

## INDEPENDENCE AND SUBSTANCE

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Entities such as Rusty the cat are very different from entities such as Rusty's features or the aggregates he belongs to. Calling entities such as Rusty "substances," metaphysicians have devoted a lot of effort to understanding what sets them apart, and one point in particular that has drawn their attention is independence: it seems right to say that to be a substance is to be an independent entity, an entity that does not depend on others. But since it also seems right to say that paradigm substances such as Rusty do depend on other things—for example, Rusty depends on his master for trips to the veterinarian—, it is necessary to discern the precise form of independence that substances have, i.e., the precise form of dependence that they do not have.

In the philosophical tradition in which the idea of substance has received the most attention, i.e., the Aristotelian-scholastic tradition, the relevant sense of independence is understood as non-inherence, where inherence is understood (putting the point a bit roughly to be sure) as the mode of existence characteristic of attributes or features. Substance appears, from this point of view, as one term of a distinction between what exists in itself and what exists in another, and what exists in another is, ultimately, an attribute of something that exists in itself. Felix exists in himself, and his color exists in another, namely, him.<sup>1</sup>

In contemporary analytic metaphysics, by contrast, one cannot presume agreement with this sort of exhaustive distinction between things and the features that depend on them. Quite a few analytic metaphysicians countenance additional types of entity, understanding them to be irreducible to the traditional types; important examples include events and states of affairs. Further, quite a few analytic metaphysicians understand substances to be dependent on some or even all of their features, rather than the other way around.<sup>2</sup> All this means that an uncomplicated re-assertion of the traditional view will not be very persuasive in an analytic context.

One way to revive the Aristotelian-scholastic approach would be by tackling the various issues that make the current philosophical environment inhospitable to the traditional view. One could, for example, argue against the legitimacy of ontological categories such as events or states of affairs; one could argue that there is no sense in which substances depend on their features; and so on. This strategy is not the one that I will adopt here. Instead, I

propose to rethink the notion of inherence in a way that is significantly broader than the traditional one, broader in a way that makes it serviceable in the context of analytic metaphysics while still preserving the spirit of the traditional idea.

A convenient way of framing my proposal is as a commentary on some remarks by Kit Fine, an analytic philosopher whose thoughts lean—and professedly so—in a somewhat Aristotelian direction. Fine holds that a substance is “anything that does not depend upon anything else or, at least, upon anything other than its parts,” and by “dependence” here Fine means what he calls “ontological” dependence: one thing depends on a second in this sense if and only if the second is included in the first’s essence.<sup>3</sup> I show that even though Fine does not give us an adequate account either of essence or of inclusion in essence, it is still possible to develop a valuable theory of the independence of substance on the basis of his remarks. I also show that this notion of dependence is not by itself sufficient to capture the notion of substance. Thus I propose both to contribute to the revival and development of the independence approach to substance and to raise questions about the project of characterizing substance solely in such terms.<sup>4</sup>

A note on the paper’s organization. Fine makes it clear that he does not accept the now-standard modal understanding of essence, the view that identifies a thing’s essential features with those it cannot exist without and its accidental features with those it has but can exist without. For present purposes, however, it is best to defer discussion of the correct understanding of essence and discuss the two main questions—essence, and inclusion in essence—in reverse order. In the first section of the paper, therefore, I take essence in the standard way and ask what it means for one thing to include another in its essence; only in the paper’s second section, which addresses the problem of essence directly, do I call the standard view into question. Having developed the desired broad notion of inherence in this two-step fashion, I show in the third main section of the paper that the sort of independence that results from combining the results of the first two sections is a merely necessary condition of substantiality, not a sufficient one.

