

# SUBSTANCE AND IDENTITY-DEPENDENCE<sup>1</sup>

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## Introduction

Metaphysicians have often held that a crucial mark of substance, perhaps even *the* crucial mark of substance, is independence, and a number of versions of this approach can be found in the recent literature.<sup>2</sup> One of the most interesting involves the claim that substances are independent in the sense that they are not identity-dependent. In this paper I explore that version by looking at the writings of its main advocate, Jonathan Lowe.<sup>3</sup> As we shall see, the identity-dependence account faces serious difficulties, but it can be modified to address them.<sup>4</sup>

## Substance and existence-dependence

To understand Lowe's theory, it is necessary to begin by discussing something that seems rather different from identity-dependence, namely, existence-dependence. That is because Lowe defines substance as follows:

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<sup>1</sup> I am grateful to Jonathan Lowe for correspondence on the issues discussed here and for comments on an earlier version of this paper. I am also grateful for editorial comments, referees' comments, and comments from [other acknowledgements deleted for blind reviewing].

<sup>2</sup> See for example Kit Fine, "Ontological Dependence," *Proceedings of the Aristotelian Society* 95 (1995): 269-90; Joshua Hoffman and Gary S. Rosenkrantz, "The Independence Criterion of Substance," *Philosophy and Phenomenological Research* 51 (1991): 835-53; Joshua Hoffman and Gary S. Rosenkrantz, *Substance Among Other Categories* (Cambridge: Cambridge University Press, 1994), pp. 89-143; Joshua Hoffman and Gary S. Rosenkrantz, *Substance: Its Nature and Existence* (London and New York: Routledge, 1997), pp. 43-72; Benjamin Schnieder, "Substanzen als ontologisch unabhängige Entitäten," in W. Löffler (ed.), *Substanz und Identität: Beiträge zur Ontologie* (Paderborn: Mentis Verlag 2002), pp. 11-40; Peter Simons, *Parts* (Oxford: Oxford University Press, 1987), pp. 305-310; Peter Simons, "Farewell to Substance: A Differentiated Leave-Taking," *Ratio* 11 (1998): 235-252.

<sup>3</sup> Lowe's theory first appeared in "Ontological Dependency," *Philosophical Papers* 23 (1994): 31-48 and "Primitive Substances," *Philosophy and Phenomenological Research* 54 (1994): 531-52. These later appeared in modified form as chapters six and seven of his *The Possibility of Metaphysics* (Oxford: Oxford University Press, 1998). Page references in this paper will be to the book version and will be given in the text.

<sup>4</sup> For a mostly positive commentary on Lowe's theory from an advocate of a different version of the independence approach, see Gary S. Rosenkrantz, "The Possibility of Metaphysics: Substance, Identity, and Time," *Philosophy and Phenomenological Research* 64 (2002): 728-36.

$x$  is a substance =df  $x$  is a particular and there is no particular  $y$  such that  $y$  is not identical with  $x$  and  $x$  depends for its existence upon  $y$  (140).

Taking the idea of dependence for existence at face value, it might seem fairly easy to think of an objection. Consider, for instance, Plantinga's idea that many things depend on God in the sense that it is "up to God," i.e., within God's control, whether they exist or not. One does not have to share Plantinga's theism to suspect that there might be a problem here for Lowe. Lowe's definition of substance implies that if there were a God, then either no substance would depend on God for existence or else nothing would be a substance (except perhaps God himself); but a definition of substance should be neutral on such matters, implying neither that disjunction nor its negation.

Lowe has a way to respond. Consider his understanding of dependence for existence:

$x$  depends for its existence upon  $y$  =df Necessarily, the identity of  $x$  depends on the identity of  $y$  (147).

Lowe immediately glosses this formula by saying that  $x$ 's being identity-dependent on  $y$  means that "*which* thing of its kind  $y$  is fixes (or at least helps to fix) *which* thing of its kind  $x$  is (147)." Consider, for example, Socrates' death; that it is *this* death, rather than *some other* death, is (at least in part) fixed by the fact that Socrates is *this* human being and not *some other* human being. If this is what Lowe means by dependence for existence, then it is altogether possible for something to depend on God for existence in Plantinga's sense while not depending on God for existence in Lowe's sense. Thus something could be a substance in Lowe's sense while still depending on God for existence in Plantinga's sense.

