify this claim in Corkum (2009).

is, say, present in a subject. And when there is little room for misunderstanding, I will follow Aristotle's usage and also say that the non-substance itself is present in or *inheres* in a subject, and that a universal is itself said of a subject.

Notice, Aristotle is catholic in his acceptance of what is. Qualities, quantities relations and so on are all things that are. The predominant metaphysical issue is, for Aristotle, *in what way* things which are are—that is to say, whether or not they have claim to their ontological status independently of standing in a relation to something else and so *simpliciter*. This concern is central to the *Categories* and is of importance elsewhere in Aristotle's corpus. The question of mathematical existence, for example, is not one of existence *per se* but of the dependence on, or independence from, those items which have uncontroversially independent status as beings, individual substances.

However, although Aristotle is liberal in his acceptance of what exists, he is not indiscriminate. I have not been always as clear on this point as I could have been. Jonathan Schaffer (2009: 352) characterizes Aristotle as taking a 'permissive disinterest' in such existence questions as whether there are numbers. In support of this ascription, Schaffer cites my (2008: 76) observation, an interpretation of *Meta.* 13.1 (1076^a36-37), that "the philosophical question is not *whether* such things exist but *how* they do." Schaffer goes on to advocate what he characterizes as the Aristotelian view: the task of metaphysics is to say not what exists but what grounds what, and its method is to deploy diagnostics for what is fundamental, together with diagnostics for grounding derivative entities on fundamental entities. There is much that I find attractive in Schaffer's characterization of metaphysics. But, although I ascribe to Aristotle the view that the philosophical work of metaphysics predominantly lies in articulating how things exist, I

now hesitate to characterize Aristotle as disinterested in existence questions altogether. Aristotle's aim in the *Categories* might best be viewed as the provision of a structured ontology from the predicative structure of a given discourse, without there detailing specific guidance as to how to determine the appropriate discourse.⁸

Contemporary intuitions, as to what substances, individuals and universals are, may mislead the reader. Aristotle's views on individuals and universals are arguably out of step with typical contemporary views. So, for example, although he holds that there are individuals in non-substance categories such as quality, it is controversial whether such individuals are particulars or instead maximally determinate types. So it may be surprising to the reader that individuals are not obviously particulars in Aristotle. I discuss this controversy in Corkum (2009). It is also not obvious that Aristotle views universals in the manner of contemporary metaphysicians: I will return to this observation below. Moreover, recent metaphysicians who discuss substance tend to take them to be the ordinary mid-sized dry goods familiar to us from folk ontology.⁹ Aristotle's own examples of individual substances – a particular human or particular horse – might suggest to the reader that Aristotle would agree. However, Aristotle apparently denies that ordinary folk objects are substances. He seems to take such objects to be compounds of form and matter and identifies substance with their forms. I will return to this question of the extension of the *substance* concept in Aristotle. Since independence is a mark of individual substance, we would expect an interpretation of ontological dependence to play a role in Aristotle's views on what the substances are.

⁸ For further discussion, see Corkum (*forthcoming a*).

⁹ See, for example, Schnieder (2006: 393).

And so any interpretation will be judged in part by the light shed on these surprising views.

In this section, I will defend the claim that individual substances are the ground of Aristotle's ontology. That is to say, I will argue that individual substances are ontologically independent from both non-substances and universal substances but that neither non-substances nor universal substances are ontologically independent from individual substances. I will begin by showing that some of Aristotle's separation terminology refers to some notion of ontological independence. This largely rehearses arguments from Gail Fine (1984). I will then argue that there is an asymmetry between individual substances and other kinds of entities with respect to separation: substances are separate from both non-substances and universal substances but neither non-substances nor universal substances are inseparable from substances. Taken together, these claims show that substances are ontologically independent from non-substances but non-substances are ontologically dependent on substances. I have discussed these claims in detail in Corkum (2008) and will be brief here.¹⁰

Aristotle does not define separation. But G. Fine persuasively argues that he associates separation and the notion of natural priority. For there's evidence that, for Aristotle, the claims that one thing is separate from another and the second is not separate from the first are jointly sufficient for the claim that the first is naturally prior to the

¹⁰ The Greek *chôris* and its cognates in Aristotle can refer to local separation, defined at *Phys.* 226^b21-3, temporal separation, mentioned for example at *Meta.* 1016^b2, and definitional separation, distinguished from simple separation at *Meta.* 1042^a28-31. I will assume that unqualified separation terminology in Aristotle refers to the separation which Aristotle ascribes to individual substances. I will use such terms as 'separate' and 'separable' interchangeably. For a discussion of the distinction between the state of separation and the capacity of separability, see Corkum (2008: 30 n. 13).

second. One passage which G. Fine (1984: 34) offers in support of this sufficiency thesis is *EE* 1.8 (1217^b10-15):

[The Platonists claim that the Idea of the good] is the original good, for the destruction of that which is participated in involves also the destruction of that which participates in the Idea, and is named from its participation in it. But this is the relation of the first to the later, so that the Idea of good is the good per se; for this is also (they say) separable from what participates in it, like all other Ideas.¹¹

The passage is ascribing to the Platonists the following argument: if a thing is separate from what participates in it, and what participates cannot be without that in which it participates, then it is prior to them.¹²

The relevant notion of priority is substantial or natural priority, which is characterized at *Meta.* 5.11 (1019^a1-4): “Some things then are called prior and posterior ... in respect of nature and substance, such as (*hosa*) those which can be without (*einai endechetai aneu*) other things, while the others cannot be without them.”¹³ I have flagged the Greek expressions being translated as ‘such as’ and ‘can be without’ and I will return to the question how we ought to take these expressions. 1019^a1-4 is typically taken to be a definition of natural priority, with two components:

A is *naturally prior* to B just in case both of the following conditions hold: (i) A can be without B and (ii) B cannot be without A.

Here and in what follows, I use the letters ‘A’, ‘B’ and so on as variable ranging over Aristotelian entities: substances, non-substances, individuals and universals. Natural

¹¹ Translations based on Barnes (1984) except as noted.

¹² Other evidence of the relation holding between separation and priority include *Meta.* 1028^a31-b2, 1038^b29 and 1218^a1-9.

¹³ This notion of natural priority needs to be distinguished from various other senses of priority, such as temporal priority, local priority, definitional priority, priority with respect to motion, priority with respect to power, priority in order and so on. Aristotle discusses these at *Cat.* 12 and *Meta.* 5. 11. For a discussion of these various senses of priority, see Cleary (1988). I discuss definitional priority further below.

priority, on this reading, is thus defined as an asymmetric relation involving notions of ontological dependence and independence. In the following sections of the chapter, will I consider several interpretations of this notion of ontological dependence in Aristotle. And I will consider whether 1019^a1-4 is best thought of as a definition. First, though, I will argue for a condition of adequacy for any interpretation.