### INCLUSION IN ESSENCE

Fine identifies a thing’s essence or “being” with certain propositions or properties, and in line with this he describes “ontological” dependence by saying that “[t]he being of an object... will then depend upon another object in the sense of involving that other object; it [the other object] will appear as a constituent of a component proposition or property.”<sup>5</sup>

Unfortunately, however, Fine tells us basically nothing about what this means. Noting that

his account rests on the assumption “that propositions and properties may intelligibly be said to contain objects as constituents,” he says: “This is an assumption that, for better or worse, I shall just accept, although without any definite commitment as to what the objectual structure of propositions or properties might be.”<sup>6</sup>

It seems, then, that we are going to have to think out for ourselves what inclusion in essence is. Since Fine shows sympathy for the Aristotelian tradition of metaphysics, it seems reasonable to propose an understanding of inclusion in essence by using an idea that harkens back to the medieval scholastics and even to Aristotle himself. Many of them thought that some entities “belong to” other entities or exist “in” them or are “of” them; some medievals expressed this idea by saying that an entity of this sort is not a being in the ordinary sense but instead “of a being”—an *entis* and not an *ens*.<sup>7</sup> Entities like these, because it is essential to them to belong to or be “of” other entities, can be thought of as including those other entities in their essences. Consider Rusty and his particular redness. To be this redness is to be the redness of *Rusty*. The essence of this redness includes Rusty himself. (I speak of the essence of one particular redness even though philosophers have sometimes doubted the propriety of talking about the essence of a particular as such. It is possible to reformulate what I say here in ways that acknowledge this concern, but doing so would distract from the main issues.)

Now in cases like these it has been traditional to use the word “inherence,” and in what follows I will adopt it for the sake of conciseness, saying not “Rusty’s redness contains Rusty in its essence” or “Rusty is contained in the essence of Rusty’s redness” but instead simply “Rusty’s redness inheres in Rusty.” As already noted, however, I will be giving the word a meaning wider than the traditional one. My basic proposal involves thinking in terms of relations: to say that one thing inheres in another is to say that it is essential to the first that it have some relation to the second. First I will set this out more carefully, and then I will refine it in response to a series of objections. Taking “*a*” and “*b*” as non-empty names, consider the following formulation:

I1      *a* inheres in *b* =def there is some relation R such that *a* cannot exist unless it has R to *b*.

I1 spells out the basic proposal using a modal interpretation of the word “essential” instead of the word itself, in order to leave room for later reconsiderations of its meaning. The formula

should be read so that “*a*” and “*b*” refer to distinct entities; nothing is gained by allowing something to inhere in itself.

To see more concretely what is meant, consider the following. Rusty’s redness is related to Rusty by, let us say, the “color of” relation. Saying so might sound trifling, but in fact it is an indicator of an all-important substantive point, as will become clear by the end. This is a case of inherence because the redness cannot exist without having that relation to that specific thing, Rusty. (It is left open whether Rusty’s redness inheres in Rusty in any other way, as well as whether it inheres in anything other than Rusty.) By contrast, although Rusty cannot exist without being related to some color-token or other, this is not a case of inherence because there is no specific color-token he must be related to.

As already noted, inherence thus understood is a wider notion than what has traditionally been called by that name, and such wideness is to be desired: it makes the idea available to philosophers who want to acknowledge entities that do not easily find a place within an Aristotelian-scholastic framework. Consider an event, such as Socrates’ and Xanthippe’s wedding, and think of a philosopher who treats events as belonging to a distinct ontological category, not reducible to actions or features or anything else. Such a philosopher could treat this wedding as inherent on the grounds that it has the “wedding of” relation to Xanthippe and cannot exist without having that relation to some specific thing, namely, her. (This is to use the word “exist” in a wide sense according to which events can be said to exist or not exist, not in the narrower sense according to which one says that events do not “exist” but rather “occur.”) Or, the same philosopher could deny that the wedding is inherent while still accepting the account of inherence given in this paper by saying that the wedding has no relation of the right sort. And similar remarks would, of course, apply to other putative entity-types: aggregates or facts, for example.

Now for the first objection and first modification. The objection is that Rusty necessarily has a relation like “is an instance of” or “participates in” with respect to the universal Felinity; from this it would follow, according to I1, that Rusty inheres in Felinity, which would mean that he is not a substance. One could try to argue against the presuppositions of this objection by, for example, arguing that universals do not exist in any relevant sense. A more neutral reply is to grant that substances—like non-substances—have necessary relations to universals, but then say that they do not have necessary relations to particulars. Consider then the following:

I2  $a$  inheres in  $b$  =def  $b$  is a particular and there is some relation  $R$  such that  $a$  cannot exist unless it has  $R$  to  $b$ .