There is a question whether the objector ought to feel satisfied with this. On the one hand, it is true that Lowe's definition of substance is immune to the objection when existence-dependence is interpreted as identity-dependence. On the other hand, this way of understanding existence-dependence seems unnatural and idiosyncratic. Lowe's approach seems only verbally to give us an account of substance in terms of existence-dependence.

Fortunately, however, coming up with a good theory of existence-dependence is not necessary for coming to terms with Lowe's thoughts on substance. Consider something else that he says:

$x$  is a substance if and only if  $x$  is a particular and there is no particular  $y$  such that  $y$  is not identical with  $x$  and the identity of  $x$  depends on the identity of  $y$  (151).

Lowe classes this formula as a theorem about substance and not as a definition of it, but we can transform it into a definition as follows:

LS  $x$  is a substance =df  $x$  is a particular and there is no particular  $y$  such that  $y$  is not identical with  $x$  and the identity of  $x$  depends on the identity of  $y$ .

Although this is not Lowe's definition of substance, it is fair to call it "Lowean," as it uses Lowe's central idea that identity-dependence is the crucial factor determining whether something is a substance or not. It is also Lowean inasmuch as it categorizes as substances all and only those entities that Lowe's official definition so categorizes. The difference, obviously, is that it defines substance directly in terms of identity-dependence, instead of defining it directly in terms of dependence for existence and only indirectly in terms of identity-dependence.

### Understanding identity-dependence

But what does LS really amount to, and is it satisfactory? To answer these questions, we must understand what Lowe means by one thing depending on another for identity. As already noted, Lowe provides a somewhat informal description according to which one thing's being identity-dependent on another consists in its having its identity at least partially fixed by that other. He later goes on to offer a more formal definition:

The identity of  $x$  depends on the identity of  $y$  =df Necessarily, there is a function  $F$  such that it is part of the essence of  $x$  that  $x$  is the  $F$  of  $y$  (149).

Grasping this idea requires understanding two points: what it means for there to be a function  $F$  such that  $x$  is the  $F$  of  $y$ , and what it means for this to be part of  $x$ 's essence. Let us consider them in turn.

What does it mean for there to be a function  $F$  such that  $x$  is the  $F$  of  $y$  or, as I shall sometimes say, for  $x$  to be "a function-entity with respect to  $y$ "? To start with an example that

Lowe gives (148), consider a particular marriage  $x$ , and let  $y$  and  $z$  be the two spouses. There is a “marriage with  $z$ ” function such that, if there takes place a marriage between  $y$  and  $z$ , then  $x$ , the marriage, is the marriage-with- $z$  of  $y$ .

Lowe offers no elucidation of this notion beyond giving the example just described, but it permits of a fairly clear explication if we think in terms of relations. As a preliminary attempt, let us say that  $x$ 's being a function-entity with respect to  $y$  means that there is some relation that only  $x$  has to  $y$ . This covers simple cases such as that of Sophroniscus, the father of Socrates. He, and only he, stands in the “father of” relation to Socrates, and that is why he is “the father of Socrates.” Sophroniscus is a function-entity with respect to Socrates because there's some relation such that he, and only he, has that relation to Socrates.

Not all cases are so simple, however. Suppose that Socrates is playing a game of chess and a game of draughts at the same time. It seems right that the chess game should count as a function-entity with respect to him, and yet it also seems impossible to spell this out in terms of there being some single relation that only that game has to Socrates. For example, the game has the “played by” relation to Socrates, but so does the game of draughts; and it seems likely that for any other single relation one might think of, there could always be some other entity (not necessarily the draughts game) that had that relation to him at the same time. This shows that the notion of being a function-entity needs to be thought of in a richer way. Having the “played by” relation to Socrates is not enough to make the game be a function-entity with respect to him, but perhaps the conjunction of (a) having the “played by” relation to Socrates and (b) being a chess game is sufficient to do so; or, if Socrates is playing two chess games at once, one against Phaedo and one against Diotima, then it might be sufficient to add (c) having the “played by” relation to Diotima. (Item (a) is not superfluous, because Diotima too might be playing two chess games.)