Aristotle holds that substances, alone of the categories, are separate.¹⁴ Moreover, Aristotle holds that substances are prior to non-substances. Consider *Meta.* 12.1 (1069^a20): “substance is first, and is succeeded by quality, and then by quantity.” See also *Meta.* 12.6 (1071^b5): “substances are the first of existing things.” This, along with the relation holding between separation and priority, suggests that non-substances are inseparable from substances, independently of the interpretation of separation terminology as expressing ontological independence. But when combined with the evidence canvassed above for thinking that separation terminology refers to ontological independence, these passages give us good reason to ascribe to Aristotle that view that non-substances are ontologically dependent on substances and that substances are ontologically independent from non-substances.

Moreover, Aristotle clearly holds in the *Categories* that individual substances are prior to, and so separate from, universal substances. He explicitly calls individual substances primary with respect to universal substances and universal substances secondary with respect to individual substances. See, for example, *Cat.* 5 (2^a11-19):

A substance—that which is called a substance most strictly, primarily, and most of all—is that which is neither said of a subject nor in a subject, e.g. the individual man or the individual horse. The species in which the things primarily called

¹⁴ See *Phys.* 185^a31-2, *Meta.* 1029^a27-8.

substances are, are called secondary substances, as also are the genera of these species. For example, the individual man belongs in a species, man, and animal is a genus of the species; so these—both man and animal—are called secondary substances.¹⁵

Finally, Aristotle claims at 2^a34-b7 that the ontological status of all other kinds of entity are somehow dependent on primary substances:

All the other things are either said of the primary [i.e., individual] substances as subjects or present in them as subjects.... [C]olor is present in body and therefore also present in an individual body; for were it not present in some individual body it would not be present in body at all.... So if the primary substances did not exist it would be impossible for any of the other things to exist (*adunaton tôn allôn ti einai*).

I have followed the Ackrill (1963) translation in taking the Greek *einai* existentially. I will discuss below whether this is the right interpretation for the relevant ontological dependency relations. Putting these claims together, Aristotle holds

Primacy

individual substances are ontologically independent from both non-substances and universal substances, and both non-substances and universal substances are ontologically dependent on individual substances.¹⁶

It is not uncontroversial whether Aristotle consistently endorses **Primacy**. I will flag some of the reasons for this controversy below. But if we can ascribe the thesis to Aristotle, then **Primacy** provides a condition of adequacy for any interpretation of ontological dependence in Aristotle.

2. Boundaries

¹⁵ Cf. *Cat.* 2^b4, 3^a17, 3^b11, 8^a15.

¹⁶ **Primacy** is what I called the ‘Asymmetry Thesis’ in Corkum (2008).

I will next discuss several interpretations of ontological dependence in Aristotle. Donald Morrison (1985a and 1985b) claims that one thing is separate from another in Aristotle only if they are numerically distinct. However, Morrison seems to take the notion of separation to be not numerical distinctness but the relation obtaining between numerically distinct substances. Morrison takes one thing to be separate from another if the first is outside the “ontological boundaries” of the second. Thus Morrison advocates what we might label as:

Boundary

A is ontologically independent from B's just in case A is outside the ontological boundaries of the B's.

In **Boundary**, and in the other proposals I will consider below, I take ‘A’, ‘B’ and so on as dummy letters for which can be substituted terms expressing entities such as ‘Callias’, ‘human’, ‘colour’, as well as meta-ontological expressions as ‘an individual substance’, ‘universal’ and ‘non-substance’. Morrison holds that being outside the ontological boundaries of a thing is equivalent to being numerically distinct from it, in his targeted, special sense of being numerically distinct. Morrison gives an example of a man inside the trunk of a hollow oak tree. Although the man is inside the tree, he is not inside the ontological boundaries of the tree, which excludes the hollow space which the man inhabits. Morrison (1985a: 140) claims that there are two reasons why the man and the oak are outside of each other's ontological boundaries. He writes that

[t]he reason the man and the oak are ontologically distinct is primarily, on Aristotle's view, that they lack unity of motion in place and time. They lack unity of motion because the oak is stationary whereas the man can leave: he can climb out, walk around, and so on.... The man and the oak ... not only lack unity of motion. They also lack specific unity, since the man is an organized whole different in kind from the organized whole that is the oak. The parts of the man are governed by one principle of organization, his soul, and the parts of the oak are governed by another principle of organization, its soul. However, their lack of

specific unity is not the cause of their ontological distinctness. A tiny young oak, potted and set inside the hollow old one, would still be numerically distinct.... What counts is that the souls are different souls, not that they are different in kind. So there are two reasons why the man and the oak are outside of each other's ontological boundaries: they lack unity of motion and they have numerically distinct souls. Morrison elaborates on his notion of ontological boundaries by providing a certain metaphysical picture. A thing, in Aristotle's world, is a cluster of non-substances inhering in an individual substance. Morrison (1985a: 141) writes:

Aristotle's metaphysics is a conception of the world as organized into clusters, where the principle of clustering is one of priority relations, and at the core of each cluster is *ousia*. My soul is prior to my body and all of its parts, and your soul is prior to your body and all of its parts. My soul is not prior in the same ways to any of the parts of your body; therefore the parts of your body are outside of the 'sphere of influence' of my soul, and hence they are outside the boundaries of my substance, and hence they are separate from me.... [O]ne can think of priority-relations as the metaphysical glue whose holding-power gives structure to the universe. To be separate from something is to be *not* attached to it with this sort of glue; to be 'in' something and not separate is precisely to be attached to it in this way.

There's much in Morrison's cluster picture with which one might agree. In particular, one might endorse the suggestion that these things are grouped together by certain priority relations. The cluster includes not only body parts of the individual substance but also the various non-substances inhering in the individual substance. These non-substances are thereby posterior to that individual substance; and the individual substance is thereby prior to the accidents. Of course, this is just to say that the individual substance is separate from its inherent attributes and the attributes are inseparable from it.

