

# Mereology and Meta-ontology

OR

## Is Mereology Ontologically Interesting?

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Many philosophers subscribe to an ontological interpretation of mereology—General Extensional Mereology—on which the perfectly general concept of parthood is given perfectly general application. According to this conception, any “mereological sum” automatically composes some whole. It is often claimed that such an application of mereology is only natural, and that any restriction on such would be unmotivated. In this paper, I appeal to meta-ontological principles in diagnosing some of the already-noted problems with this approach, and revealing some new problems along the way. What these issues will point to, as I will suggest, is an alternative strategy to that which I criticize in this paper, and which will provide a novel, meta-ontological motivation for restricted mereology.

### 1. INTRODUCTION

*Mereology* is a well-developed axiomatic logic of parts and wholes that captures the perfectly general sense of parthood. In philosophical application, the relevance of mereology to metaphysics enters in perhaps most directly via its *extensional* interpretation, according to which the contents of reality are encompassed without remainder by the general concept of parthood,<sup>1</sup> thus injecting a (minimal) ontological component into mereology (see Varzi (2006: §3.2)). *Closure* principles are also available, which circumscribe the scope of parts and whole. The most popular of those is *infinitary* closure, under which parthood in its perfectly general sense is given even wider—in fact, maximal—scope: not only do the parts of things exhaust them, but moreover, everything is a part of something; indeed, of many things. Under this principle, one finds the realm of unrestricted fusions (see Varzi (2006: §4.2)), in which the mereological sum of any

number of objects or parts of objects<sup>2</sup> is an object in its own right—even sums of completely unrelated things like my pinky finger and some nitrogen atom on Neptune. At that point, ontology and mereology are completely intersuffused. The natural propriety of this approach was defended by David Lewis (1991: 81–87), who suggested that fusions of things just exist automatically; thus, one can “[t]ake the *xs* together or take them separately, the *xs* are the same portion of reality either way,” (81) or, put another way, “[c]ommit yourself to the existence of the *xs* together or one at a time, it’s the same commitment either way...the new commitment is redundant, given the old.” (81) In this sense, then, Lewis claimed that “mereology is ontologically innocent.”

However, one can certainly have a natural conception of parthood without believing in fusions (see Thomson (1983) and van Inwagen (2001), for examples). When Lewis and others claim that “mereology is ontologically innocent,” the theory they specifically mean to claim innocence for is full-blown *General Extensional Mereology* (**GEM**) (see Varzi (2006: §4.2)), unrestricted fusions and all. Therefore, I will take one who accepts **GEM** and who pleads ontological innocence on behalf of “mereology” to be claiming that *Mereology* with a capital *M*<sup>3</sup>—that is, **GEM**—is innocuous. This leaves the question of the status of *mereology* with a lower-case *m*, that is, the metaphysically unadorned logic of parts and wholes (or, “ground” mereology, as Varzi (2006: §2.2) puts it). Is *it* ontologically innocent? Well, *that* question, given the above-made distinction, seems somehow misplaced or infelicitous, doesn’t it? What this shows, I take it, is that one can, and should, step back from the previously-phrased question and ask a prior question. Just as mereology is prior to Mereology, there are questions prior to those of ontology, and that is the province of *meta-ontology*, or how one goes about framing and

settling ontological questions. My aim in this paper will therefore be to help address the question of Mereology's ontological innocence by asking the underlying meta-ontological question: Is mereology ontologically interesting? When a meta-ontological eye is thus brought to bear in diagnosing some of the noted problems with Mereology, they can be seen as especially acute, and additional problems can be noted, as well. Finally, the discussion of such will point the way to a meta-ontological strategy that I will suggest as an alternative to the common one that I criticize in this paper.

## 2. SUMS AND SETS

Mereology (with a capital *M*) deals in an unrestricted notion of “mereological sums,” or fusions,<sup>4</sup> and it is well worth starting by taking a look at these, whatever they are supposed to be. Peter van Inwagen (2006) takes a close look at the notion of a *mereological sum*, and finds it to be such a perfectly general concept as to be useless (*ibid.*, §1: ‘Everything Is a Mereological Sum’). The context of van Inwagen’s discussion is toward determining whether mereological sums cannot change their parts, but interestingly, he does not mention fusions, whether to distinguish them from, or assimilate them to, mereological sums.