The point can be made more generally as follows. If there is an  $F$  such that  $x$  is the  $F$  of  $y$ , then the content of  $F$  must include some relation that  $x$  has to  $y$  (otherwise  $x$  would not be the  $F$  of  $y$ ), and furthermore it must be the case that only  $x$  is the  $F$  of  $y$  (otherwise  $x$  would not be *the*  $F$  of  $y$ ), but the burden of guaranteeing uniqueness need not be borne solely by the relation between  $x$  and  $y$ , i.e., the relation to  $y$  needn't be sufficient, all on its own, to ensure that only  $x$  is the  $F$  of  $y$ . This is illustrated by the example just given: for the chess game to be a function-entity with respect to Socrates, it has to have a relation to Socrates, and it has to have a collection

of features singling it out from all other entities, but the relation to Socrates need only be one of the members of that collection.

That suggests the following:

$x$  is a function-entity with respect to  $y$  =df There is some collection  $C$  of relational and non-relational features such that (i)  $x$  has all the features in  $C$ , (ii) only  $x$  has all the features in  $C$ , and (iii) one of the members of  $C$  is a relation  $R$  such that  $x$  has  $R$  to  $y$ .

Sophoniscus is a function-entity with respect to Socrates because he is the sole entity that has a certain relation to Socrates; Socrates' game of chess with Diotima is a function-entity with respect to Socrates because it is the sole entity that has a certain relation to Socrates as well as some other features; and of course the same game is, by parallel reasoning, a function-entity with respect to Diotima. Or to return to Lowe's own example, the marriage called  $x$  is the marriage with  $z$  of  $y$  because  $x$  and only  $x$  is both a marriage with  $z$  and related to  $y$  by the marriage-of relation.

Now given that some entity  $x$  is a function-entity with respect to  $y$ , we can ask whether  $x$  can exist without being a function-entity with respect to  $y$ . Sophroniscus is the father of Socrates, but Sophroniscus can exist without being the father of Socrates, as indeed he did at one time. By contrast, the marriage called  $x$  cannot exist without being  $y$ 's marriage to  $z$ ; it is  $y$ 's marriage to  $z$  necessarily. And furthermore something can be one kind of function-entity necessarily and another kind of function-entity contingently: being careful to note what is and what is not a rigid designator, we can for example say that a certain marriage is necessarily the marriage to Xanthippe of Socrates but only contingently the first marriage of Socrates; in some other possible world, Socrates might have been married to Diotima before he was married to Xanthippe (cf. 148).

That there is more than one way to be a function-entity is very important, and this leads to the second main point in understanding Lowe's definition of identity-dependence. Merely being a function-entity with respect to  $y$  is not sufficient for being identity-dependent on  $y$ ; if it were, then being the husband of Xanthippe would make Socrates dependent on her for his identity, which would in turn make him not a substance. At the very least, it appears,  $x$ 's identity-dependence on  $y$  requires *necessarily* being a function-entity with respect to  $y$ . But Lowe holds that even this is not enough; Socrates is, necessarily, the sole member of {Socrates},

but it would be wrong to think that he is identity-dependent on that set and therefore not a substance (148).

Lowe proposes to solve the problem by saying that something is identity-dependent only if it is “essentially” a function-entity. Now according to the commonly accepted way of interpreting essence, there is no difference between saying that Socrates is *necessarily* dependent on a certain set and saying that he is *essentially* dependent on it. If Lowe’s proposal is to make any sense, therefore, he must have it in mind to abandon this modal approach. And so he does:

[W]hereas it is part of the ‘essence’ of  $\{x\}$  that it contains  $x$  as its sole member, it is *not* part of the ‘essence’ of  $x$  that it is the sole member of  $\{x\}$  (because whereas one cannot understand what  $\{x\}$  is without understanding that it contains  $x$  as its sole member, one certainly *can* understand what  $x$  is without understanding that it is the sole member of  $\{x\}$ ) (148).