Both Rusty and his redness are necessarily related to universals, he to the universal Felinity and his redness to the universal Redness. But only his redness, a non-substance, is necessarily related to a particular, i.e., Rusty. Thus I2 allows us, at least as far as the first objection is concerned, to treat the redness as inherent while treating Rusty as non-inherent.

Naturally this does not take care of all possible objections. For example, some philosophers hold that at least some things contain their (proper) parts necessarily.<sup>8</sup> If so, then it would follow from I2 that such things inhere in their parts. The way to avoid being saddled with the implausible view that things with essential parts are *ipso facto* non-substances, and at the same time to stay neutral on the question of whether anything actually does have essential parts, is to modify the definition again:

I3  $a$  inheres in  $b$  =def  $b$  is not a part of  $a$ ,  $b$  is a particular, and there is some relation  $R$  such that  $a$  cannot exist unless it has  $R$  to  $b$ .

To say this is, of course, only to follow up on Fine's own suggestion when he says that a substance does not depend on anything "or, at least, upon anything other than its parts." Nor is there any reason to fear that the move is *ad hoc*, as it is a development of the pre-philosophical intuition that the theory of substance is intended to make sense of. Putting the point a bit vaguely, as pre-philosophical intuitions must be put, the things that philosophers come to call substances are not dependent on others but are instead self-sufficient in some way. Now a thing with an essential part is (of course) distinct from that part, i.e., not identical to it, and the thing is also (of course) essentially related to the part, but it does not follow that the thing is not self-sufficient, because this is not a way for the thing to be related to something *outside itself*. Expressed differently, the kind of independence here sought is not compromised by dependence that, so to speak, stays within the thing in question.<sup>9</sup>

Addressing this concern about essential parts leads to a related topic, namely, boundaries and necessary features. If features are taken as tropes and not as universals, then I2 makes Rusty inhere in any necessary feature of his, i.e., any feature without which he cannot exist;<sup>10</sup> it also makes him inhere in his own spatial boundary. These results, which are undesirable because they make him a non-substance, are avoided by I3 provided that one is willing to embrace the wide and flexible notion of parthood countenanced by some

contemporary mereologists; if the features and boundary of a thing are among its parts, then the thing does not (according to I3) inhere in them.<sup>11</sup> Philosophers uncomfortable with such a wide notion of parthood can handle the issues involved more directly by substituting “part, feature, or boundary” for “part” in I3; even if the features and boundaries of a thing are not taken to be among its parts, they seem clearly enough to be “within” the thing, in such a way that something’s having an essential relation to them does not count as its having an essential relation to something outside itself and therefore does not count against its being a substance. For the sake of simplicity I will speak only of “parts” in what follows, but the possibility of adding features and boundaries should always be kept in mind.

Now for a new objection and new modification. Consider the idea often called “necessity of origins,” i.e., the idea that an entity could not have originated from anything other than the particulars that it did in fact originate from. If this implies that an entity had necessary relations to its origins, then the entity might appear to inhere in them; but that would disqualify too many things from being substances. Now of course the necessity of origins has often been disputed. Here, without pretending to give a complete account of such a complicated issue, I want to accept it for the sake of argument and show that it poses no problem for this paper’s account of the independence of substance.

To begin with, some cases of necessity of origins involve relations to parts (in the ordinary sense). For example, it appears that a given water molecule cannot exist without being composed of the specific atoms of which it was originally composed; but since the molecule’s relations to those original atoms are relations to parts, this is not a case of inherence. Not all cases of origins can be treated in this way, however. Suppose that Rusty could not have come from any other ovum or mother. If this makes him unable to exist without having a relation to them, then since they are particulars that are not among his parts, I3 makes him inhere in them. Such cases can be handled in the following manner:

I4  $a$  inheres in  $b$  =def  $b$  exists at every time at which  $a$  exists,  $b$  is not a part of  $a$ ,  $b$  is a particular, and there is some relation  $R$  such that  $a$  cannot exist unless it has  $R$  to  $b$ .