But regardless, the picture fails to support Morrison's claims for several reasons. First, the picture does little to *explain* the notion of ontological boundaries. Second, the picture fails to establish that numerical distinctness is equivalent to some criterion of being within certain boundaries. And finally, *were* the notion of being within certain

boundaries equivalent to numerical distinctness, then the interpretation would fail to meet **Primacy**. Morrison is committed to the claim that substances are separate only from other substances. And so he views the separation ascribed to substances as a symmetrical relation. If substances are separate from non-substances, and separation is numerical distinctness, then non-substances must be separate from substances. So the view is committed to denying either that substances alone of the categories are separate or that it's not non-substances, from which substances are separate, but only other substances. Morrison takes the second option. As we've seen, there's explicit textual evidence against the first option. The burden on this view is to explain the apparent relation between separation and priority drawn in such passages as 1217^b10-15, discussed above. That is to say, the claim that separation is numerical distinctness fails to meet our condition of adequacy on any interpretation of separation in Aristotle, **Primacy**.

3. Existence

Until recently, a standard formulation of ontological dependence was expressed in terms of existence conditions. Peter Simons (1987), for example, holds that something is “ontologically dependent on something else when the first cannot exist unless the second exists.” One way of fleshing out this proposal is as follows:

One entity ontologically depends on a second entity just in case necessarily, if the former exists, then the latter exists.

A standard interpretation of ontological independence in Aristotle follows the general lead of this formulation. G. Fine (1984), for example, advocates:

Existential

A is *ontologically independent* from B's just in case A can exist without the B's. Recall that in passages such as 1019^a1-4 Aristotle claims that what is prior can be without (*einai endechetai aneu*) what is posterior. **Existential** takes the Greek *einai* in such passages existentially and the *endechetai* modally. As we will see, this is not the only way to read the Greek but, so read, ontological independence is taken to be a capacity for realizing a certain condition of existence.

The claim that A can exist without Bs is ambiguous between two claims. Under one disambiguation, the claim is that, for any given member of the class of B things, A can exist without *that* B. This claim is consistent with holding that A cannot exist without some B or other. Under the other disambiguation, the claim is that, for the class of B's, A can exist without any member of that class whatsoever.¹⁷ Let's use the following acronyms:

Existential₁

A is *ontologically independent* from B's just in case, for any given B, A can exist without *that* B.

Existential₂

A is *ontologically independent* from B's just in case A can exist without any B whatsoever.

I will say that **Existential₁** or **Existential₂** is *exhibited by* As *with respect to* Bs. Now, do either of **Existential₁** or **Existential₂** meet the demands imposed by our condition of adequacy, **Primacy**? That is to say, are either of **Existential₁** or **Existential₂** exhibited by substances with respect to non-substances and not exhibited by non-substances with respect to substances?

Individual substances exhibit the kind of independence expressed by **Existential₁** with respect to some non-substances: Callias need not be generous. So the individual

¹⁷ For a similar distinction, see Simons (1987) and Correia (2008: 1015).

substance Callias can exist without the non-substance quality generosity. But there are problems for viewing the relevant notion of ontological independence as **Existential₁**. First, individual substances do not possess this capacity with respect to all kinds of non-substances. Consider *propria*, necessary but inessential properties. An individual substance cannot exist without its *propria*. A traditional example—not Aristotle’s—of a *proprium* for humans is risibility. If risibility is indeed a *proprium* for humans, then Callias cannot exist without risibility. Consider also non-substantial universals such as colour. It seems entirely plausible that substances cannot exist apart such general properties: Callias cannot exist colourless. There is thus a need to restrict that from which substances are ontologically independent, if we are to view ontological independence as **Existential₁**. Under this view, individual substances are not ontologically independent from non-substances generally, but only from accidents. Were ontological independence **Existential₁**, then we would need to weaken **Primacy** to the claim that substances are ontologically independent from *some* non-substances. Moreover, although individual substances exhibit **Existential₁** with respect to some non-substances, non-substances also exhibit **Existential₁** with respect to some substances. In particular, non-substantial universals also uncontroversially possess this kind of independence from individual substances: although Callias can exist without being generous, there can be generosity without Callias. So **Existential₁** is inadequate to **Primacy**.¹⁸

I turn to **Existential₂**, under which the claim that A can exist without B is the claim that A can exist without any B whatsoever. One might hold that non-substantial

¹⁸ For a similar argument against existential formulations of ontological dependence, see K. Fine (1995a).

universals lack this kind of independence from individual substances. For non-substantial universals cannot exist without any individual substance whatsoever: if no one were generous, generosity (as Aristotle might put it, on this reading) would not exist. However, individual substances also lack this kind of independence from non-substances. An individual substance such as Callias cannot exist denuded of all attributes whatsoever. If this is what is meant by ontological independence, then it is simply false that substances are ontologically independent. So **Existential₂** is also inadequate to **Primacy**. This then cannot be the relevant notion of ontological independence either. On the assumption that **Existential₁** and **Existential₂** exhaust the disambiguations of **Existential**, I conclude that **Existential** ought not to be ascribed to Aristotle.

4. Essence

Kit Fine has influentially argued for an account of ontological dependence in terms of essence, identity and definition. An essence, as detailed in K. Fine (1994) is not a merely necessary attribute but a collection of propositions true in virtue of that entity's identity. An essence is expressed by a real definition. Unlike a nominal definition, which states what a competent speaker of the language understands, a real definition states what the defined object is. These considerations suggest the following formulations:

One entity ontologically depends on a second entity just in case the latter is a constituent in the former's essence.

One entity ontologically depends on a second entity just in case the latter is a constituent in a proposition that expresses a real definition of the former.

The leading idea of these formulations is that ontological dependence is a narrower relation than an incapacity for separate existence. Attributes do not depend on substances

merely since they cannot exist apart from some substance or other. Rather, a specification of what it is to be a certain attribute makes reference to substances. To illustrate, a specific colour might be defined as a certain reflexive property of the surface of corporeal substances. The definition of the colour thereby would make reference to substance. Corporeal substances are necessarily coloured. But the definition of any substance could be given without any reference to colours.

Recently, Michail Peramatzis has ascribed to Aristotle an essentialist account of ontological priority inspired by K. Fine. Recall that Aristotle takes one entity to be ontologically prior on another if the first ‘cannot be (*einai*) without’ the other. G. Fine, we have seen, takes *einai* existentially. By contrast, Peramatzis takes *einai* in the ‘can be without’ formulation not existentially but essentially. That is, he reads priority in nature and substance as entailing that just one *relata* can be what it is without the other. So Peramatzis (2008: 189) offers the following interpretation of ontological priority:

A is ontologically prior to B iff A can be what it is independently of B being what it is, while the converse is not the case.

Peramatzis cashes out independence in a thing’s essence by appeal to non-reciprocal reference in a definition or account of what that thing is. This suggests the following account of ontological independence:

Essential

A is ontologically independent from the B’s just in case an account of what A is does not make reference to an account of what the B’s are.

