

Themes from Ontology, Mind, and Logic

Present and Past

Essays in Honour of Peter Simons

Edited by

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IN DEFENSE OF SUBSTANCE

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Summary

In his “Farewell to Substance: A Differentiated Leave-Taking”, Peter Simons reaches the provocative conclusion that the concept of substance, as it is employed by metaphysicians, has become obsolete, since in the end there may be nothing at all which answers to it. No harm is done, Simons allows, if we continue to retain an everyday notion of substance, as long as we are aware of the limitations of this practice: there is no reason in general to expect that what is salient from our specifically human point of view will retain a special place in light of our most considered scientific and metaphysical theories of the world. In this paper, I argue that, contrary to Simons’ pessimistic outlook, the concept of substance continues to retain its importance for metaphysics. Among the primary explanatory roles played by the concept of substance in metaphysics is its use in designating certain *kinds* of entities as occupying a privileged position relative to a particular ontology. But disputes over substancehood can also target the *criteria* themselves relative to which an ontologically privileged position is awarded to certain taxonomic categories. In these uses, we see the concept of substance employed in an absolute, a relational and a comparative sense, to designate items as substances simpliciter, as the substances *of* something else, or as *more* or *less deserving of substance status*.

* I am very honored to be able to contribute to a volume which celebrates the work of Peter Simons. I have learned much of what I know about mereology from Simons’ monumental work, *Parts: A Study in Ontology* (Oxford: Clarendon Press, 1987), which I have come to regard as the “bible of mereology”. The painstaking efforts Simons took to familiarize the rest of us with foundational issues in mereology and their applications to central philosophical problems have paid off tremendously in placing questions concerning parts and wholes at the forefront of many current debates in metaphysics. Since it is an accepted practice in analytic philosophy to show one’s respect and admiration for a philosopher by subjecting his or her work to vigorous criticism, I follow this tradition here by giving Simons’ views concerning substance a run for their money.

1. *Introduction*

In his “Farewell to Substance: A Differentiated Leave-Taking”, Peter Simons argues for a provocative position concerning the usefulness and importance of the concept of substance for metaphysics:

Future metaphysics worthy of the name will need to be revisionary, and the concept substance will feature within it, at best, as a derivative construct. It is premature to say how such a future revisionary metaphysics will look, but it will need to both accommodate the advances of science as well as provide the platform for showing how we and our commonsense knowledge, including the knowledge of what have been thought of as individual substances, have a place within the same overall scheme. Substance will not be simply discredited, but its role as a fundamental metaphysical primitive is gone forever. Its formal moments, the notions of independence, of persistence, of unity and integrity, of discernibility, will need to be taken account of, but they will be analytical factors out of which the everyday notion is obtained, probably with some admixture of epistemological content in order to match the notion to its paradigm examples. (Simons 1998, 250)

Simons’ verdict is certainly surprising, given the centrality of the concept of substance across the history of Western philosophy. The notion of substance plays an important role throughout the ancient, medieval and modern period, in the works of philosophers as diverse as Aristotle, Aquinas, Descartes, Leibniz, Spinoza, Locke, Hume and Kant. Even in contemporary metaphysics, the concept of substance has experienced something of a revival, particularly in recent work by neo-Aristotelians and others writing on fundamentality, grounding, ontological dependence, essence, real definition and related notions.¹ It is therefore worth looking back to the considerations which prompted Simons to conclude that “there is no place for a fundamental concept of substance within [revisionary metaphysics], although aspects of the concept are likely to find their place therein” (*ibid.*, 235).

1. See for example Corkum 2008, 2013a, 2013b; Fine 1995; Gorman 2005, 2006a, 2006b; Gorman and Sanford 2004; Hoffman and Rosenkrantz 1994, 1997; Koslicki 2013a, 2015; Lowe 1998, 2006; Peramatzis 2008, 2011; Schaffer 2009; Toner 2008, 2010, 2011.

2. *Simons on substance*

Simons in his discussion speaks of at least two different ways in which the concept of substance can be employed, the first corresponding to what he calls the “humble” or “everyday substances” and the second to what he calls the “metaphysical substances”:

- (i) An ordinary everyday commonsense use of the concept of substance.
- (ii) A technical use of the concept of substance as it is employed by metaphysicians.²

Simons takes (i) to apply to certain kinds of macroscopic concrete particular objects which are accessible to us through our unaided senses and which figure prominently in our experience of the world. When Simons speaks of the everyday substances, he seems to have in mind roughly the primary substances of Aristotle’s *Categories*, e.g., organisms, other natural things which are not alive (e.g., atoms, mountains or planets), as well as artifacts:³

Material things, organisms, geographical features and heavenly bodies are our constant companions through life. We are born of them, marry them, make them, change them, destroy them, buy and sell them, explore them. We fill our waking and sleeping hours talking and thinking about them. (Ibid., 238)

2. In what follows, I will speak of different *uses* of the concept of substance, rather than of different *concepts* of substance. But I have no strong commitments concerning the individuation of concepts or their uses. My arguments could easily be reformulated in terms of a distinction between different substance concepts, whenever I refer to distinct uses of the concept of substance.