Rusty can outlive his mother (as well as the ovum from which he arose), and thus he can exist at times at which they do not. I4 capitalizes on this fact to make him not inhere in them.<sup>12</sup>

Now for two further objections. The first has to do with God. Suppose that there is a God, and that God is a particular, and that God is not a part of Rusty, and that God exists at

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every time at which Rusty exists. Suppose further that Rusty cannot exist without having the “sustained in existence by” relation to God. From all this it would follow, according to I4, that Rusty inheres in God. Nor does one have to be a theist to see this as a problem; it is problematic enough for the non-theist that I4 is unacceptable unless one also accepts a seemingly unrelated claim, namely that either there is no God (of the sort just described) or no substances are sustained in existence by God necessarily. The second objection has to do with set-membership and runs as follows. Rusty necessarily has the member-of relation to certain sets. Perhaps he does not necessarily have the member-of relation to the set containing only himself and his food-dish, because he could exist even if that dish, and therefore that set, did not, but certainly he is unable to exist without having the member-of relation to the set containing only himself, and also he is unable to exist without having the member-of relation to any set whose members other than himself exist necessarily. Since, however, the sets in question exist whenever he does, and since no set is a part of him and no set is a universal,<sup>13</sup> I4 implies that Rusty inheres in some sets and therefore is not a substance.

There are, of course, ways to side-step these objections. For example, one could try to evade the first one by denying that there is a God or that any substance has a necessary relation to God. The problem with such moves is that they are attempts to settle the problem of the independence of substance by taking stands on issues that are too distantly related to it. If possible, it would be better to find a way to answer the objections in a manner that leaves other issues open. As I shall now argue, this can be done by moving beyond the modal understanding of essence.

#### FINE’S PROPOSAL AND THE QUESTION OF ESSENCE

To raise the question of an alternative to the modal view is to suppose that the modal view itself is not merely a stipulation of how to use the words “essential” and “accidental” but is instead an attempt to make sense of the pre-philosophical intuition that some of a thing’s features are more central or crucial or important to it than others are—that they are more “of the essence” of the thing, as we say. And Fine himself has approached the question of essence along these lines. For him, the question of essence concerns “what” things are, and the modal theory of essence is a flawed view of whatness, a view that counts too many features as essential. In this section I explain Fine’s alternative theory of essence, its shortcomings, and my own alternative,<sup>14</sup> and I apply these ideas to the topic at issue by showing how Fine’s approach to essence makes for an unsatisfactory account of substance and how the approach to essence that I recommend makes for a better one. An adequate non-

modal understanding of essence allows there to be necessary relations that are nonetheless non-essential, which makes it possible for something to be a substance even while having necessary relations to certain other entities.

Fine thinks that the modal approach to essence falls prey to certain counterexamples, and he proposes in its place an account of essence which he explains on the model of real definition. Not only is it possible to define words, it is also possible to define things, and to do so is to give their essences, to state what they are. Essence thus construed is a narrower notion than essence construed modally: for example, although in the modal sense it is essential to Socrates that he belong to the set containing only himself, this is not part of what he is.<sup>15</sup>

Fine has a fairly liberal view of what makes something the essence or definition of a given thing; for example, he suggests that we could define sphere (the type) as the shape of some token sphere.<sup>16</sup> Now while it is clear that he means such liberality to have limits—without them, after all, his theory would be empty—, unfortunately he gives no indication of what they might be. The problem is not helped by his idea that a thing can have many definitions and essences. On the basis of this multiplicity, Fine distinguishes between each essence taken singly, all of them taken together, and what all of them have in common.<sup>17</sup> This last notion seems closest to what one might instinctively take “essence” to mean, but saying so presupposes, rather than sheds light on, the distinction between the properties that belong to a thing’s whatness and the properties that do not.

Now Fine provides two notions of substance: as something that *need not* be defined in terms of something else, i.e., something *some* of whose essences do not include other things, and as something that *cannot* be defined in terms of something else, i.e., something *none* of whose essences includes other things.<sup>18</sup> To be confident that Rusty was a substance in the second sense, it would be necessary to be confident that not even one of his definitions included other entities (other than his parts). But since Fine’s idea of definition and essence is so liberal and ultimately so unclear, it is hard to be confident about this. It is easier to feel sure that Rusty fits Fine’s first notion, i.e., that he has at least one definition that does not include anything other than his parts. The problem, however, is that that condition seems all too easy to fulfill. If it is taken to be not only necessary but also sufficient, which is how Fine takes it, then we have the implausible view that the solar system is a substance. Even if it is taken to be only necessary, there are still grounds for worry: without tolerably clear limits on the idea of definition or essence, there is no way to rule out the possibility that *everything* has at least one definition that includes no particulars that are not parts. If everything were so

definable, then knowing that something was so definable would contribute nothing to an understanding of whether it was a substance.