It would be a mistake to over-focus on Lowe’s use of the word “understanding” here. His idea is not that the essence of something depends on our way of understanding it. His point is rather that there is such a thing as “what  $x$  is” and that genuine understanding of  $x$  fastens not on all of the features without which  $x$  cannot exist—these include too many far-flung irrelevancies such as  $x$ ’s belonging to this or that set—but rather only on what  $x$  is, which is a narrower matter. Socrates is a person, however one might care to define that, but “what he is” does not include whether he belongs to this or that set. Naturally this is not a fully-developed theory of essence, as Lowe himself admits (149). One could point to that fact as a way of raising doubts about Lowe’s account, but for the purposes of this paper what Lowe says is clear enough.<sup>5</sup>

Having arrived at a better understanding of essence and of being a function-entity, we can reformulate Lowe’s idea of identity-dependence as follows:

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<sup>5</sup> My interpretation of what Lowe means by essence is supported by his favourable reference (149n10) to the work of Kit Fine. Katherine Hawley points to the same connection, and uses the unclarity in what Lowe says to raise doubts about his theory of substance, in her review of *The Possibility of Metaphysics* in *The British Journal of the Philosophy of Science* 50 (1999): 478-82. For criticism of Fine on essence and my own alternative to the modal understanding of essence, see my “The Essential and the Accidental,” forthcoming in *Ratio* (2005).

ID The identity of  $x$  depends on the identity of  $y$  iff Necessarily, there is some collection  $C$  of relational and non-relational features such that it is part of the essence of  $x$ —part of what  $x$  is—that (i)  $x$  has all the features in  $C$ , (ii) only  $x$  has all the features in  $C$ , and (iii) one of the members of  $C$  is a relation  $R$  such that  $x$  has  $R$  to  $y$ .

This is Lowe’s idea, but with the notion of being a function-entity spelled out and with a reminder that Lowe is using a non-modal account of essence.

In this section, I have explained Lowe’s notion of identity-dependence. Now it is time to assess the Loweian approach to substance that rests on that notion and, if necessary, revise it.

### The Loweian understanding of substance—some objections and revisions

At issue is LS, the idea that a substance is a particular that is not identity-dependent on any particular distinct from itself. An objection could be raised as follows. If there is a God, then it seems that everything other than God is identity-dependent on God in Lowe’s sense; but this would commit the advocate of LS to the view that either there is no God or else there are no substances other than God. But presumably a theory of substance would want to remain neutral on this sort of question: most theists and non-theists would agree that a theory of substance ought to allow that something that necessarily depends on God (if there is a God) is not *ipso facto* a non-substance. Socrates is a substance whatever his relationship to the deity.

But a response is available to the advocate of LS. Even though things other than God might be function-entities with regard to God, and even necessarily so, they still might not be *essentially* function-entities with regard to God in the special sense of “essentially” that Lowe is interested in. A look at Aquinas is revealing in this connection. He held a view that supports the idea that substances are necessarily function-entities with respect to God: according to him, each substance is necessarily the imitator of the divine essence in a distinctive way. But he also held that dependence on God is necessary but non-essential,<sup>6</sup> and it seems likely that reasoning that makes one think that dependence on God is necessary but non-essential will also make one think

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<sup>6</sup> For the first point, see Thomas Aquinas, *Summa theologiae* I, q. 47, art. 1; for the second, see *Summa theologiae* I, q. 44, art. 1, ad 1. The reasonableness of the claim that something’s being created by God is extra-essential can be brought out in the following way: if the essence of thing, as Lowe thinks and Aquinas would agree, is what the thing is, then saying that a thing’s relation to God is essential to it implies, wrongly, that atheists and agnostics cannot know what things are—it implies, for example, that atheists and agnostics cannot know what an electron is.

that imitating God in a certain way is necessary but non-essential. If so, then LS would not imply that entities like Socrates are identity-dependent on God; even if they are necessarily function-entities with respect to God, they are not essentially function-entities with respect to God.

Another objection, or rather a pair of related objections, can be raised with regard to necessity of origins. Lowe says that his way of thinking requires rejecting necessity of origins (152, 165-6), and this would seem to apply to LS as much as to Lowe's own definition. One could start from the assumption that origins are necessary and argue that LS is therefore false, or one could argue merely that a theory of substance ought not to imply a stance either way on necessity of origins.

Both objections could be answered by showing that LS is, despite what Lowe says, neutral on the question of necessity of origins. A promising way of doing so is as follows. Even if some substances are necessarily function-entities with respect to their origins, the non-modal understanding of essence allows one to argue that they are not *essentially* function-entities with respect to their origins, which would mean that they are not identity-dependent on them. This would keep open the possibility that there are substances with necessary origins.