It seems to be—as far as anyone’s use of the term would indicate—that it is an analytic fact about fusions that they cannot change their parts. A fusion just *is* of its members, and a different set of members makes for a different fusion. So, there is this pertinent question: what is it, if anything, that distinguishes fusions from mere mereological sums? Van Inwagen (*ibid.*), Thomson (1983), and others, show that it is possible to think of mereological sums as capable of losing parts. Thus it would seem that the onus is on the believer in fusions to either show how such as the aforementioned are

mistaken, or else find some reason to think that fusions exist *as well as* mereological sums.

As just mentioned, Mereologists' notion of the concept *fusion* seems to involve some pretty clear ideas, such that supposedly one cannot but entertain the concept of a fusion and see that it has certain characteristic properties. These properties include automatic existence given members (see the quoted statements of Lewis given above in §1), indiscriminate member criteria,<sup>5</sup> and essential membership. There are certain abstract, somewhat less controversial, entities that have just such properties: sets. David Lewis opens his monograph on the subject by saying that “there is more mereology in set theory than we usually think.” (1991) The suggestion he goes on to develop at book length is that mereology should be considered as the concrete analogue of set theory, and so just as sets of things automatically exist, so do mereological fusions. Likewise, Matthew McGrath says “Why believe in...*set-like* sums? For all the reasons one believes in the corresponding sets. What is more, believing in sums may be easier than believing in sets, since sums are concrete objects.” (2001: 70–71). However, there are reasons for thinking of mereological sums as importantly different from sets, other than that one is concrete and the other abstract.<sup>6</sup>

It is just not the case that one should believe in mereological sums for precisely analogous reasons as for believing in sets. If one did, this could only indicate that one has countenanced singletons *before* accepting sets. But surely this is backwards: one believes in singletons because such is the lower limiting case (bar the null set) of a set, which is more characteristically plural in structure. Set existence is not simply a matter of many-one identity (as in Baxter (1998)), but of abstract representation.<sup>7</sup> If there is a hard part to

accepting sets, it is in their abstraction, so *concreteness* can't be a point in favor of mereological sums per se: one can well believe in concrete individuals (or mereological simples—partless “atoms”—for a limiting case) and sets thereof, but not their mereological sums, and with not even the appearance of internal tension.

On the other hand, it would be possible to countenance mereological sums in van Inwagen's completely general sense without going as far as ascribing to them the set-like properties of fusions. But, thus understood, the concept of a mereological sum is so general<sup>8</sup> that it serves as no particular guide to ontology; indeed, if taken as such, it gives us no metaphysical basis for thinking there are any real sortals of any kind corresponding to things that interest us. In other words, taking mereological sums as if they represented a special sort of object is an unhelpful meta-ontology, and thus not ontologically interesting.

### 3. VARZI ON MEREOLOGICAL COMMITMENTS

Achille Varzi, in his paper “Mereological Commitments” (2000), introduces an angle to mereological analysis that is itself more or less meta-ontological. He endorses what he calls the *Minimalist View*, which is encapsulated by the following principle.

- (M) An inventory of the world is to include an entity  $x$  if and only if  $x$  does not overlap any other entity  $y$  that is itself included in that inventory. (*ibid.*, 286)

Taken as a plausible meta-ontological principle, this suggests a very salient notion of *counting*, which Varzi also discusses explicitly (*ibid.*, *passim*). One may well broadly characterize the project of ontology as “counting things”—in logical terms, quantification over all the entities in a world. Thus, a meta-ontology should provide one with a most

basic counting principle. After all, in drawing up an ontology, or “inventory of the world,” as Varzi puts it, one certainly only wants to count each thing once, and this is surely what (M) is supposed to ensure. But once mereology as such is introduced into the picture, the waters are immediately muddied: enter the classic case of Tibbles the cat, whose tail is cut off in an accident, and survives. Take “Tib” to denote the part of Tibbles minus the tail: the mereological sum Tib + Tail is supposedly identical with Tibbles before the accident, but consider the following argument (as put by Varzi 2000: 289).

- (1) After the accident, Tail will not be part of Tibbles.
- (2) After the accident, Tail will (still) be part of Tib + Tail.

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(3) Thus, Tibbles and Tib + Tail have different persistence conditions and therefore must be distinct (even before the accident).