3. I am skeptical as to whether there really is such a thing as an ordinary everyday commonsense notion of substance of the kind Simons has in mind, in addition to the technical philosophical uses of the concept. Ordinary speakers of English certainly employ the term, “substance”, e.g., in such phrases as “illegal substances” or “banned substances”. But such non-philosophical uses of the term do not dovetail with the way in which the expression is employed by philosophers. One might think, of course, that ordinary speakers of English nevertheless are in possession of a *concept* of substance, which they employ in an everyday commonsense way, even if they do not use the expression, “substance”, to convey this concept. But it is not clear to me what sort of evidence would support this latter claim. When ordinary speakers of English employ more indiscriminate labels, such as “thing”, they use them to pick out a much wider range of entities than what philosophers have in mind when they assign the privileged position of substances to certain entities in their ontologies. For the purposes of this discussion, however, I will grant Simons’ assumption that the concept of substance has an ordinary everyday commonsense use, in addition to its use as a technical philosophical concept.

In Simons' view, (i), the concept of substance when used in the ordinary everyday way, is "perfectly harmless", as far as it goes, and does not need to be revised or discarded (ibid., 235). In contrast, Simons takes (ii) to be problematic and to have outlived its usefulness, due to a large extent to the following two assumptions which Simons associates with at least certain philosophical uses of the concept of substance:

- (a) The concept of substance must be accepted as a basic unanalyzable primitive.
- (b) The concept of substance applies to entities marked by seven characteristics: independence, ultimate subjecthood, individuality, persistence, referential salience, unity and integrity.

Given the complexity of the subject matter and the many treatments it has received over the years, Simons of course does not presume that the history of Western philosophy presents us with anything like a single unitary philosophical use of the concept of substance. Rather, he proceeds in his discussion by singling out several prominent strands, namely those stated in (b), which he takes to have been traditionally associated with at least certain philosophical uses of the concept of substance. The strands stated in (b), which Simons singles out for special attention, on the whole, fit reasonably well with Aristotle's conception of primary substance in the *Categories*, though even there the match is not perfect, since unity and integrity are not explicitly mentioned by Aristotle in the *Categories* as special marks differentiating the primary substances from everything else. (As we will see below, it is doubtful that Aristotle himself in the *Categories* or elsewhere would have accepted (a) as a constraint governing his philosophical uses of the concept of substance.) More generally, Simons' prominent strands certainly cannot be taken to be representative of how the concept of substance is used in other Aristotelian texts or by other philosophers. At best, then, (a) and (b) together only single out *a* metaphysical use of the concept of substance (or a family of such uses), and not *the* metaphysical use of the concept of substance (since there is no such thing). For the time being, I will follow Simons' usage and speak of *the* metaphysical use of the concept of substance as one which is associated with the constraints or desiderata stated in (a) and (b). I will, however, present reasons below which call into question the wisdom of this practice.

According to the prominent strands singled out by Simons, the substances are, first, *ontologically independent* beings, i.e., entities which are

in a certain sense self-sufficient. Simons construes the self-sufficiency or ontological independence in question as consisting in an entity's ability to exist while relying on nothing more than possibly the existence of its own proper parts. An individual human being, such as Socrates, in Simons' view, would count as ontologically independent in this sense, but the particular instance of paleness, for example, which inheres in Socrates at any particular time at which he exists, would not.⁴ Secondly, the substances are *ultimate subjects of predication*. While it can be said of Socrates that he is pale, it can only be said of Socrates himself that he is Socrates (and here only in the sense of identity). Thirdly, the substances are *individuals*, rather than universals. Other things besides Socrates can be pale as well; but Socrates himself is not the kind of thing which can be shared between numerically distinct entities by being wholly present in different regions of spacetime. Fourthly, the substances are capable of *persisting through intrinsic change* over time. When Socrates goes from being pale at one time to not being pale at another, it is Socrates himself who undergoes intrinsic change with respect to certain of his characteristics. In contrast, if the belief that Socrates is pale goes from being true to being false, it does so merely as a result of the intrinsic change which takes place in Socrates. Fifth, the substances are preferred *objects of reference*: they occupy a privileged position with respect to our discourse, thoughts and actions. Natural languages, for example, reserve a proper name for Socrates, while paleness is standardly represented by means of a general term. Finally, the substances are marked by *unity* and *integrity*. To illustrate, Socrates, while he is alive, contrasts with the corpse he leaves behind in that the parts of the former are integrated into a living organism in such a way that they compose a unified whole, while the parts of the latter are only loosely assembled and slowly disintegrate into their surroundings.⁵

4. In this context, we have to exclude *causal* requirements, such as Socrates' need to breathe air filled with oxygen in order for him to survive. For reasons I have stated elsewhere (Koslicki 2013a, 2013b), Simons' construal of ontological independence as modal existential independence is not my own preferred notion. For one thing, modal existential independence does not yield the most plausible reading of Aristotle's conception of primary substance as developed in the *Categories*. In addition, modal existential independence turns out not to be the most fruitful notion from the point of view of formulating a plausible criterion of substancehood more generally. Since I have discussed these issues in detail in other work, it will not be necessary to dwell on them here. See also Corkum 2008, 2013a, 2013b and Peramatzis 2008, 2011, for further discussion.

5. Simons' work in mereology, especially Chapter 9 of Simons 1987, has contributed greatly to our understanding of integrity as a property of wholes.