A better alternative to the modal view of essence is therefore needed. Before presenting it, however, I must first introduce an important idea. Sometimes, when an entity has two features, it has one of them *because* it has the other. For example, a hydrogen atom is prone to bond with other atoms, and it has this feature *because* it has another feature, namely, the feature of having a number of protons such that when the atom is electrically neutral, its outer electron shell is unfilled, and when its outer electron shell is filled, the atom is electrically charged. For the sake of having a single word to use, I will say that in a case like this, an entity's having a feature is "explained" by the entity's having some other feature. This is meant to cover not only situations in which an entity's having a feature is wholly explained by its having some other feature but also situations in which an entity's having a feature is only partially explained by its having some other feature. For example, a hydrogen atom's having a certain number of protons "explains" its actually being in a bond even though other factors are involved as well (e.g., the presence of another atom under the right conditions).

Note that I am using the word "explained" in an ontic and mind-independent sense ("That explains why the floor is so wet!"), not in a cognitive sense according to which one might say that someone can explain something to someone else. Note further that the content of the explanation-relation is often not something that metaphysicians are qualified to spell out in advance in any detail but rather something to be discovered by physicists—and also, if physicalist reductionism is false, by biologists, psychologists, and so on, in which case there would be more than one type of explanation. And it is worthwhile to bring out explicitly how all this applies to relational features: Xanthippe's having the married-to relation to Socrates, for example, is explained, in part, by her having gone through a certain ceremony.

Using the notion of explanation, I propose to distinguish the essential from the accidental as follows. Given an entity and one of its features F, to say that F is essential to the entity is to say not only that the entity cannot exist without having it but also that the entity's having it is not explained by the same entity's having any other feature; to say that F is accidental to the entity is to say that the entity's having F is explained by the entity's having some other feature, regardless of whether the entity can or cannot exist without having F. On this account, an entity's essential features are its foundational features and thus rightly thought of as being "what it is." If it turned out that a hydrogen atom's having a certain number of protons was not only necessary but also not explained by its having any other

feature, then the atom's having such a number of protons would be essential to it. If, on the other hand, it turned out that having such a number of protons was not a foundational feature of a hydrogen atom because the atom's having that number of protons was explained by something else about it—something having to do with its quarks, for instance—then having that number of protons too would be non-essential, and the search for the essence of hydrogen would not yet be at an end. In either case, we already know that a hydrogen atom's feature of being prone to bond is non-essential because we know that the atom's having it is explained by the atom's having a certain number of protons.

What has been said so far has been presented as if each entity had only one essential feature. If it were thought useful to say that at least some entities have more than one essential feature and that these are mutually explanatory, it would still be possible to capture the point of this theory. Saying that a feature F was essential to an entity would mean not only that F was necessary but also that the entity's having F was not explained by the entity's having any other feature unless the entity's having that other feature was explained by its having F; saying that a feature F was accidental to an entity would mean that the entity's having F was explained by its having some other feature such that its having that other feature was not explained by its having F. This allows for mutually explanatory essentials while preserving the idea that accidentality involves being explained: the point now is that accidentality means not simply being explained but rather being on the receiving end of a non-mutual explanation relation. To keep things simple, I will not make use of this “multiple essentials” version in what follows, but it is important to note that it is available.

The approach that appeals to explanation does not identify essential features with necessary features, nor does it identify accidental features with non-necessary features. It is, therefore, not just a minor variation on the modal approach. As illustrated by the case of hydrogen and the proneness to bond, if an entity's having some feature is explained, even partially, by the entity's having some other feature, then that first feature is inessential, even if the entity cannot exist without it.<sup>19</sup> And this is crucial to the present inquiry because there is now a way to say that an entity can necessarily be in a certain relation without being in that relation essentially, which is just what is needed to allow us to grant that something can be a substance while having a necessary relation to a particular that is not one of its parts and that exists whenever it does.