This argument is typical of the kind that is supposed to establish the nonidentity of a thing and its constituting matter. But, as Varzi points out, the argument presupposes that we can pick out the parts Tib and Tail as objects *before* the accident. Now consider another argument, schematically very similar to the first, and which concerns the entities present *before* the accident instead of *after* (Varzi 2000: 296).

- (4) Before the accident, Tail was part of Tibbles.
- (5) Before the accident, Tail was not part of Tib.

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(6) Thus, Tibbles and Tib have different persistence conditions and therefore must be distinct (even after the accident).

This is the sort of argument that is supposed to establish the distinctness of Tibbles before the accident with the cat's stand-in after the accident, and thereby point the way to temporal parts and four-dimensionalism. But, just as before, the argument presupposes that there are two objects, Tib and Tail, present before the accident, and also, as Varzi points out, it presupposes that there are still two objects *after* the accident. The point of Varzi's discussion of cases like these (2000: §§3–5) is that one can frontload arguments with preexisting mereological commitments in various ways in order to make them come out the way the arguer intends, and that this is methodologically suspect. Varzi also defends a minimal principle of extensionality, in keeping with principle (M), in order to stave off some of the methodological pitfalls discussed (see Varzi 2000 for discussion).

I agree with Varzi thus far on the suspect meta-ontological strategies involved in the arguments analyzed above, and I have two points to add. The first is that what the mereological commitments of both of the aforementioned arguments have in common is the countenancing of *arbitrary undetached parts* (see van Inwagen 1981): subsets of objects that are considered objects in their own right. Thus, in each scheme, the arbitrary undetached parts Tib and Tail are picked out individually before Tibbles's accident. It is just this presumption that makes the conclusion (3) work. Likewise, a crucial presumption of (4) is that Tail can be referred to as an object in its own right—the same entity referred to as such in (5) and (6)—whether while or after such time as it is a part of Tibbles. The doctrine of arbitrary undetached parts (DAUP) enables mereological commitments and entailments of no small consequence. I will have more to say about DAUP later, in §6.

The second point to add is that in talking of mereological commitments, Varzi perhaps does not go quite far enough. Mereological commitments are well taken as ontological commitments, and a helpful discussion is given (Varzi, 2000: §§5–6) of approaches to “counting” principles, and all of this points to an exploration of meta-ontology, but Varzi never quite gets to the ground-level issue of relationships between meta-ontology and mereology as such. Generally, what an analysis of argument schemes such as (1–3) and (4–6) reveals is not just that (M) is a sensible way to approach such matters, but that mereology per se provides no constraints as to what entities are countenanced at any given time: Tibbles, Tib, Tail, and Tib + Tail each can be considered an entity at various times according to the aim of the argument. Varzi takes his (M) in conjunction with the results of his argument analyses to point to a moderate extensional mereology, but in fact it is just extensional mereology that leads to such crooked trails as he discusses. Therefore, what is required for a sound methodology is a way prior to the invocation of extensional mereology to first decide what entities are present in any given situation. And since mereology itself doesn’t do this, this suggests that meta-ontology is prior to mereology.

#### 4. FUSIONS, ‘FREE LUNCHES,’ AND DOUBLE COUNTING

We have looked at fusions, and the preceding section introduced the meta-ontological principle of counting. Now it is time to examine the two in conjunction. For, as it turns out, fusions are right at the crux between mereology and meta-ontological counting.

David Lewis defended the ontological “innocence” of fusions by putting forth the characteristic claims quoted above in §1, meaning to establish the automatic existence of fusions. In order for fusions to be ontologically innocent, they are also supposed to be

meta-ontologically innocent, thus: “[i]f you draw up an inventory of Reality ... it would be double counting to list the fusion of the *x*s and also list the *x*s.” (1991: 81) David Armstrong, likewise, thinks of fusions as “ontological free lunch[es]” (Armstrong, 1997: 12) that “supervene” on their parts: “[w]hat supervenes is no addition of being,” and “the supervenient is ontologically nothing more than its base.” (Armstrong, 1997: 12, 13) (It should be noted that Armstrong’s use of *supervene* in this sense is somewhat non-standard, in being unusually minimal.)