Simons reaches the following overall verdict with respect to the everyday use of the concept of substance in (i). Insofar as we retain (i), we must acknowledge that the concept of substance, when used in the ordinary everyday commonsense way, does not satisfy all the desiderata cited above in (a) and (b). Simons therefore concludes that the everyday substances are not metaphysical substances; and the everyday use of the concept of substance is not what metaphysicians have in mind when they employ the notion in a technical role.

Simons' main reasons for thinking that the concept of substance, when used in the ordinary everyday commonsense way, cannot be construed as basic and therefore fails the first constraint in (a) are as follows. For one thing, according to Simons' preferred analysis (cf., Simons 1994), everyday substances turn out to be complex trope bundles of a certain kind, and are hence further analyzable into more basic constituents, viz., the tropes or particularized property instances which characterize these wholes. As a result, Simons takes the concept of substance in its everyday use to be a defined notion and therefore non-basic. Secondly, Simons notes that, in order to explain the characteristics and behavior of everyday substances, our best scientific theories (in particular, quantum mechanics) find themselves appealing to such entities as quarks, fermions and electrons which are not immediately accessible to us through our unaided senses. While these micro-physical entities play a central role in our comprehensive scientific understanding of the world, they do not figure directly into our commonsense representations.

In connection with the second constraint, Simons argues that the everyday substances do not satisfy all of the characteristics specified in (b) and hence are not to be identified with the metaphysical substances. While Simons is happy to ascribe *some* of the seven characteristics identified above to the everyday substances, he adduces both metaphysical and scientific considerations to the effect that these entities do not in general satisfy *all* of these characteristics simultaneously. In particular, the everyday substances turn out not to be the straightforwardly re-identifiable individuals metaphysicians might have hoped for.

On the positive side, Simons 1994 offers a careful treatment of independence, unity and integrity, according to which these properties can be successfully ascribed to everyday substances. In addition, given their prominent role in our experience of the world, Simons of course has no qualms granting that everyday substances are suitable to act as preferred objects of reference. Their status as ultimate subjects of predication is

furthermore unproblematic, since they are the bearers of properties (represented by the tropes in each bundle) but are not themselves properties exemplified by other trope bundles. The everyday substances, for Simons, thus satisfy at least five out of the seven characteristics he singles out for special consideration.

Metaphysical troubles do arise, however, when it comes to the ascription of the remaining two characteristics to the everyday substances: their alleged status as individuals, capable of persisting through intrinsic change over time. In this connection, Simons points to relatively familiar puzzles concerning the individuation of kinds and their members; identity through time; as well as possible threats of indeterminacy specifically with respect to the boundaries of individuals. In some cases, controversy arises, for example, over whether a given entity (e.g., a coral reef or an aspen grove) really should be regarded as an individual, rather than a collection. In other cases, theorists disagree over how entities, especially those which do not reproduce sexually (e.g., proteins or genes), are best grouped into kinds. Thirdly, the persistence of individuals over time can pose tricky questions for metaphysicians, e.g., how many car-parts one can replace before the old car ceases to exist and a new car has come into being. Finally, everyday substances such as mountains or geographical regions are well-known to be subject to vagueness, as is brought out for example when we try to determine where the Outback begins and ends or whether a particular rock is part of Mt. Everest or the adjacent mountain, Nuptse. What is worse, metaphysical concerns over individuation and persistence, according to Simons' assessment, are not confined to the macroscopic realm, but affect even the micro-physical entities which are referred to and quantified over by our best scientific theories, leading him to speculate pessimistically:

Suddenly it begins to look as though substance, far from being a widely applicable commonplace, is a concept rarely if ever fulfilled, an idealized limit of little or no use to metaphysics. (Ibid., 250)

Based on these considerations, Simons concludes that metaphysicians might as well wake up to the reality that their cherished concept of substance has become obsolete, since in the end there may be nothing at all which meets all seven characteristics listed in (b) and falls under a basic, unanalyzable, primitive concept of substance in compliance with (a). No harm is done, in Simons' view, if we continue to talk about the everyday substances, as long as we are aware of the limitations of this practice. If the concept of substance, as used in the everyday way, retains any usefulness at

all, it does so only as a convenient device for singling out entities that are easily accessible from our specifically human point of view. But there is no reason in general to expect that these anthropomorphically salient objects will retain their special place in light of our most considered scientific and metaphysical theories of the world.

III. *The continued importance and usefulness of the concept of substance for metaphysics*

III.1 *The non-basicality of substance*

Simons' first constraint in (a) states that the concept of substance is to be accepted as a basic unanalyzable primitive. This constraint is open to several interpretations. For one thing, as it was stated above, (a) is most naturally read as concerning the simplicity or complexity of the *concept* of substance itself. Alternatively, Simons may also be targeting positions according to which what is in question is the *metaphysical* simplicity or complexity of the entities to which the concept is applied.⁶ Presumably, on either reading, the important question at issue is whether it is possible to explain *in more basic terms* why some particular item is classified as a substance; or whether, instead, once an entity has been designated as a substance, all explanation must be presumed to come to a stop.