Notice, **Essential** is ambiguous in the same way that **Essential** is ambiguous. That is to say the claim that A can be what it is independently of B’s is ambiguous between

Essential₁

A is *ontologically independent* from the B’s just in case, for any given B, an account of what A is does not make reference to an account of what that B is.

Essential₂

A is ontologically independent from the B's just in case an account of what A is does not make reference to an account of any B whatsoever.

For reasons similar to those rehearsed in the above discussion of **Existential**, **Essential₂** is the preferable formulation for the claim that substances are ontologically independent of non-substances. Although an account of my essence can be formulated without reference to the non-substances which inhere in me, the *circumstances* in which I can be human are those in which I have, for example, some colour or other, and where I am risible. So I doubt that non-reciprocal reference, in an account of what the dependent item is, involves a capacity.

Essential₂ is a promising interpretative suggestion. For Aristotle, an essence is an attribute which belongs to a thing in virtue of that thing itself.¹⁹ Like K. Fine, Aristotle holds that an essence is not equivalent to a necessary property: as we have seen, Aristotle holds that there are necessary but inessential properties. These *propria* of a thing are for Aristotle coextensive with an essential property but do not tell us what it is to be that thing: for example, the set of humans and the set of objects capable of learning grammar are, in Aristotle's opinion, the same, but a capacity for learning grammar is not what it is to be human. So there are these similarities.

Aristotle's discussion of multivocality, moreover, also suggests a picture similar to **Essential₂**. For example, at *Meta.* 4.2 (1003^a33-b10) Aristotle writes:

There are many senses in which a thing may be said to 'be', but they are related to one central point, one definite kind of thing, and are not said to 'be' by a mere ambiguity. Everything which is healthy is related to health, one thing in the sense that it preserves health, another in the sense that it produces it, another in the sense that it is a symptom of health, another because it is capable of it.... So, too,

¹⁹ See, for example, *Top.* 1.5, *Meta.* 7.4.

there are many senses in which a thing is said to be, but all refer to one starting-point; some things are said to be because they are substances, others because they are affections of substance, others because they are a process towards substance, or destructions or privations or qualities of substance, or productive or generative of substance, or of things which are relative to substance, or negations of one of these things or of substance itself.

Here the ontological primacy of substances is described as a systematic ambiguity in the expression 'to be'. Again, Aristotle assumes that our linguistic practices reflect ontology.

In his example, a diet or complexion is called healthy because of a relation to the health of an animal: a healthy diet promotes an animal's health; and a healthy complexion indicates an animal's health. So it seems that the relation between a dependent entity and the entity on which it depends is at least in part cashed out in this way: an account of what it is to be the dependent entity makes reference to the entity on which it depends, but not *vice versa*. **Essential**₂, then, arguably expresses the dependence in Aristotle of non-substances on substances.

There are reasons to doubt the ascription of any version of **Essential** to Aristotle, however. One concern is philological. Peramatzis's suggestion that *einai* at 1019^{a3} should be read as 'what it is to be' should be controversial. Aristotle has available to him expressions such as *ti estin* and *to tou ên einai* to express essence, and it would be peculiar if, in a definition of ontological priority, Aristotle did not employ this technical vocabulary, were **Essential** his intention. For this reason, I doubt that **Essential** is Aristotle's *general* formulation of ontological independence.

A second concern: Aristotle distinguishes ontological priority from epistemic and definitional priority, characterizing the latter at *Meta.* 5.11 (1018^b30-37). On a natural reading of this distinction, ontological priorities are disjoint from definitional priorities. So **Essential** arguably conflates ontological and definitional priority. Peramatzis (2011:

268) appears to hold that definitional priorities range over both real and nominal definitions, where ontological priorities are coextensive with real definitional priorities. I discuss Peramatzis's argument in detail in Corkum (*forthcoming c*).

A final worry. Although the formulation may express the dependence in Aristotle of non-substances on substances, it is less clear that the dependence of universal substances on individual substances is captured by **Essential**. In the *Categories*, Aristotle holds that items in the category of substance such as a genus are ontologically dependent on those individual substances which are members of that genus. However, suppose that one entity ontologically depends on a second entity just in case the latter is a constituent in a proposition that expresses a real definition of the former. Then an individual substance, if definable, depends on the constituents of its definition: its species, genus and differentia. So the ontological primacy of individual substances may be violated by a definitional or essentialist construal of ontological dependence. As such, **Essential** is inconsistent with **Priority**.²⁰

Some scholars hold that Aristotle indeed rejects the primacy of the individual substance, a central thesis of the *Categories*, and instead identifies a universal essence or form with substance in the later work, the *Metaphysics*. The argument for this position is that Aristotle identifies essence and form with universals, and substance with essence and form. Aristotle occasionally identifies an essence with the category of substance. For example, he uses the Greek expressions translated as 'essence' and 'substance' interchangeably in *Topics* 1.9. However, he also identifies an essence with a universal

²⁰ Peramatzis (2011: §11) restricts **Primacy**: non-substances are ontologically dependent on individual substances but universal substances are independent from individual substances.

substance, and either a species or genus. At *Topics* 1.9, he gives the example that ‘man’ or ‘animal’ expresses the essence of an individual man. There is also a sense of ‘essence’ according to which a term referring to a non-substantial species or genus expresses the essence of a non-substantial individual: also at *Topics* 1.9, Aristotle gives the example that ‘white’ or ‘colour’ expresses the essence of a non-substantial individual white. This suggests that Aristotle identifies essential and *said of* predications. Further support for the identification of an essence with a universal can be found in Aristotle’s epistemological comments. He occasionally states that an individual is indefinable and only a universal can be defined: see, for example, *Meta.* 7.10 (1036^a5-9). As we have seen, he holds that a definition expresses an essence. Moreover, Aristotle occasionally states that universals alone are the objects of knowledge: see, for example, *Meta.* 3.6 (1003^a14-15). He holds that individuals are unknowable or are more immediately known and known prior in time than universals, since they are perceivable, but are not more knowable by nature than universals.

In *Meta.* 7.6, Aristotle identifies the essence of each thing with the substance of that thing. Moreover, Aristotle seems to identify form with substance. A substratum possesses qualitative attributes, is the subject of predications, and persists through qualitative changes. Aristotle holds that the substratum is a hylomorphic compound of form and matter. He wonders at *Meta.* 7.3 whether, if the substratum or some part of it is to be identified with the substance of a thing, we ought to hold that the form, the matter or the compound is the substance. And he appears at *Meta.* 7.11 to endorse the identification of form with substance. So if Aristotle indeed holds that a thing’s essence and its form are universals and either that this essence or this form is the substance of that

thing, then this is good reason to believe that in the *Metaphysics*, unlike in the *Categories*, Aristotle rejects the primacy of the individual substance in favour of a more Platonic ontology.