But, one may well ask, whence this fluid shift from plural quantification to singular, and how does a “no-double-counting” principle, as such, justify that move? It would seem, on the contrary, that one thing can’t be identical with several, so a fusion won’t be identical with its parts. There is an underlying tension in the discourse of UM-ists like Lewis and Sider who want something like composition as identity but acknowledge that “[w]hat’s true of the many is not exactly true of the one. After all, they are many while it is one.” (Lewis 1991: 87) But, as van Inwagen says, “if composition is not really identity, but only very strongly analogous with identity, then what is the force of the argument that, in accepting fusions, we are accepting only what we already believe in? Is the force of this argument not at least somewhat diminished?” (2001: 109, fn. 11) Then, the UM-ist looks to be in a position of accepting General Extensional Mereology (Varzi 2006: §4.2) as a convenient means for buying composite objects, but without the means to offer any ontological justification to a mereological nihilist for doing so, other than needing to countenance composite objects *ex hypothesi*.

So, if in defense of fusions the Mereologist advances the “same portion of reality either way” gambit, then although she has in effect committed herself to double counting,

the Mereologist turns right around and accuses her interlocutor of that very meta-ontological transgression. The meta-ontological dialectic of the Mereologist who argues in this way seems to be in the form of a snake eating its own tail, so to speak. From the point of view of the critic, on the other hand, it is not the “no-double-counting” principle that needs defending, but rather the “is/are hybrid” predicate (as van Inwagen (2001: 100ff) puts it) by which fusions are supposed to be so cheaply bought. Someone who doesn’t accept fusions may well not accept them *either* as an addition to one’s ontology *or* as a “free lunch.” But the Mereologist, *having accepted fusions*, seems to feel immune to either criticism; it is just as if she thinks of herself as in the unassailable position of having thrown away the Tractarian ladder after having climbed it. The meta-ontological sleight of hand by which Mereologists tend to defend fusions can be seen in the very phrase “composition as identity” that is meant to express that thesis: “composition” is invoked at the outset, thus briskly assuming that such a relation is in play, followed by “as identity”—now from the vantage point of the Tractarian ladder-climber—to the sound of the Mereologist throwing down the ladder and clapping the dust from her hands.

Fusions, then, seem to be left as something of ontological danglers, and I assess the Mereologist’s defense of them as elliptical and broadly circular. Consider what van Inwagen says along the same lines:

Even from the point of view of the Mereologist, the analogy [between composition and identity] is not quite so strong as Lewis suggests. ... But let us grant that, from the Mereologist’s point of view, the analogy is still strong enough to be compelling. ... *If* Mereology is a correct theory of composition, therefore, Lewis’ Composition as Identity thesis (in its considered, analogical form) would appear to be correct—and otherwise not. And if the Composition as

Identity thesis is correct, then Mereology is ontologically innocent. What Lewis's argument would appear to establish, therefore, is that if Mereology is correct, then it is ontologically innocent. There would seem to be no way to find out whether Mereology is innocent than this: find out whether it is true. (2001: 109)

And how *would* one establish the ontological propriety of Mereology? It certainly looks as though mereology in itself gives us no reason to believe in Mereology. And it counts as an additional point against Mereology that the only suggested route to it, as falling out naturally from mereology, turns out to be circular. So much the worse, then, for Mereology, and in general for the ontological relevance of mereology, too.

#### 5. MANY-ONE IDENTITY AND MEREOLOGICAL UNIVERSALISM

What about a *strong composition thesis* (SCT), according to which the “are” predicate is *literally* equivalent to the *is* of identity?<sup>9</sup> Donald Baxter (1988) is one who has defended this thesis in its full strength; and in fact, accepts it as part and parcel of “many-one identity.” Baxter takes this extreme stance mainly as a means of dissolving the general “many-one” problem, but the consequences are drastic indeed. Ted Sider is a Mereologist who backs away from full composition as identity, noting that “strong composition as identity implies that there can be no predicate that behaves the way ‘is one of’ is commonly assumed to behave.” (2007, §4.3) In fact, in the service of collapsing the many into one, Baxter goes so far as to urge the acceptance of the *discernibility* of identicals. I can only say that this sounds like about the worst meta-ontological principle possible.