Consider in this connection Aristotle's own conception of primary substance in the *Categories*, which forms much of the backdrop for Simons' discussion. Aristotle allows that the entities he classifies there as primary substances are metaphysically complex in a certain way; but the metaphysical complexity in question is not of the right kind to yield a proper explanation as to why some particular item is classified as a primary substance. For, according to the ontology of the *Categories*, entities which are classified as primary substances may have *proper parts* which are themselves

6. A third possibility is that Simons takes the simplicity or complexity of the concept of substance to be directly connected to, or even inherited from, the metaphysical simplicity or complexity of the entities to which the concept applies. This third reading is encouraged by Simons' appeal to his own trope-theoretic account of everyday substances, according to which these entities turn out to be complex trope bundles. Simons seems to be suggesting that the concept of substance itself, when used in the everyday way, must be regarded as non-basic as a result of the metaphysical complexity which he attributes to the entities falling under this concept.

classified as primary substances (e.g., Socrates and Socrates' arm).⁷ But the mereological complexity Aristotle attributes to these entities does not lead to an explanation in more basic terms as to why some particular item, e.g., Socrates, is classified as a primary substance in the *Categories*. For we could not very well account for Socrates' status as a primary substance in the *Categories* by appeal to the fact that his arms, legs, head, etc., are also classified as primary substances. Presumably, what disqualifies Socrates' proper parts from figuring in an adequate explanation of Socrates' status as a primary substance in the *Categories* is that a mereological analysis of Socrates into his proper parts does not yield an analysis of Socrates into constituents which play a *more basic* explanatory role than Socrates himself, since both Socrates and his proper parts are assigned the *same* status within the ontology of the *Categories*, namely that of primary substances. The occurrence of the term, "basic", in (a) is therefore crucial for a proper understanding of Simons' first constraint, since it is needed to distinguish varieties of complexity which are relevant to the explanatory tasks at hand from those which are irrelevant. (More on these issues below.)⁸

The *Categories* is generally agreed to be one of the earliest, if not *the* earliest, of Aristotle's written works. In contrast, when we turn to such texts as the *Physics*, *De Anima* and the *Metaphysics*, we notice that Aristotle's views concerning metaphysical complexity have undergone a definitive shift. For a variety of reasons, Aristotle comes to believe that such entities as individual living organisms, which were previously among his ontological front-runners in the *Categories*, are further analyzable into *more basic*

7. Aristotle is careful to distinguish his "being in a subject" relation from parthood (cf., *Cat.2*, 1a24–25) and is thereby able to maintain in the *Categories* that the parts of substances are themselves substances:

We need not be disturbed by any fear that we may be forced to say that the parts of a substance, being in a subject (the whole substance), are not substances. For when we spoke of things *in a subject* we did not mean things belonging in something as *parts*. (*Cat.5*, 3a29–32) This and all further passages from Aristotle's *Categories* come from the translation by J. L. Ackrill (see Barnes 1984).

8. Given that Simons finds it necessary to appeal to a notion of basicness as well suggests that he himself makes use of some ranking of entities by their degree of explanatory priority. In light of the explanatory roles played by the concept of substance, which will be discussed further below, the resulting ordering of entities by their degree of explanatory priority preserves a key ingredient in the concept of substance, as it is used by metaphysicians. Simons himself therefore does not in the end fully abandon all that is philosophically important in the notion of substance, despite his desire to do so.

constituents, viz., their matter and their form.⁹ To illustrate, at the conclusion of his so-called “striptease” argument in *Met. Z.3*, Aristotle assigns a decidedly secondary status to matter/form compounds precisely because of their composite nature:

The substance compounded of both, i.e. of matter and shape, may be dismissed; for it is posterior and its nature is obvious.” (*Met. Z.3*, 1029a30–32; translation by W. D. Ross)¹⁰

As this passage indicates, although Aristotle still regards matter/form compounds as substances (*ousiai*), these entities have apparently forfeited their status as *primary* substances and are now classified as *posterior*, due to their particular brand of metaphysical complexity. Presumably, once the hylomorphic analysis is on the table, Aristotle has the resources to explain in more basic terms, at least in certain cases, why some particular item is classified as a substance. For example, in response to the question, “But why is Socrates a substance?”, Aristotle can now point to the presence of Socrates’ form (viz., his soul) in his matter (viz., a human body capable of sustaining a human soul). In light of Simons’ first constraint, however, it should strike us as curious that Aristotle would persist in calling matter/form compounds “substances”, even while in the same breath noting that their hylomorphic structure leads them to occupy a posterior explanatory rank relative to their main competitors in his *Metaphysics* ontology, especially form.

On the *conceptual* side as well we find that Aristotle tolerates a certain degree of non-basiness in the notion of substance, even in cases in which the conceptual complexity in question has no direct metaphysical correlate. Famously, Aristotle characterizes the primary substances in the *Categories* as ultimate subjects of predication in the sense that every-

9. According to my own mereological reading of Aristotle’s hylomorphism, the matter and the form are construed not only as constituents of a hylomorphic compound but as proper parts, strictly and literally speaking and according to a single notion of parthood (see Koslicki 2008). However, it is not necessary in the current context to enter into the controversial question of whether Aristotle in fact subscribes to the view that the matter and the form are constituents (mereologically or otherwise) of a hylomorphic compound. The important (and hopefully less controversial) point for present purposes is that Aristotle treats matter and form as explanatorily *more basic than* matter/form compounds at least with respect to certain explanatory tasks which take on center-stage in such texts as the *Physics*, *De Anima* and the *Metaphysics*. I will have more to say below concerning the operative notion(s) of explanatory basicness as well as the relevant tasks relative to which explanatory basicness is to be understood.