But it is far from obvious that substances are never essentially function-entities with regard to their origins. Consider a water molecule W, and consider also the atoms it originated from, the oxygen atom O and the two hydrogen atoms H1 and H2. It could be argued that W is essentially the water molecule composed of H1, H2, and O, and from this it would follow (according to LS) that W is not a substance, despite the fact that it seems a fairly good candidate for substantiality. So while I consider the response outlined in the previous paragraph promising, I also think it would be premature to call it decisive. Since it would lead us too far from our path to investigate whether substances are ever essentially function-entities with regard to their origins, I will for the moment simply set aside the question of necessity of origins and return to it only after I have dealt with two other objections.

The first of these can be introduced by observing that Lowe takes it as confirming the correctness of the identity-dependence approach that it classes as non-substances particulars of the following types: non-individuals, collectives, spatial parts, temporal parts, events, places, and times. Non-individuals, i.e., entities like particular masses or quantities of matter that do not form countable unities ("one cannot intelligibly inquire *how many* particular masses or quantities of water currently occupy a certain room"), are not substances, and this is because they are

identity-dependent on their parts (160-161). Collectives, such as a pile of stones, are mereological sums, and they too are identity-dependent on their parts (162). Spatial parts, such as the top half of something, are non-substances because they are identity-dependent on the particulars of which they are parts (162), and the same goes for temporal parts, such as “my desk during the first year of its existence” (162). Events, which Lowe understands to be changes in persisting concrete particulars, are non-substances because they are identity-dependent on the persisting concrete particulars in question (162-3); perhaps this is the category to which marriages belong. Places and times, finally, are identity-dependent on the particulars that occupy space and time (163-4).

Any reservations I might have about Lowe’s claims that these entities are not substances would only take the form of wondering whether entities like “times” ought to be countenanced in the first place; for present purposes, I happily grant that he is right in saying that all the entities on his list are identity-dependent and therefore that his theory classifies them correctly as non-substances. Unfortunately, however, there is a kind of non-substance that gets counted as a substance by LS (and by Lowe’s own definition too, of course). Consider the Berlin Philharmonic. The Berlin Philharmonic as a musical ensemble, not as a collective, has continued to exist for years as the same orchestra, despite changes in its membership. It is a particular not identity-dependent on its members or on anything else.<sup>7</sup> Yet an orchestra is not a substance. It does not have enough internal unity.

One could say in response that the Berlin Philharmonic is unified to some extent and also that some substances are more unified than others, and then argue on that basis that the Berlin Philharmonic is a substance after all, just a rather loosely unified one. I am willing to grant the first two points, but allowing musical ensembles and the like to count as substances is much too radical a departure from the intuitive notion that the theory of substance is supposed to make sense out of. Allowing that would turn the theory of substance into the delineation of an ontological category (identity-independent entity) of which substance in the usual sense is just a sub-category.

Being a substance thus requires an entity’s being unified in some special way. Working out the details of such a requirement would not be easy, but on the other hand it does seem likely

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<sup>7</sup> It may in fact be the case that this particular orchestra is identity-dependent on a constitution or on some other sort of founding document, but clearly there could be an identifiable orchestra existing through time that was not dependent in that way.

that a satisfactory account could be constructed.<sup>8</sup> For present purposes it will be acceptable to give the identity-dependence approach the benefit of the doubt and assume that this problem is not insurmountable. So that gives us the following:

RLS  $x$  is a substance =df  $x$  is a particular,  $x$  is unified in the right way, and there is no particular  $y$  such that  $y$  is not identical with  $x$  and the identity of  $x$  depends on the identity of  $y$ .

RLS is a Revised Lowean definition of Substance, i.e., LS with a unity requirement added.

The move from LS to RLS is not enough to solve all problems, however. Consider the idea that something can have essential proper parts, as illustrated by the previously-mentioned water molecule  $W$ : the oxygen atom  $O$  and the hydrogen atoms  $H1$  and  $H2$  would seem to be essential proper parts of  $W$ . If “essential” is taken in the non-modal way discussed above, then an entity with essential proper parts is identity-dependent on those parts, and therefore RLS (and LS too, for that matter) imply that there cannot be any substances with essential proper parts. In a way reminiscent of the issue of necessity of origins discussed above, we can think of this implication as giving rise to a pair of objections. First, on the assumption that there are substances with essential proper parts, RLS is false. Second, even without that assumption, RLS suffers from the disadvantage of requiring its advocate to take a stand on an issue that he or she ought, *qua* substance-theorist, to remain neutral on.