SCT has also been defended by Meg Wallace (ms), but with the principle of “relative counting” at work:

[A]ccording to SCT, it is incoherent to give an unqualified answer to: How many? If an SCT-ist must give a response to how many things are in front of us, she could give a disjunctive answer such as: there is one six pack or six beers or twelve halves-of-beers, etc. And this answer would be *correct*, in a way. But she should then explain (on pain of being misleading) that we cannot count by all of these things at once. The SCT-ist might insist: first, pick your sortal (or concept or things you want to count by), then I can help you out with the count. (§6.2)

Again, there is the laudable desire to forbear from double counting: meta-ontologically, one wants to settle on one way, and *then* proceed, so as not to count the same portion(s) of reality twice. But Wallace seems to be suggesting that it does not matter *which* sortal is at work, so long as everything is accounted for *once*, and this approach is, again, meta-ontologically unhelpful. In a sense, it seems to agree with *mereological nihilism* (MN)—the thesis that there are no composite objects—in saying that whatever *kinds* of things there are is entirely a matter of convention. But one surely wants *one* ontology, not several to choose from with no means by which to decide which is *correct* (unless one is a Quinean willing to settle for convention and pragmatism—meta-ontology without ontology, as one might put it<sup>10</sup>).

Worse yet, as I will presently argue, SCT actually runs afoul of the central motivating principle for fusions, *mereological universalism* (a corollary of Mereology), according to which the formation of fusions is completely unrestricted. For, consider a fusion  $f_1$ , and a subset thereof,  $f_2$  (the *ss* may be considered the simples of which the fusions are composed). We begin by assuming the truth of SCT.

(1) By SCT,  $\{s_1, s_2, \dots, s_n\} = f_1$  and  $\{s_1, s_2, \dots, s_{n-1}\} = f_2$ .

(2) On the set-theoretic criterion of identity for fusions,  $f_1 \neq f_2$ .

(3) So  $\{s_1, s_2, \dots, s_n\} \neq \{s_1, s_2, \dots, s_{n-1}\}$  (1, 2)

(4) According to mereological universalism, both  $f_1$  and  $f_2$  exist.

(5) But then the summands in  $\{s_1, s_2, \dots, s_{n-1}\}$  will have been counted twice.

(4, 1 (taken right-to-left), 3)<sup>11</sup>

Of course, this result holds for any subset of a fusion, giving the SCT-ist not only double-counting, but triple-counting, quadruple-counting, and so on. One might even take this result to suggest that SCT effectively collapses back into MN, ontologically speaking. The only ways I can see in which the SCT-ist can prevent this is to hold one of the following:

(A) There's just one fusion, which comprises everything.

(B) No fusions overlap, such that nothing falls under more than one fusion.

(C) Not just many-one identity is to be countenanced, but also many-many (*many many-manies*, in fact) identity, thus accepting discernibility of identicals in perfect generality, with all possible fusions coming out identical with each other as well as their constituents.

Each of (A) and (B) amounts to the denial of universalism.<sup>12</sup> The real rub is that for the SCT-ist to be thoroughgoing with her universalism *and* keep from double counting, she is left with (C), which I hope that most everyone would agree is a perfect meta-ontological mess.

So, Mereology, when examined from a meta-ontological angle, turns out to be more problematic than many have thought. Yet one may well wonder: Doesn't all of this collectively seem to point toward MN? Achille Varzi considers the meta-ontological choice between unrestricted ontological exuberance and nihilism:

If, given two objects  $x_1$  and  $x_2$ , the countenance of a sum  $x_1 + x_2$  is regarded as a case of further ontological commitment, then given a mereologically composite object  $y_1 + y_2$  the countenance of its proper parts  $y_1$  and  $y_2$  could also be regarded as a case of further ontological commitment. After all, every object is distinct from its proper parts. So...there would be ontological exuberance [sic] in countenancing  $y_1$  and  $y_2$  along with  $y_1 + y_2$ . Yet this has nothing to do with the Sum axiom [of **GEM**]; it is, rather, a question of whether there is any point in countenancing a whole along with its parts. And if the answer is negative, then there seems to be little use for mereology *tout court*. From the point of view of the present objection, it would appear that the only thoroughly parsimonious account would be one that rejects, not only *some* logically admissible sums, but *any* such sum. The only existing entities would be mereological atoms, entities with no proper parts. And such an account, though perfectly defensible, would be mereologically uninteresting: nothing would be part of anything else and parthood would collapse to identity. (Varzi 2006, §4.3)

And the general worry seems to be abroad: Don't we need Mereology in order to ensure a use for mereology? This worry, and the implicit argument-by-elimination for Mereology that many take it to result in, however, is unfounded. Mereology and MN are logical contraries, not contradictories, and I want to suggest that there is in fact a middle way.