10. This and all subsequent passages from the *Metaphysics* come from the translation by W. D. Ross (see Barnes 1984).

thing else is either “said of” or “present in” them as subjects (cf., *Cat.5*, 2b3–6).¹¹ Whether Aristotle intends his characterization in the *Categories* to amount to an outright *definition* of what makes something a primary substance is controversial. But at the very least we can read him as putting forward a *criterion* of some sort which can be construed as either necessary or sufficient for something’s being a substance.¹² Either way, Aristotle’s ultimate subject criterion in the *Categories* provides the basis for an informative answer in conceptually more basic terms to the question of why some particular item deserves to be classified as a primary substance in the *Categories*.¹³

We have in this section encountered reasons for thinking that, at least for Aristotle, the philosophical usefulness and importance of the concept of substance does not hinge on accepting this notion as a basic unanalyzable primitive, as Simons’ first constraint in (a) would suggest. Rather, in Aristotle’s view, the classification of certain entities as substances is in some cases compatible with the availability of an explanation in more basic terms as to why a particular item is classified as a substance. The interesting and difficult task now before us is to elucidate further how the designation of an entity as a substance can contribute to certain central explanatory goals in metaphysics, even when it is admissible that either the concept or the entities themselves are subject to further analysis.

11. The first of these relations (“being said of a subject”) is illustrated by an essential predication of the form, “Socrates is human”, in which an individual (Socrates) is said to be a member of a species (human being). The second relation (“being in a subject”) is exemplified in accidental predications of the form, “Socrates is pale”, in which an accidental feature (paleness) is said to inhere in a substantial individual (Socrates).

12. Devereux 2003 for example reads Aristotle’s ultimate subject criterion as providing only a *sufficient* condition for something’s being a substance. Individuals in the category of substance satisfy this criterion by being neither said of nor present in anything else as a subject. In contrast, species and genera in the category of substance fulfil only one half of the ultimate subject criterion: while they are not present in anything as a subject, they are still predicable of other things as subjects. Given that Aristotle in the *Categories* nevertheless classifies substantial species and genera as *secondary* substances, Devereux reasons that the ultimate subject criterion can only be read as providing a sufficient, but not also a necessary, condition for substancehood. There is, however, also the possibility of interpreting the ultimate subject criterion as a condition that is both necessary and sufficient for an entity’s status as a *primary* substance in the *Categories*.

13. The complexity at issue in the *Categories* is merely conceptual and lacks a direct metaphysical correlate, since entities which are classified as primary substances in the *Categories* are *not* taken to be *composed* of an ultimate subject of predication as a constituent, along with other constituents. Rather, Aristotle in the *Categories* thinks of these entities as themselves *being* (identical to) ultimate subjects of predication.

3.2 *Taxonomic vs. non-taxonomic substancehood*

Among the most important explanatory roles played by the concept of substance in philosophical contexts are what I will call a “*taxonomic*” and a “*non-taxonomic*” role. First, in its taxonomic role, philosophers employ this notion to single out certain *kinds* of entities (e.g., macroscopic concrete particular objects), without thereby simultaneously committing themselves to the idea that these entities must be assigned a privileged ontological position within their respective ontologies. When the concept of substance is utilized in this first taxonomic way, the substances appear merely as one among many entries in a catalogue of beings. The resulting inventory might for example constitute an answer to the existential question, “What is there?”, which Quine saw as central to the discipline of ontology. In other contexts, however, philosophers employ the concept of substance in a second non-taxonomic role, in order to indicate that certain kinds of entities (taxonomically speaking) deserve to be singled out for special treatment in the ontology in question. Much confusion has resulted over the years from a failure to distinguish between these two very different, but equally important, roles played by the concept of substance in philosophical contexts.

To illustrate, consider Aristotle’s well-known list of ten categories in which “substance” appears as his first entry:

Of things said without any combination, each signifies either substance or quantity or qualification or a relative or where or when or being-in-a-position or having or doing or being-affected. (*Cat.4*, 1b25–27)

Here, Aristotle draws our attention to a ten-fold division among different *kinds* of being (taxonomically speaking). In order to set up a hierarchical ordering among these entities, Aristotle appeals to his two relations, “being in a subject” and “being said of a subject”, as follows:

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 [human being] or the individual horse. The species in which the things primarily called substances are, are called *secondary substances*, as also are the genera of these species. For example, the individual [human being] belongs in a species, [human being], and animal is a genus of the species; so these—both [human being] and animal—are called secondary substances. (*Cat.5*, 2a11–19; Ackrill’s italics)¹⁴

14. I have taken the liberty of replacing “man” with “human being” in Ackrill’s rendition of this passage.

Given his ultimate subject criterion, certain kinds of entities (taxonomically speaking), e.g., individual living organisms, turn out to be “most strictly, primarily, and most of all” deserving of the title, “substance”, in Aristotle’s *Categories* ontology, while others rank below them: the so-called “secondary substances” (viz., the species and genera to which substantial individuals belong); as well as the *non*-substances (viz., the individuals, species and genera belonging to the other nine taxonomic categories listed earlier).