The evidence supporting the identification of an essence with a universal is not conclusive, however. Indeed, at *Meta.* 7.13, Aristotle rejects the identification of a universal with the substance of that item of which the universal said. As such, he appears to endorse an inconsistent triad in *Meta.* 7. On the one hand, he seems to view both an essence and a form as universals. And he holds that a substance is identical with an essence or a form, for the reasons just canvassed. And yet Aristotle rejects that any universal is a substance. To resolve this interpretative difficulty, some scholars hold that ‘essence’ is ambiguous between an individual essence, which expresses the identity of an individual substance, and a universal essence, which is identified with the species. On this view, the relation between an individual essence and an individual substance is identity, a symmetric relation, and not a relation of ontological dependence.²¹ How might we think of an individual essence? And in what sense might such an item be ontologically independent? I will sketch a response to these questions in the next two sections.

5. Grounding

²¹ For the view that there are individual essences in Aristotle, see for example, Frede (1987). This line of interpretation could be cashed out in one of several ways. See for example Gill (2005) for discussion. The issue has been the source of a lively debate in recent years since an exchange between Albritton (1957) and Sellars (1957).

Expounding an account of ontological independence in terms of non-reciprocal reference, and not in terms of a capacity for existence, as Peramatzis does, is promising. But the emphasis on an item's essential properties renders **Essential** too narrow to cover all of the cases of an item's dependence on an individual substance in Aristotle. For example, the account fails to capture the dependence of a universal substance on an individual in at least the *Categories*. We have then these *prima facie* reasons for seeking a broader account.

In Corkum (2008: 77), I offer a formulation of ontological dependence not unlike the following.

Grounding

A is ontologically independent from B's just in case A admits of its ontological status without reference to B's.

I will explain the label, and address a few objections, momentarily. First, let me unpack the proposal. In offering **Grounding**, I am taking a not implausible reading of the 'can be without' phrase in the characterization of natural priority at 1019^a3. The English 'can' translates the Greek *endechetai*. This term can refer to a notion of possibility or contingency, and with this meaning it is most often used as the impersonal 'it is possible'. However, the term can also refer to a notion of admission and can mean the same as 'admits' or 'allows'.

The claim that A admits of an ontological status without reference to B's is ambiguous in just the way that the claim that A exists without B's is ambiguous. So, as with **Existential**, we need to distinguish between these two theses:

Grounding₁

A is ontologically independent from B's just in case, for any given B, A admits of its ontological status without reference to that B.

Grounding₂

A is *ontologically independent* from B's just in case A admits of its ontological status without reference to any B whatsoever.

Grounding₁ is consistent with the claim that the admission of the ontological status of A must refer to some B or other; **Grounding₂** is inconsistent with this claim. Now: are either of **Grounding₁** or **Grounding₂** plausible candidates for an account of ontological independence? Do either meet the demands imposed by our condition of adequacy, **Primacy**? I have discussed these issues at length in Corkum (2008) and, again, will be brief here. Individual substances exhibit **Grounding₁**: Callias would have his ontological status as a being even were he not generous. However, a non-substantial universal does not generally depend on any individual substance for its status as a being. Generosity would be, for Aristotle, a being no less than Callias even if he were not generous. Non-substantial universals exhibit **Grounding₁** and so the thesis fails to meet the demands imposed by **Primacy**.

What then of **Grounding₂**? Substances do not depend on non-substances for their ontological status as beings. Individual substances are classified as beings independently of standing in any tie to anything else—independently, that is to say, of being *present in* or *said of* any other beings. Universal substances, on the other hand, have their ontological status as beings in virtue of standing in ties to other things—but only in virtue of being said of individual substances; they do not depend for their ontological status on non-substances but they do depend on individual substances. Moreover, a substance doesn't depend even on properties from which it cannot exist apart. Consider again *propria*. Although these properties are necessary, a substance is not a being in virtue of standing in some tie to its *propria*. So although, for example, Callias cannot exist without

risibility, Callias's claim to having the ontological status of a being does not depend on his being risible. Similar comments could be made for such general properties as *being coloured*. So individual substances exhibit **Grounding₂**.

What of non-substances and universal substances? Non-substantial universals fail to exhibit **Grounding₂**; although generosity, for example, does not depend on Callias, the property would not have the ontological status it enjoys were there no generous people whatsoever. Similar comments could be made for universal substances. And non-substantial individuals also fail to exhibit **Grounding₂**. As I mentioned earlier, it is controversial whether these are found in at most one subject. Let's call non-substantial individuals recurrent if they are found in more than one subject, and non-recurrent otherwise. If they are non-recurrent, then they do depend on the specific individual substance in which they uniquely inhere. But this, of course, is consistent with a failure to exhibit **Grounding₂**. For Callias's generosity, if non-recurrent, admits of its ontological status in virtue of standing in a tie to some substance or other—namely, Callias. And if non-substantial individuals are recurrent, found in more than one subject, then they admit of their ontological status in virtue of standing in a tie to some substance or other—namely, those subjects which share the non-substantial individual. So, to sum up, substances exhibit **Grounding₂** with respect to non-substances and non-substances fail to exhibit **Grounding₂** with respect to substances. **Grounding₂** conforms to **Primacy**.

I have left unspecified in **Grounding** what constitutes the admission of an ontological status. In response to the similar formulation in Corkum (2008), some

scholars have understandably questioned how I intend to develop this notion.²² A plausible requirement is that the admission ought to be *explanatory*. The item on which a second depends will be a constituent in a proposition specifying that *in virtue of which* the first has a certain ontological status. I appealed to this terminology in my original discussion of ontological dependence in Corkum (2008: 77) and again in the discussion of **Grounding** above. Much will depend, for the success of this proposal as an interpretation of Aristotle, on how we take explanation. Aristotle himself typically views the explanation of an item as appealing to items of higher generality. So the explanation of the species humanity appeals to the genus, animal, under which it falls. Such top-down explanations are perspicuously represented by demonstrations, the subject matter of the *Posterior Analytics*. This narrower view of explanation is perhaps part of what is driving **Essential**. The interpretative narrative here may be that Aristotle comes to reject **Primacy** when he considers the role of universal substances in demonstrative explanations.