Consider, then, the following:

I5  $a$  inheres in  $b$  =def  $b$  exists at every time at which  $a$  exists,  $b$  is not a part of  $a$ ,  $b$  is a particular, and there is some relation  $R$  such that  $a$  cannot exist unless it has  $R$  to  $b$  and there is no feature of  $a$  such that  $a$ 's having that feature explains  $a$ 's having  $R$  to  $b$ .

I5 differs from I4 by understanding “essential” differently. It is not just that Rusty’s redness cannot exist without having some relation to him, but also that its having that relation is not explained by anything else about it. That the redness has the color-of relation to Rusty is as fundamental a fact about it as there can be. Or, to use the hydrogen example again, but now with an eye towards what is essential to the proneness rather than what is essential to the atom, a hydrogen atom’s proneness to bond has a necessary relation to that particular hydrogen atom, and there is nothing about that proneness that explains its being so related. The proneness to bond is thus inherent in the atom and therefore not a substance.

Thinking of inherence in this way allows us to see why it sounds trifling to say, for example, that a particular color has the “color of” relation to that of which it is the color. Colors just are *colors of*, so stating that they are related in this way sounds like a restatement of what has already been said with the mere word “color.” What sounds so insignificant, however, actually reveals a crucial metaphysical fact about entities like colors: they are relational at their cores.

The situation is very different with substances. It is a necessary condition of something’s being a substance that it not be inherent in the sense spelled out by I5. A substance can have a relation to a particular that is not one of its parts and that exists whenever it does, and it can even have such a relation necessarily, but its having this relation will be explained, at least partially, by its having some other feature. Relations to external particulars are never fundamental to substances.

Now to return to the difficulties raised at the end of the previous section, beginning with the objection that had to do with dependence on God. Granting for the sake of argument that it is necessary for Rusty to have the “sustained in existence by” relation to God, it is reasonable to hold that Rusty’s having this relation to God is not a case of inherence when inherence is understood according to I5. Things like Rusty, it can be argued, are dependent on God because of the sort of thing they are. It’s because Rusty is the sort of thing that he is—because he is finite, say—that he cannot hold himself in existence, that he needs the support of a divine being. But that means that his being sustained in existence by God is (partially) explained by something else about him, which is sufficient for his being sustained

in existence by God to be non-essential to him, which is sufficient in turn for it not to be a case of inherence that he is sustained in existence by God.<sup>20</sup>

The second objection had to do with the member-of relation. Rusty's having that relation to any set that contains him is explained by something else about him, namely, his being a determinate entity distinct from all others; if, as some philosophers suppose, there are entities that are not determinate in this way, then they cannot be members of sets.<sup>21</sup> For this reason, therefore, although Rusty necessarily has the member-of relation to some sets, he does not have it to any of them essentially.

Naturally it is impossible to go through every possible relation and every possible relatum and thereby rule out every conceivable alleged counterexample. But it seems that others can be handled in a way similar to the way in which these last two were. For example, if it is alleged that Rusty is not a substance because he is essentially related to the number two by the "is distinct from" relation, one can point out that Rusty's being distinct from the number two is explained, at least in part, by his being a cat.

To conclude this section, then, non-inherent entities like substances can have necessary relations to particulars that exist whenever they do and that are not their parts; what such entities cannot have is *essential* relations to entities of that sort. In contrast to inherent entities, which are relational "all the way down," non-inherent entities like substances can be only superficially relational. It is in this sense that they are independent.

### BEYOND INDEPENDENCE

For Fine, as the quotations given earlier make clear, being independent in the right way is both necessary and sufficient for being a substance. However, two considerations show that this cannot be accepted without some qualifications.

First, if one accepts that there are universals, then on the account given here, they are independent in the same way that substances are. If one allows for the possibility of uninstantiated universals, then these will not be dependent on particulars at all. If one holds that all universals are instantiated, still many if not all of them will be dependent on particulars only in the sense that there must be some particular or other to which they bear a certain relation ("being instantiated by," for example); there will be no *specific* particular to which they must be related. But certainly the pre-philosophical notion that this entire discussion grows out of is stretched too far by the suggestion that universals are substances.