In view of these importantly different roles played by the notion of substance in philosophical contexts, it now emerges that Simons’ everyday and metaphysical uses of the concept of substance, distinguished earlier in (i) and (ii), work at cross purposes. For when Simons speaks of the *everyday* substances, he is most naturally read as having in mind a *taxonomic* division among entities. In this context, it would be decidedly odd to ask for example, “Is Socrates an *everyday* substance?”, since it is taken as fixed that individual living organisms count as paradigm everyday substances.¹⁵ In contrast, when Simons speaks of the *metaphysical* substances, he has in mind a *non-taxonomic* use of the concept of substance. In this context, it is perfectly legitimate to ask, “Is Socrates a *metaphysical* substance?”. In fact, individual living organisms, even though they count as paradigmatic everyday substances in the context of Simons’ discussion, turn out not to be metaphysical substances, given the constraints in (a) and (b).

The concept of substance, then, can be used by metaphysicians, among other things, in the service of two distinct explanatory tasks: first, to classify entities taxonomically; and, secondly, to impose a non-taxonomic ordering of some kind onto the entities included in a given ontology. The second project moreover requires metaphysicians to engage with the further question of *why* certain items are to be assigned a privileged position within a particular ontology. For this reason, philosophical disputes concerning substancehood often center on the very *criteria* themselves by means of which substance status is awarded to certain taxonomic categories within a given ontology. Simons, for the purposes of his discussion, settles on a particular choice of criteria; but not everyone will agree with Simons’ preference. (More on these issues below in Section III.4.)

15. Even in its taxonomic uses, however, the concept of substance may admit of interesting borderline cases. In a context in which it is presupposed that individual living organisms are paradigmatic everyday substances, for example, one may nevertheless wonder about the status of bacteria, if bacteria constitute a borderline case of living organisms.

3.3 *Absolute, comparative and relational substancehood*

The concept of substance in its philosophical applications can take on further explanatory roles depending on whether it is used in an *absolute*, a *relational*, or a *comparative* way:

ABSOLUTE SUBSTANCEHOOD: x is a substance *simpliciter*.

RELATIONAL SUBSTANCEHOOD: x is *the substance of* (or *a substance of*) y.

COMPARATIVE SUBSTANCEHOOD: x is *more deserving of substance status than* y.

In its first absolute role, the concept of substance is used to designate entities as substances *simpliciter*. In its second relational role, the concept of substance picks out a relation between pairs of entities, x and y, when x is *the substance of*, or *a substance of*, y. When used in the third comparative way, the concept of substance ranks entities by the degree to which they are *deserving of substance status*.

All three of these explanatory roles are evident in Aristotle, but unfortunately not always clearly distinguished by Aristotle himself or his commentators. For example, at *Cat.5*, 2a11–19 (cited earlier), Aristotle classifies individual living organisms, as well as their species and genera, as substances *simpliciter*, using an absolute notion of substancehood. In the very same passage, however, we find Aristotle identifying certain items as *primary* substances (e.g., individual living organisms) and others as *secondary* substances (e.g., the species and genera to which these individual living organisms belong). In this usage, Aristotle ranks entities in a comparative way, by the degree to which they satisfy the ultimate subject criterion at work in the *Categories*.^{16, 17} The third relational use of the concept of substance is operative for example in the opening lines of *Met.Z.6*:

We must inquire whether each thing and its essence are the same or different. This is of some use for the inquiry concerning substance; for each thing is thought to be not different from *its* substance [*tēs heautou ousia*], and the

16. See also for example *Cat.5*, 2b7–8: “Of the secondary substances the species is *more a substance than* [*mallon ousia*] the genus, since it is nearer to the primary substance”.

17. Aristotle also holds that no species is any more a secondary substance than any other species; and no individual is any more a primary substance than any other individual (cf., *Cat.5*, 2b22–24). This statement is of course compatible with the idea that, on the whole, the primary substances are more deserving of substance status (i.e., more substances) than the secondary substances.

essence is said to be *the substance of* each thing [*hē hekastou ousia*].” (*Met.Z.6, 1031a15–18*; my italics)

In this passage, Aristotle speaks of the essence of each thing, relationally, as *the substance of* that thing.¹⁸

Simons, in his discussion, appears to be exclusively concerned with an absolute conception of substance, according to which entities are classified as either everyday substances or metaphysical substances *simpliciter*. Much of the philosophical usefulness and importance of the notion of substance, however, stems not only from its applications as an absolute concept, but also from its relational and comparative uses. When an entity (e.g., Socrates’ form) is designated relationally as *the substance of*, or *a substance of*, another (e.g., Socrates), we can expect the first entity to answer certain specifically metaphysical questions which arise in connection with the second entity, e.g., questions concerning existence, identity, essence, parthood, dependence, unity, and the like. (See Section III.5 for further discussion.) Moreover, as we have observed in earlier sections, when an entity is classified in a comparative way as *more deserving of substance status than* (or *more of a substance than*) another, the resulting ordering of entities indicates the degree to which a certain taxonomic category of entities is assigned a privileged position in a given ontology.