The advocate of RLS can, to be sure, deny the key assumption of the first objection and say that there can be no substances with essential proper parts. This appears implausible, however, as the case of the water molecule  $W$  shows, and furthermore Lowe himself wants to keep open the possibility that there are substances with essential proper parts (151-2, n. 12), which makes such a move out of place here. Furthermore, such a strategy leaves the second objection unanswered.

A different response, one that addresses both objections, can be drawn from Lowe himself, who argues that it is an error to suppose that if an entity has an essential proper part, it is therefore identity-dependent on it and thereby disqualified from being a substance. Lowe’s

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<sup>8</sup> Joshua Hoffman and Gary S. Rosenkrantz, while not including a unity requirement in their definition of substance, provide good insights into the question of substantial unity: see their “On the Unity of Compound Things: Living and Non-Living,” *Ratio* 11 (1998): 289-315, and *Substance: Its Nature and Existence*, pp. 73-149.

analysis runs as follows. If one understands “ $x$  has  $y$  as an essential proper part” to mean that it is essential to  $x$  that it be “the [one and only] whole of which  $y$  is a proper part,” then  $x$ ’s having  $y$  as an essential proper part would imply that  $x$  was identity-dependent on  $y$ . But this is not the right interpretation of “ $x$  has  $y$  as an essential proper part”; even if  $x$  has  $y$  as one of its essential proper parts, still  $y$  might later become a proper part of some other whole  $z$ . And this possibility shows, according to Lowe, that  $x$ ’s having  $y$  as an essential proper part does not imply that  $x$  is identity-dependent on  $y$ : “[I]t is still possible for  $y$  to become an essential proper part of another composite substance  $z$ , whence the presence of  $y$  as an essential proper part of a substance has no special bearing on the identity of that substance” (151-2, n. 12).

But Lowe’s analysis here is faulty. Although he is right to reject the above-mentioned interpretation of “ $x$  has  $y$  as an essential proper part,” and also right about the related fact that  $y$ ’s being an essential proper part of  $x$  does not mean that  $y$  can belong only to  $x$ , it does not follow that entities with essential proper parts are not identity-dependent on them. Lowe’s analysis presupposes an overly-strong and in fact non-Loweian understanding of identity-dependence. The fact that  $x$ ’s having  $y$  as an essential proper part is consistent with  $y$ ’s possibly belonging to some other entity  $z$  does show something, of course: it shows that  $y$  is not able, all on its own, to fix  $x$ ’s identity. But whether  $y$  can do so is irrelevant. Identity-dependence as Lowe understands it does not require that the depended-on entity be able, all on its own, to fix the dependent entity’s identity; all that is needed, as we saw earlier, is for the depended-on entity to *help* fix the dependent entity’s identity. To illustrate the point by the case of  $W$ , it is true that  $O$  might belong to any number of water molecules and therefore also true that  $O$  does not, all on its own, fix  $W$ ’s identity. But  $O$  does *help* to fix  $W$ ’s identity, and that is enough. Put generally, then, if  $y$  is an essential proper part of  $x$ , then since it helps to fix  $x$ ’s identity,  $x$  is identity-dependent on  $y$ .

The point can be made more rigorously in terms of ID, as follows.  $x$  is identity-dependent on  $y$  if it is essential to  $x$  that there is a collection of features that only  $x$  has, one of which is a relational feature that  $x$  has to  $y$ . But if  $x$  has  $y$  as an essential proper part, then it is essential to  $x$  to be related to  $y$  by the having-as-proper-part relation. Therefore, by ID,  $x$  is identity-dependent on  $y$ ; it simply does not matter that  $y$  could, upon the demise of  $x$ , become an essential proper part of some other entity  $z$ .

So an entity with essential proper parts is identity-dependent on them, and therefore RLS does imply that no substance can have essential proper parts. Since avoiding this implication is desirable, we must move one step farther beyond LS by saying that relations (including

dependence-relations) to one's own parts do not count against being a substance. Consider then the following:

RLS\*  $x$  is a substance =df  $x$  is a particular,  $x$  is unified in the right way, and there is no particular  $y$  such that  $y$  is not identical with  $x$ ,  $y$  is not one of  $x$ 's parts, and the identity of  $x$  depends on the identity of  $y$ .