If parts are taken as ontologically primitive, as the Mereologist seems to do, then it is certainly hard to see how any restriction on composition could be motivated, since by

definition a “part” is a subset of some whole. But wouldn’t it be a more sensible approach—with respect to mereology proper as well as to ontology—to figure out what *things*—that is, wholes—are present, and *then*, if we like (though it need have nothing to do with ontology), surveying their parts?<sup>13</sup> One way to do this is with a form of restricted mereology (RM) on which DAUP is denied, as van Inwagen does (1981). On both this view and MN, proper parts as such are not counted in one’s ontology. But the difference between the two views is that the *existence* of parts as such is not denied in the same sense according to RM as to MN. After all, according to RM, parthood is *restricted*, not denied outright. Parthood would then simply involve regions of occupied space, which preserves the natural sense of parthood as such. We would go on to say that such demarcations of occupied space strictly speaking don’t, with the single exception of improper parthood, involve *objects* in their own right, at least not in the same sense as objects in the most fundamental sense. Or, endorse a principle of RM according to which a whole is something more than its parts, while still ontologically countenancing the parts, whatever they may be. Both of these RM-informed approaches draw an ontological distinction between wholes and parts, which Mereology conspicuously does not. Therefore, I take it that there are meta-ontological reasons to favor RM—even if it were *the case that*, as some writers have seemed to imply (such as Markosian (1998)), any true, informative, and general principle of RM would be too hard for us to figure out.

I said earlier (§3) that a meta-ontology should provide us with a most-general counting principle, but went on to reject Wallace’s “relative counting” suggestion. What kind of sortals are we left with, then? Surely I don’t mean to suggest that the world contains only simples and tokens of exactly one type of composite object, do I? Well, yes

and no. I think there are baseball bats, trees, and people, and these don't obviously fit under a single sortal, at least in terms of counting principles like those Wallace considers. Those varieties of sortals, however, are actually the province of ontology, while meta-ontology, in contrast, would tell us what a sortal *is* in a most-general sense—in fact, what an *object* is—so that we can determine what sortals there are under which objects are found. This is precisely what RM is supposed to do. And, of course, the sortals generated in terms of a sound meta-ontology will be such that they don't result in overlapping objects, thus ensuring that each thing is counted once. Mereological universalism, as has been shown, certainly can't do this, but a theory of RM, if successful, certainly will.

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<sup>1</sup> An extensional mereologist will therefore, with Noonan (1993), deny that a statue is distinct from the lump of clay that “constitutes” it, owing to the fact that the statue and the lump share all the same parts.

<sup>2</sup> On this approach, after all, the terms *part* and *object* have effectively the same total extension.

<sup>3</sup> Cf. van Inwagen’s (2001) and Simons’ (1987: 8) usage.

<sup>4</sup> Varzi (2006, §4.1), in accord with common currency, takes these two terms to be synonymous.

<sup>5</sup> That is, as for sets and their members, anything whatever can be, and is, a member of some sum—indeed, very many sums.

<sup>6</sup> Some excellent points toward this end have been made by Stephen Kearns (2006, especially §§8–9).

<sup>7</sup> On this point, see also Mark Johnston (2006: §15)

<sup>8</sup> I take van Inwagen (*ibid.*, §1) to have adequately demonstrated this.

<sup>9</sup> Yi (1999) makes the distinction clear between SCT and a *weak composition thesis* like that of Lewis’s described above.

<sup>10</sup> As I would characterize a position such as Quine (1969). To put it another way, I find Wallace’s claim that “*we cannot count merely by existential quantifiers and identity statements*” (*ibid.*, §4.3; emphasis in original) intuitively unsatisfying: on the contrary, it seems to me that a sound meta-ontology should underwrite the ability to go about ontological business in just that way (more on this in §6).

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<sup>11</sup> This argument assumes that the decomposition of a fusion into its simples is as automatic as its composition, but I see no principle by which the SCT-ist should deny that.

<sup>12</sup> To accept (A) is to be an Eleatic monist. (B), tellingly, points directly to either restricted mereology, or to *brutal composition* (see Markosian (1998)).

<sup>13</sup> Essentially this same point has been made by Peter Simons (1987: §9) (who also cites Rescher and Oppenheim (1955)), but it remains severely underacknowledged and undercited since then.