Grounding, by contrast, is by intention a broad formulation that is intended to cover a range of cases. The admission of the *specific* nature of a dependent item may make reference to another item. For example, a colour admits of its ontological status *as a colour* with reference to the surface reflexive properties of a sensible substance. However, the dependency of one item on another may involve the admission of a more general *kind* to which the dependent item belongs. For example, the admission of a dependent item as material or form, or as associated with an essence, may make reference to another item. And finally, the dependency of one item on another may involve the

²² See Peramatzis (2011: 243 n. 11) and Koslicki (*forthcoming a*).

admission of the *category* of the dependent item. I believe that the dependency of universal substances on individuals is a case of this kind, as I will discuss in the next section of the chapter.

Recent work in metaphysics may prove helpful in developing this interpretation. There has been growing consensus that ontological dependence is an explanatory relation of some kind. Among some contemporary metaphysicians, the relation is taken to be a generalization of the grounding relation. The *grounding* relation is the converse of the being *in virtue of* relation: A grounds B just in case B exists in virtue of A. Grounding is often taken to be a factive relation: the substituends for ‘A’ and ‘B’ are facts. Ontological dependence is by contrast typically taken to be categorically unrestricted.²³ Taking up this suggestion, we might hold that A is ontologically dependent on B just in case A possesses its ontological status at least partly in virtue of B. When this condition obtains, an account of that in virtue of which A possesses its ontological status makes reference to B.

The **Grounding** relation is plausibly primitive. We need to accept some primitives, after all, and **Grounding** is a good candidate. If this is the case, then there is no analysis of **Grounding** in terms of more primitive notions. But even if there is no *analysis* of **Grounding**, we may provide a *characterization* of the relation. For example, many take the grounding relation to be irreflexive, asymmetric, transitive and

²³ For the view that grounding is factive, see for example K. Fine (2001). For views of grounding closer to what we are here calling ontological dependence, see for example Schaffer (2009).

hyperintensional.²⁴ I have focused on two of these features in Aristotle's discussion of ontological dependence. The upshot of the rejection of **Existential** is that ontological dependence is hyperintensional—at very least for the *Categories* ontology. And **Primacy** asserts the asymmetry of ontological dependence, again at least when the *relata* are items from the ontology of the *Categories*. Indeed, I find this a preferable reading of 1019^a1-4. An assumption commonly held in the secondary literatures is that Aristotle aims to define ontological priority at 1019^a1-4. Recall, this passage is: “some things then are called prior and posterior ... in respect of nature and substance, such as (*hosa*) those which can be without other things, while the others cannot be without them.” There is little reason, however, to take the passage as offering a *definiens* for natural priority. The Greek (*hosa*), translated as ‘such as’, is often used by Aristotle to introduce an example or amplification. So the passage gives every appearance of being a clarification or illustration. If this is correct, then Aristotle is not *defining* natural priority but simply characterizing it as an asymmetrical relation.

An irreflexive, asymmetric, transitive relation is a strict partial order. So the grounding relation imposes considerable structure on the space of facts. If ontological dependence in Aristotle is also a strict partial order, then the notion imposes considerable structure on the ontology of the *Categories*. Notice, however, that these formal characteristics fail to uniquely define ontological dependence. As such, noting that ontological dependence has certain features underdetermines any single full account of the relation. And indeed, there may not be a unitary account of ontological dependence

²⁴ See for example Schaffer (2010), Trogdon (2012) and Audi (*forthcoming*). Some of these characteristics are controversial. For example, Lowe (1998: 145) and Jenkins (*forthcoming*) question whether grounding is irreflexive.

beyond these formal characteristics shared among several distinct relations. Aristotle may well be a pluralist with respect to ontological dependence. For example, there may be distinct kinds of ontological dependence corresponding to different ontological statuses that, in Aristotle's view, an item may have. For Aristotle's distinction between being said of a subject and being present in a subject gives the appearance of corresponding to different kinds of ontological dependence. The infra-categorical *said of* tie obtaining between an individual and an universal, and the cross-categorical *present in* tie obtaining between a substance and a non-substance, may both be relations of ontological dependence. For one thing, they may both be asymmetric and hyperintentional relations. Yet they may nonetheless be distinct and irreducible relations of ontological dependence. I sketch one line of fleshing out this interpretation below.

6. Case Studies

In this section, I will discuss two case studies. One is a case of ontological dependence. Recall, it is uncontroversial that, in the *Categories*, Aristotle holds that universals are ontologically dependent on individuals. The other is a case of ontological independence. It is uncontroversial that, in the *Metaphysics*, Aristotle holds that forms are ontologically independent from matter and from the hylomorphic compound of form and matter. A central interpretative controversy in Aristotle studies is how to reconcile these two views.

I raised above the worry that **Essential** does not capture the dependence of universal substances on individuals. **Grounding** holds promise for capturing this dependency. Elsewhere I have canvassed the suggestion that universals are mereological

sums of individuals.²⁵ Let me here briefly rehearse this issue. Aristotle often associates individuals and universals with combinatorial notions. For example, at *Cat.* 5 (3^b10-18), Aristotle characterizes individuals as indivisible (*ta atoma*). Moreover, Aristotle uses mereological terminology in certain technical contexts. For example, he provides a semantics for universal categorical propositions in the *Prior Analytics* 1.1 (24^b26-28):

‘One thing is wholly in another’ is the same (*tauton*) as ‘one thing is predicated universally of another’.

The difficulty of interpretation here is partly that Aristotle is employing mereological notions which are foreign to us. Among various senses of ‘whole’, Aristotle distinguishes at *Meta.* 5.26 (1023^b26-33) between what became known as quantitative wholes and integral wholes.

We call a whole ... that which so contains the things it contains that they form a certain unity; and this in two senses—either as each part being one, or as a unity made up out of the parts. For what is universal and what is said wholly, since it is a certain whole, is universal in the sense that it contains many things by being predicated of each and by being all those and each of them one, as for instance man, horse, god are one because they are all living things. But the continuous and limited is also a whole, whenever there is a certain unity from the many.

Aristotle draws the contrast between quantitative and integral wholes by appealing to two distinct kinds of constitution relations. A quantitative whole is homoiomerous: the sum of animals, for example, is composed of parts each of which is itself an animal. An integral whole, by contrast, is heteromerous. A house, for example, is not a quantitative whole: its parts—the roof or the door, say—are not themselves houses; and not all of what can

²⁵ See Corkum (*forthcoming b*). There, however, I do not *identify* universals with mereological sums of individuals. Rather, I argue for the weaker claim that the conditions under which a universal predication expresses a true thought are given in terms of mereological sums of individuals. The association of universals with sums is a traditional line of interpretation that is currently understudied. The starting point for the interpretation in recent scholarship is Mignucci (1996).

be said of a house—that it's final cause is to provide shelter, say—can be said of the parts of a house.