If identity-dependence on parts does not count against something's being a substance, then something with essential parts can still be a substance. Nor is this so *ad hoc* as it might at first appear. The theory of substance is supposed to make sense out of the pre-philosophical idea of an existing particular thing like a dog or a cat, and the motivation for thinking about substances in terms of independence is that they seem to have a kind of self-sufficiency that entities like properties or events do not. But relations to one's *own* parts do not count against metaphysical *self-sufficiency*.<sup>9</sup>

RLS\*, it should be noted, is unable to do something that LS and RLS can do, namely, exclude non-individuals and collectives on the grounds that they are essentially related to their parts. This is because RLS\* holds that essentially having a relation to one's parts is consistent with being a substance. RLS\* can still exclude them, however, by means of the unity requirement, which is needed in any event to cover the Berlin Philharmonic case.

Now earlier I raised the question of necessity of origins, noting that the advocate of LS had to answer the charge that LS wrongly demanded that the substance-theorist hold a controversial thesis, namely, that entities with necessary origins are *ipso facto* barred from being substances; I pointed out that the advocate of LS could appeal to the essential/necessary distinction in response, and I also noted that this strategy might not be truly successful. I want to conclude my discussion of RLS\* by showing how it handles the question of necessity of origins.

First note the following distinction. Sometimes philosophers who talk about origins are talking about principles that do not become parts of the entities of which they are the origins—the parents of an organism are a good example of origins in this sense. But sometimes philosophers who talk about origins are talking about principles that do become parts of the

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<sup>9</sup> For more on dependence on one's own parts as not counting against substantiality, see Peter Simons, "Farewell to Substance," esp. 236, 243-44. See also Kit Fine, "Ontological Dependence," 269-70.

entities of which they are the origins—the atoms H1, H2, and O are origins of W in this sense. Now entities can outlive their origins in the first sense, but at least in some cases they cannot outlive their origins in the second sense; organisms can outlive their parents, but W cannot outlive H1, H2, and O.<sup>10</sup>

Both the advocate of LS and the advocate of RLS\* can, without appealing to the necessary/essential distinction, accept necessity of origins for substances when origins of the first sort are in question. Origins in this sense can be outlived by the entity whose origins they are; and nothing can have a relation to something that does not exist; therefore, entities with necessary origins in the first sense do not have necessary relations to them, let alone essential relations to them.<sup>11</sup>

What about origins in the second sense? Here the advocate of LS must appeal to the necessary/essential distinction, because if a particular had its origins not just necessarily but also essentially, it would be a function-entity with regard to them and would therefore not be a substance. The difficulty facing this strategy, as we saw, was that entities like W at least appear to be substances that are not merely necessarily but also essentially function-entities with respect to their origins. But the advocate of RLS\* does not need to appeal to the necessary/essential distinction to allow for origins of this sort, nor does he or she need to insist that no substance is essentially a function-entity with respect to its origins. According to RLS\*, relations to parts do not count against something's being a substance, even if these relations are essential. So while LS (and RLS too) might not be able to accept the possibility that a substance has necessary origins of the second sort, RLS\* is so able.

### Summary and conclusion

After spelling out Lowe's approach and recommending that it be understood as expressed by LS, I pointed out that this approach to substance is too wide and proposed adding a unity requirement; the result was RLS. I then pointed out that RLS was committed to a thesis that a

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<sup>10</sup> It seems rash to claim that origins of the second sort can never be outlived. Perhaps there are entities that cannot have had different original parts but that can nevertheless lose them along the way; this seems to be the way in which organisms are related to their originating DNA strands.

<sup>11</sup> This remark assumes a controversial theory of time, one according to which past entities are not accorded existence; but since that theory is shared by Lowe (84-105; see esp. 103-4), the assumption is legitimate here.

theory of substance ought not to be committed to, showing at the same time that Lowe's attempt to free his own theory from this commitment was unsuccessful and thus unavailable to the advocate of RLS. This line of reasoning led to RLS\*, which was then shown to have the additional advantage of being neutral about necessity of origins where RLS, LS, and Lowe's own theory might not be. I conclude that while the basic Lowean approach is not satisfactory, a modified version of it is a very good theory of substance indeed.