18. It is exceedingly difficult to determine how exactly Aristotle conceives of the connections between his absolute, relational and comparative uses of the concept of substance. It is by no means clear that Aristotle wants to be committed to the following principle connecting relational and absolute uses of the concept of substance: if *x* is *the substance of* (or *a substance of*) *y*, then *x* is a substance *simpliciter*. In fact, in a case in which *y* is a substance *simpliciter* and *x* is *actually* present in *y*, this inference would lead to trouble with a principle Aristotle endorses in *Met.Z.13*, according to which no substance can have other substances present in it actually (cf., 1039a2–14). (The *Met.Z.13* principle would contradict Aristotle’s earlier view from the *Categories*, discussed in Section III.1, according to which a primary substance can have proper parts which are themselves primary substances, but only under the assumption that the proper parts of a primary substance are present in it actually.) Moreover, consider the following attempt at connecting comparative and absolute uses of the concept of substance: *x* is a substance *simpliciter* just in case *x* is *more deserving of substance status* than any other entity relative to *all* comparative criteria of substancehood. Such a principle has the consequence that nothing would be classified as a substance *simpliciter*, since no single type of entity meets *all* the comparative criteria of substancehood Aristotle invokes along the way. Unfortunately, I will have to leave the further investigation of these interesting questions for another occasion.

3.4 *Preferred cases and criteria*

In his most pessimistic moments, Simons speculates that perhaps nothing at all qualifies as a metaphysical substance. Given that he thinks of metaphysical substancehood in an absolute non-taxonomic way, Simons' assessment does not directly speak to the philosophical usefulness and importance of the concept of substance in its other explanatory roles. Moreover, whether nothing at all occupies the ontologically privileged position associated with absolute non-taxonomic uses of the concept of substance of course depends crucially on the *criteria* of substancehood which are invoked in a particular context. Simons operates with a conception of metaphysical substancehood according to which this notion is governed by the constraints specified in (a) and (b). Under this construal, he arrives at the conclusion that the concept is only ever satisfied (if at all) under very special circumstances, and not generally by the macroscopic concrete particular objects which figure prominently in our human experience of the world or by the entities referred to and quantified over by our best scientific theories. But Simons' strategy raises the question of why those who are sympathetic to an absolute non-taxonomic conception of substancehood should accept these particular constraints as reflective of what they have in mind when they assign a privileged ontological position to certain taxonomic categories of entities.

Consider for example Simons' own ontology, according to which everyday substances turn out to be complex trope bundles and are hence classified as non-basic, both on conceptual and metaphysical grounds. We may nevertheless wonder whether this ontology in fact contains metaphysical substances after all, only (contrary to what we might have expected) the metaphysical substances, in this ontology, would turn out to be *tropes*, rather than everyday substances. Under this construal, Simons' first constraint in (a) would presumably be satisfied, since he takes tropes to be both conceptually and metaphysically basic. But we would nevertheless run into difficulties with respect to the second constraint in (b), since even tropes, on Simons' conception, do not meet all seven of the characteristics cited above. Among other things, tropes turn out not to be ontologically independent, as some of their existential needs can only be met when they find themselves in the presence of other tropes in the form of certain kinds of trope bundles. Furthermore, given that tropes are particularized property instances, they do not function as ultimate subjects of predication; rather, they are what is predicated of a subject, viz., the

trope bundle. (See Simons 1994 for a defense of this particular version of trope theory.)

At this point, however, we face a decision: we can either retain (a) and (b) and continue to operate with a substance concept governed by these constraints; or we can reject (a) or (b) and opt instead for an alternative conception of substancehood that is governed by a different set of constraints. The first route, if Simons is right, leads to an outmoded substance concept with little or no application to the real world, as presented to us by commonsense or science. The second route, however, is very much a live option as well for those who are convinced that the concept of substance retains its usefulness and importance for metaphysics. In the past, philosophical disputes concerning substancehood have often focused precisely on the very *criteria* themselves by means of which certain taxonomic categories of entities are assigned a special role relative to a particular ontology. Such philosophical disputes concerning the criteria of substancehood have in no way been closed off by the considerations Simons brings to bear on this discussion.

3.5 *Metaphysical explanations*

Armed with these distinctions, we can now return to the puzzle I raised earlier in connection with Aristotle's pronouncement at the end of his "striptease" argument in *Met.Z.3*, repeated here:

The substance compounded of both, i.e. of matter and shape, may be dismissed; for it is posterior and its nature is obvious. (*Met. Z.3*, 1029a30–32)

Given that Aristotle classifies matter/form compounds, here and elsewhere, as substances *simpliciter*, using an absolute (rather than a relational or comparative) construal of the notion of substance, we can further refine the question at issue and ask why Aristotle is willing to designate an entity as a substance *simpliciter*, despite assigning to it an explanatorily posterior rank.