If this is the relevant sense of division, then the claim that individuals are indivisible is the claim that individuals cannot be divided into distinct entities which are homoiomerous parts of that individual, and so that of which the individual is said. Genera, by contrast, are said of species and species are said of individuals. So Aristotle holds that a genus can be correlated to a collection of the various species falling under that genus. A species likewise can be split into subspecies and so on. But individuals provide the limit case, as items which cannot be further divided into parts of the same kind. Aristotle is not as explicit on the mereological relation holding between universals and individuals as we might hope: in his example in 1023^b26-33, above, he only claims that a genus is associated with a whole of which species are parts; in the passage 3^b10-18, also mentioned above, he only claims that individuals are indivisible, not that they are themselves parts of species. However, I conjecture that all universals correlate to sums of which individuals are parts.

It is commonly held that any genuine mereological relation is transitive and weakly supplementary. That is, any part of a part of a thing is itself part of that thing. And a proper part implies a remainder: whenever an object has a proper part, it has more than one proper part. Since Aristotle characterizes the relation holding between a quantitative part and a whole as mereological, he is *prima facie* committed to at least the transitivity and weak supplementation of the relation. Moreover, we have the textual evidence to establish that the quantitative part relation is transitive and weakly supplementary. Aristotle appeals to the transitivity of containment when he introduces the

syllogism known by its medieval mnemonic, Barbara, at *Prior Analytics* 1.4 (25^b32-35):

Whenever three terms so stand to each other that the last is wholly in the middle and the middle is either wholly in or wholly not in the first, it is necessary for there to be a complete syllogism of the extremes.

I discuss this passage at length in Corkum (*ms.*). Aristotle claims that a universal term is predicated of many subjects at *De Interpretatione* 7 (17^a39-b1):

I call a universal that which is by its nature predicated of many things, and individual that which is not; man, for instance, is a universal, Callias an individual.

So Aristotle appears to be committed to weak supplementation. I discuss the evidence for weak supplementation further in Corkum (*forthcoming* b). If the quantitative part relation is transitive and weakly supplementary, it is *genuinely* mereological. And so there is this initial evidence that Aristotle associates universals with mereological sums of individuals.

A pleasing result follows. A transitive and weakly supplementary relation is a partial order. (If the relation is irreflexive, the relation is a strict partial order, since an irreflexive and transitive relation is asymmetric and so antisymmetric. However, a reflexive, transitive and weakly supplementary relation is also antisymmetric.) And so the ties among individuals and universals impose the kind of structure on the world which we would expect from a relation of ontological dependence. Indeed, the above considerations suggest that the relation obtaining between universals and individuals is a distinctive relation of ontological dependency: namely, constitution.

Obviously, on this interpretation, Aristotle's universals are quite different from the universals envisaged by contemporary metaphysicians. For one thing, such universals are not wholly present in each instance. Moreover, as an interpretation of Aristotle, the identification of universals with sums of individuals would be highly controversial. But I will leave discussion for another occasion. For my present purposes, to indicate just one

way in which universal substances might depend on individuals for their ontological status as universals, the preceding sketch suffices.

I turn to the second of the two case studies which I will sketch here. This case will also allow me to return to the extension question. Recall, I noted at the beginning of the chapter that Aristotle does not share all of the intuitions of many contemporary metaphysicians on what the substances are. For example, ordinary objects such as particular men and horses are compounds of form and matter. Perhaps surprisingly to the contemporary reader, Aristotle denies that such objects are substances. Rather, he identifies substance with the compound's form and denies that matter or the compound of form and matter is substance.

Aristotle holds that ordinary mid-sized dry goods are *hylomorphic* compounds – that is to say, complexes of form and matter. In the *Physics*, he requires a material constituent for such things so to explain certain kinds of changes. The matter of a compound is a substratum persisting through the substantial changes of such compounds – their coming into, or passing out of, existence: see for example, *Phys.* 2.3 (194^b24). Recall that being the substratum of change is a mark of substance in the *Categories*. Aristotle arguably retains the view of matter as the substratum of substantial change in the *Metaphysics*, but he there denies that the matter is the substance of the compound for it lacks other marks of substance. In particular, matter is neither demonstrable nor separate: see *Meta.* 7.3 (1029^a28). Since the matter persists through the destruction of the compound, its inseparability cannot be an incapacity to exist apart from either the compound or its form.

Aristotle also denies that the hylomorphic compound *per se* is a substance, for such a complex is posterior to its constituents: see *Meta.* 7.3 (1029^a31). Instead, Aristotle identifies the substance of the thing with its form. As we can see, the independence criterion for substances, expressed in the terminology of separation and priority, does work in the denials that matter or the compound of form and matter are substances: the hylomorphic compound cannot be substance for it is posterior to its constituents; and matter cannot be substance for it is inseparable. I will next suggest that an interpretation of independence such as **Grounding** provides a pleasing explanation of this role.

First, notice that an account of a composite, as a composite, makes reference to its constituents. It is arguably for this reason that the hylomorphic compound is posterior to form and matter. Lacking independence in the sense of some such criterion as **Grounding** precludes the composite from being substance. The criterion also makes good sense of the primacy of form over matter. Aristotle distinguishes between actuality and potentiality and, within actuality, between first and second actuality: see *De Anima* 2.5 (417^a21-^b2), for example. The *second actuality* of a given substance is a set of activities which are characteristic of things of that kind. The *first actuality* of a substance is a state or ability to perform such activities. Aristotle identifies the form with the first actuality. The matter of the hylomorphic compound is a potential for a given first actuality or mere capacity to be in a certain state or possess a certain ability. As such, an account of what it is to be matter *per se* makes reference to the form. This dependency also is manifest in specific accounts of matter: for to be a specific kind of matter makes reference to a specific form. An account of what it is to be flesh or bone, for example, makes reference to what it is to be human. Flesh, as flesh, *just is* the capacity to realize an

ability to engage in human activities. By contrast, although a human is necessarily flesh and bone, an account of what it is to be human does not make reference to flesh and bone.

The question whether it is an essence, as in *Meta. 7*, or the individual substance, as in the *Categories*, which is ontologically basic, is mistaken. It is both. The essence, on this interpretation, just is the concrete particular—not considered as a compound of form and matter but insofar as it is a realized state. I hope that this sketch, despite its brevity, has discharged an obligation I incurred earlier in the chapter: to present one line of interpretation of individual essences and so to illustrate how **Grounding**, **Primacy** and the ontological independence of form might be taken to be consistent.