The most straightforward way of addressing this point is simply to say that being a particular is a necessary condition of being a substance. Another way of responding would

be to say that universals are not entities in any relevant sense and that all entities are particular; from this perspective, appeal to particularity as an additional condition is neither necessary nor appropriate. Such issues lie far beyond the task of this paper. Suffice it to say for present purposes that distinguishing inherent from non-inherent entities is not enough to capture the idea of substance; either one must add a particularity condition, or one must adopt an ontology that excludes universals.

Second, it might be objected that if independence (even together with particularity) were enough, then orchestras or piles of sand would be substances. But this is clearly not in accord with the intuitions that the theory of substance tries to do justice to. Orchestras and piles of sand are not substances, and the reason why not is that they do not have sufficient internal unity.

Now again, the most straightforward way to handle this point would be by adding unity as a necessary condition for substance. What kind of unity would be required is obviously an important question, but pursuing the matter in any detail would be going too far astray.<sup>22</sup> But again there is also a more radical response, which is to hold, in traditional fashion, that unity is a transcendental property of being, that all entities are unified insofar as they are entities. From this point of view, the proper response to the objection about piles of sand and orchestras is that while each grain of sand and each musician is an entity, the pile and the orchestra are not. As in the previous case, adding a distinct condition is neither necessary nor appropriate. For the purpose of this paper, which is to understand the independence of substance and whether independence is all there is to substance, it is enough to note that the unity question does need to be addressed. One must either add a unity requirement or else adopt an ontology that does not allow for non-unified entities.

## CONCLUSION

Improving on Kit Fine's remarks, I have presented an account of the independence of substance, an account intended to capture the spirit of the traditional notion of inherence but to do so in a way that is usable in the context of the non-traditional category schemes often found in analytic metaphysics. I have also argued that such independence is not sufficient: either one must add additional requirements for substantiality, or else one must adopt other separate ontological positions concerning the ontological status of universals and the connection between being an entity and being unified. The conclusion, then, is that the independence approach, rightly understood, is a very promising path to pursue for contemporary metaphysicians, but not one that leads to the full truth about substance.<sup>23</sup>

## NOTES

<sup>1</sup> For discussion of Aquinas on this point, see John F. Wippel, *The Metaphysical Thought of Thomas Aquinas* (Washington, D.C.: The Catholic University of America Press, 2000), esp. pp. 198-200. For discussion of some post-Thomistic views that still move within this overall metaphysical framework, see William E. McMahon, “Reflections on Some Thirteenth- and Fourteenth-Century Views of the Categories” in Michael Gorman and Jonathan J. Sanford, ed., *Categories: Historical and Systematic Essays* (Washington, D.C.: The Catholic University of America Press, 2004), pp. 45-57. Scholastic thinking on these matters often aimed to leave room for the theological doctrine of transubstantiation; although the present treatment is purely philosophical, it could easily be adapted to address that concern.

<sup>2</sup> For a helpful overview of some of these non-traditional ontological categories, see chapter four (“Propositions and their Neighbors”) of Michael J. Loux, *Metaphysics: A Contemporary Introduction*, second edition (London: Routledge, 2002). For discussion of how substances can be treated as dependent on their features, see Loux’s description of the bundle theory of substance in chapter three of the same work.

<sup>3</sup> Kit Fine, “Ontological Dependence,” *Proceedings of the Aristotelian Society* 95 (1995): 269-90; the quotation is on pp. 269-70.

<sup>4</sup> Other recent attempts to work out an independence approach to substance include the following: Joshua Hoffman and Gary S. Rosenkrantz, *Substance: Its Nature and Existence* (London and New York: Routledge, 1997); Joshua Hoffman and Gary S. Rosenkrantz, *Substance Among Other Categories* (Cambridge: Cambridge University Press, 1994); E. J. Lowe, *The Possibility of Metaphysics* (Oxford: Oxford University Press, 1998), pp. 136-75; Benjamin Schnieder, “Substanzen als ontologisch unabhängige Entitäten” in W. Löffler, ed., *Substanz und Identität: Beiträge zur Ontologie* (Paderborn: Mentis Verlag, 2002), 11-40; Peter Simons, “Farewell to Substance: A Differentiated Leave-Taking,” *Ratio* 11 (1998): 235-252; Peter Simons, *Parts* (Oxford: Oxford University Press, 1987), pp. 305-310. Unfortunately, space does not allow for discussion of the views of these authors here; for Lowe, however, see my “Substance and Identity-Dependence,” forthcoming in *Philosophical Papers* 35 (2006).