The apparent oddity inherent in Aristotle's practice is alleviated by taking substancehood *simpliciter* in this context as playing a *taxonomic*, rather than a non-taxonomic, role. In this way, the occurrence of "ousia" in the above passage from *Met.Z.3* is comparable to that in Aristotle's list of the ten categories cited earlier (cf., *Cat.4*, 1b25–27). As the *Met.Z.3* passage brings out, it would be a mistake to assume in general that whatever is classified as a substance *simpliciter*, in a taxonomic sense, will also be desig-

nated as explanatorily prior relative to a non-taxonomic use of the notion of substancehood. In fact, Aristotle attempts to establish in *Met.Z* that form is *more deserving of substance status than* both matter and the matter/form compound with respect to various non-taxonomic comparative considerations he invokes along the way. And yet, ironically, Aristotle is also hesitant to classify forms as substances *simpliciter*.¹⁹ Instead, he usually opts for the relational designation of form as *the substance of* the matter/form compound.²⁰

Relative to this ontology, then, we encounter the following combination of classifications:

- (1) A matter/form compound is a substance *simpliciter*.
- (2) A matter/form compound is *less deserving of substance status* than its form.
- (3) A form is *the substance of* a matter/form compound.
- (4) A form is *not* a substance *simpliciter*.

Given the different explanatory roles played by the notion of substance, it makes perfect sense from Aristotle's point of view to designate matter/form compounds as substances *simpliciter* (using a taxonomic absolute conception of substancehood), despite the fact that these entities are also ranked as *less deserving of substance status*, and hence as explanatorily posterior, than their forms (using non-taxonomic comparative criteria of substancehood), while form is in turn classified only relationally as *the substance of* a matter/form compound.

After Aristotle announces, in the passage from *Met.Z.3* cited above, that the substance composed of matter and form may be "dismissed" on the grounds that "it is posterior and its nature is obvious", he continues as follows:

It is agreed that there are some substances among sensible things, so that we must look first among these. For it is in an advantage to advance to that which

19. Aristotle's qualms about designating forms as substances *simpliciter* might at least in part be traced to his adherence to the *Met.Z.13* principle, mentioned earlier, according to which no substance (*simpliciter*) can be present in another substance (*simpliciter*) actually. Aristotle seems to be motivated in this connection primarily by concerns over unity.

20. See for example the closing paragraph of *Met.Z.17*. Although Aristotle here does not explicitly mention form, he is usually read as having in mind form when he speaks of *the substance of* a matter/form compound, which he also characterizes as its principle, its nature and the primary cause of its being (cf., 1041b27–29).

is more intelligible. For learning proceeds for all in this way –through that which is less intelligible by nature to that which is more intelligible; and just as in conduct our work is to start from what is good for each and make what is good in itself good for each, so it is our work to start from what is more intelligible to oneself and make what is intelligible by nature intelligible to oneself.” (*Met.Z.3*, 1029a33–1029b12)

Like everyone else, then, metaphysicians start with what is salient to them and ask questions about these entities which are specific to their discipline, e.g., questions concerning existence, identity, essence, parthood, dependence, unity, and the like. The entities which form the starting-point, but by no means the end-point, of metaphysical inquiry are called “substances” in a taxonomic sense (*viz.*, Simons’ everyday substances). In the course of their investigation, metaphysicians may well find themselves “dissolving” these experientially salient objects into explanatorily more basic constituents: e.g., matter and form (in Aristotle’s case) or tropes (in Simons’ case). But progress in metaphysics, *i.e.*, advancing from “what is intelligible to us” to “what is intelligible by nature”, does not require that anything in the end be classified as a substance *simpliciter* in an absolute non-taxonomic sense (Simons’ metaphysical substances). Rather, we may well end up with an ontology in which what is highlighted as explanatorily prior qualifies for substance status only in a relational or comparative sense. All the while, we are nevertheless well within the bounds of the study of being *qua* being as focused on the principles and causes of substances:

But everywhere science deals chiefly with that which is primary, and on which the other things depend, and in virtue of which they get their names. If, then, this is substance, it will be of substances that the philosophers must grasp the principles and the causes. (*Met. Γ.2*, 1003b16–19)

4. Conclusion

In this paper, I have argued that the concept of substance retains its importance and usefulness for metaphysics, despite Simons’ powerful considerations to the contrary. First, the philosophical significance of this notion does not require that either the concept itself or the entities falling under it are accepted as basic unanalyzable primitives. Secondly, philosophers employ the concept of substance not only to differentiate among different taxonomic categories of entities (e.g., Simons’ everyday substances), but also to mark some of these as occupying a privileged

ontological position (e.g., Simons' metaphysical substances). Thirdly, philosophically significant uses of the concept of substance for metaphysics do not necessitate that anything be classified as a substance *simpliciter* in an absolute non-taxonomic sense (Simons' metaphysical substances), since the concept can also be employed relationally and comparatively ("x is *the substance of* or *a substance of* y"; "x is *more deserving of substance status than* y"). Fourth, whether anything does qualify for substance status in one of these senses crucially depends on the criteria of substancehood themselves which are at play in a particular context. Simons proceeds by selecting one particular set of criteria; but any such choice is of course controversial.

Are the everyday substances metaphysical substances? Are there any metaphysical substances at all? How these questions are answered depends on the particular use of the concept of substance at issue and the constraints governing this use. Whether any particular such use is to be preferred over others itself requires a philosophical discussion involving the concept of substance. Metaphysicians therefore ought to hold on to their concept of substance; it has by no means outlived its usefulness and importance for their discipline.²¹

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