7. Conclusion

I have discussed a characteristic mark of individual substances in Aristotle, which I labeled **Primacy**: individual substances are ontologically independent from non-substances and universal substances, while non-substances and universal substances are ontologically dependent on individual substances. I have canvassed some of the reasons to endorse the ascription of the thesis to Aristotle and some reasons to hesitate. I have also raised difficulties for interpreting **Primacy** by appeal to various recent views of ontological dependence put forward by Simons, K. Fine and others in contemporary metaphysics. I have not aimed to resolve all of these interpretative difficulties. My aim, instead, has been to indicate a few of the relations among issues in Aristotle studies: for example, the topics of substance and ontological dependence mesh with interpretative questions concerning such other Aristotelian notions as form, essence and universality.

However, I hope also to have brought out the fruitful interaction possible between contemporary metaphysics and Aristotle studies: contemporary metaphysics is an important tool, if applied judiciously, for historical research; and the study of Aristotle is a rich source of philosophical inspiration for the contemporary discussion of ontological dependence.²⁶

WORKS CITED

- Ackrill, J. L. 1963: *Aristotle's Categories and De Interpretatione: Translated with Notes and Glossary*. Oxford: Clarendon Press.
- Albritton, R. 1957: 'Forms of Particular Substances in Aristotle's Metaphysics'. *Journal of Philosophy* 54, pp. 699-708.
- Audi, P. *forthcoming*: 'A Clarification and Defense of the Notion of Grounding'. In B. Schnieder & F. Correia (eds.): *Grounding and Explanation*, to appear with Cambridge University Press, Cambridge, UK.
- Barnes, J. 1984: *The Complete Works of Aristotle: The Revised Oxford Translation*. Princeton: Princeton University Press.
- Cleary, J. 1988: *Aristotle on the Many Senses of Priority*. Carbondale: Southern Illinois University Press.
- Corkum, P. 2008: 'Aristotle on Ontological Dependence'. *Phronesis* 53, pp. 65-92.
- 2009: 'Aristotle on Nonsubstantial Individuals'. *Ancient Philosophy* 29, pp. 289-310.
- 2010: 'Attention, Perception and Thought in Aristotle'. *Dialogue* 42, pp. 199-222.
- *forthcoming* a: 'Aristotle on Mathematical Truth'. *British Journal for the History of Philosophy*.
- *forthcoming* b: 'Aristotle on Predication'. *European Journal of Philosophy*.
- *forthcoming* c: 'Critical Notice of Michail Peramatzis, *Priority in Aristotle's Metaphysics*, Oxford University Press, 2011'. *Canadian Journal of Philosophy*.
- *ms.*: 'Aristotle on Logical Consequence'.
- Correia, F. 2008: 'Ontological Dependence'. *Philosophy Compass* 3, pp. 1013-32.
-

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- Fine, G. 1984: 'Separation,' *Oxford Studies in Ancient Philosophy* 2, pp. 31-88.
- 1985: 'Separation: A Reply to Morrison'. *Oxford Studies in Ancient Philosophy* 3, pp. 159-66.
- Fine, K. 1994: 'Essence and Modality'. *Philosophical Perspectives* 8, pp. 1-16.
- 1995a: 'Ontological Dependence'. *Proceedings of the Aristotelian Society* 95, pp. 269-290
- 1995b: 'Senses of Essence'. In W. Sinnott-Armstrong, D. Raffman & N. Asher (eds.): *Modality, Morality, and Belief, Essays in Honor of Ruth Barcan Marcus*, New York: Cambridge University Press, pp. 53-73.
- 2001: 'The Question of Realism'. *Philosopher's Imprint* 1, pp. 1-30.
- Frede, M. 1987: 'Individuals in Aristotle'. In *Essays in Ancient Philosophy*. Minneapolis: University of Minnesota Press, pp. 49-71.
- Gill, M. 2005: 'Aristotle's Metaphysics Reconsidered'. *Journal of the History of Philosophy* 43, pp. 223–251.
- Gorman, M. 2006: 'Independence and Substance'. *International Philosophical Quarterly* 46, pp. 147-59.
- Hoffman, J. and G. Rosencrantz 1991: 'The Independence Criterion of Substance'. *Philosophy and Phenomenological Research* 51, pp. 835-53.
- Lowe, E. J. 1998: *The Possibility of Metaphysics*. Oxford: Clarendon Press.
- Lowe, E. J. 2005: 'Ontological Dependence,' *The Stanford Encyclopedia of Philosophy (Summer 2005 Edition)*, Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/sum2005/entries/dependence-ontological/>.
- Jenkins, C. forthcoming: 'Is Metaphysical Dependence Irreflexive?'. *Monist*.
- Koslicki, K. forthcoming a: 'Varieties of Ontological Dependence'. In B. Schnieder & F. Correia (eds.): *Grounding and Explanation*, to appear with Cambridge University Press, Cambridge, UK.
- Koslicki, K. forthcoming b: 'Substance, Independence and Unity'. In E. Feser (ed.): *Aristotle on Method and Metaphysics*, to appear with Palgrave/Macmillan.
- Mignucci, M. 1996 'Aristotle's Theory of Predication'. In A. Ignacio and C. María (eds.): *Studies on the history of logic. Proceedings of the III. Symposium on the history of logic*, Berlin: Walter de Gruyter.
- Morrison, D. 1985a: 'Separation in Aristotle's Metaphysics'. *Oxford Studies in Ancient Philosophy* 3, pp. 125-58.
- 1985b: 'Separation: A Reply to Fine'. *Oxford Studies in Ancient Philosophy* 3, pp. 167-74.
- Peramatzis, M. 2008: 'Aristotle's Notion of Priority in Nature and Substance,' *Oxford Studies in Ancient Philosophy* 35, pp. 187-247.
- Peramatzis, M. 2011: *Priority in Aristotle's Metaphysics*. Oxford: Oxford University

Press.

Schaffer, J. 2009: 'On what grounds what'. In D. Chalmers, D. Manley & R. Wasserman (eds.): *Metametaphysics*, Oxford: Oxford University Press.

——— 2010: 'Monism: The Priority of the Whole'. *Philosophical Review* 119, pp. 31-76.

Schnieder, B. 2006: 'A Certain Kind of Trinity: Dependence, Substance, Explanation'. *Philosophical Studies* 129, pp. 393-419.

Sellars, W. 1957: 'Substance and Form in Aristotle'. *Journal of Philosophy* 54, pp. 688-99.

Simons, P. 1987: *Parts: A Study in Ontology*. Oxford: Oxford University Press.

Trogon, K. 2012: 'An Introduction to Grounding'. This volume.