<sup>5</sup> Fine, pp. 269-75; the quotation is on p. 275.

<sup>6</sup> *Ibid.*, p. 276.

<sup>7</sup> See, e.g., Thomas Aquinas, *Summa theologiae* I, q. 90, a. 2.

<sup>8</sup> In this context, “part” should be read as meaning “proper part.” Note that inherence in an improper part, i.e., self-inherence, has already been ruled out.

<sup>9</sup> For more on dependence on nothing outside oneself, see Peter Simons, “Farewell to Substance,” esp. pp. 236, 243-44.

<sup>10</sup> Cf. the criticism of Fine’s position made by Schnieder, pp. 35-6.

<sup>11</sup> For a notion of part flexible enough to count features and boundaries as parts without ignoring the ways in which they differ from other, more familiar kinds of parts, see Peter Simons, *Parts*, esp. pp. 290-323; Barry Smith and Kevin Mulligan, “Pieces of a Theory,” in Barry Smith, ed., *Parts and Moments: Studies in Logic and Formal Ontology* (Munich: Philosophia, 1982), 15–109; Barry Smith, “Boundaries: An Essay in Mereotopology,” in L. Hahn, ed., *The Philosophy of Roderick Chisholm* (Library of Living Philosophers), LaSalle: Open Court, 1997, 534-561.

<sup>12</sup> This strategy is inspired by Simons, *Parts*, pp. 305-6.

<sup>13</sup> Here I follow Jorge J. E. Gracia’s idea that universals are instantiables and particulars (“individuals,” in his terminology) are non-instantiable instances; see his “Individuals as Instances,” *Review of Metaphysics* 37 (1983): 37-59.

<sup>14</sup> My criticism of Fine’s theory of essence, and my own approach, can be found in a more detailed and somewhat different version in my “The Essential and the Accidental,” *Ratio* 18 (2005): 276-89.

<sup>15</sup> For Fine’s positive theory, see his “Essence and Modality,” in James Tomberlin, ed., *Philosophical Perspectives 8: Logic and Language* (Atascadero, CA: Ridgeview, 1994), pp. 1-16, esp. pp. 2-3, 10-14; for the counterexamples, see pp. 4-6. See also his “Senses of Essence,” in Walter Sinnott-Armstrong, Diana Raffman, and Nicholas Asher, ed., *Modality, Morality, and Belief* (Cambridge: Cambridge University Press, 1995), p. 53.

<sup>16</sup> Fine, “Ontological Dependence,” p. 285.

<sup>17</sup> Fine, “Senses of Essence,” pp. 66-8.

<sup>18</sup> Fine, “Ontological Dependence,” pp. 285-287.

<sup>19</sup> For a description of necessary non-essentials in similar terms, see Thomas Aquinas, *Summa theologiae* I, q. 77, a. 1, ad 5. If it is objected that the “cannot” in my hydrogen example is nomological and therefore not relevant to the metaphysical issue of essence and accident, I reply that nomological necessity is not weaker than metaphysical necessity; see Sydney Shoemaker, “Causal and Metaphysical Necessity,” *Pacific Philosophical Quarterly* 79 (1998): 59-77, esp. pp. 68-70.

<sup>20</sup> The idea that dependence on God is necessary but accidental was in fact held by at least some of the medieval scholastics; see Mark Henninger, *Relations: Medieval Theories 1250-1325* (Oxford: Clarendon Press, 1989), 78-85.

<sup>21</sup> Here I am assuming a standard understanding of sets. The question of whether set theory can be modified to allow vague entities to belong to sets cannot be taken up here.

<sup>22</sup> An interesting contribution to the question of the unity of substance has been made by Joshua Hoffman and Gary S. Rosenkrantz; 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.

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