

Coincident Entities and Question-Begging Predicates: an Issue in Meta-Ontology

Francesco Berto

© Springer Science+Business Media B.V. 2012

Abstract Meta-ontology (in van Inwagen's sense) concerns the methodology of ontology, and a controversial meta-ontological issue is to what extent ontology can rely on linguistic analysis while establishing the furniture of the world. This paper discusses an argument advanced by some ontologists (I call them unifiers) against supporters of or coincident entities (I call them multipliers) and its meta-ontological import. Multipliers resort to Leibniz's Law to establish that spatiotemporally coincident entities a and b are distinct, by pointing at a predicate $F()$ made true by a and false by b . Unifiers try to put multipliers in front of a dilemma: in attempting to introduce metaphysical differences on the basis of semantic distinctions, multipliers either (a) rest on a fallacy of verbalism, entailed by a trade-off between a *de dicto* and a *de re* reading of modal claims, or (b) beg the question against unifiers by having to assume the distinction between a and b beforehand. I shall rise a tu quoque, showing that unifiers couldn't even distinguish material objects (or events) from the spatio-temporal regions they occupy unless they also resorted to linguistic distinctions. Their methodological aim to emancipate themselves from linguistic analysis in ontological businesses is therefore problematic.

Some philosophers think that the variety of the world we talk about depends on the variety of the linguistic expressions we use; some believe that the world itself is variegated. This paper deals with (bits of) this issue: where should we draw the line between features of the world and features of the language we use to talk about the world? I shall approach it by considering a philosophical dispute concerning the composition of material objects. I will begin with a single argument, but broader ontological and, more importantly, *meta*-ontological issues will quickly enter the stage.

F. Berto (✉)
Department of Philosophy and Northern Institute of Philosophy,
University of Aberdeen, Aberdeen, UK
e-mail: f.berto@abdn.ac.uk

The term “meta-ontology” is borrowed from van Inwagen¹ and employed, roughly, to refer to the discipline that deals with the methodology of ontological inquiry. What you are now beginning to read is an essay in meta-ontology.

1 Leibniz's Law as a Metaphysical Tool

Locke's principle claims that two material objects of the same sort cannot occupy the same place at the same time. In a sense, this seems to be, quite simply, analytically entailed by the fact that material objects are concrete²: completely filling the content of the space–time regions they occupy.³

The problem is what “same sort” means. In mainstream sortal theories (e.g., those proposed by E.J. Lowe and David Wiggins), sortal terms⁴—“man,” “horse,” “table,” and “tree”—unlike ordinary predicates such as “orange,” “round,” or “dirty” can be employed within an answer to the question: *what is it?*—the question by means of which Aristotle characterized the category of substance. Sortal terms “divide reference” and categorize the various objects of our world into kinds. Philosophers like Strawson have also claimed that the distinction between sortal predicates and ordinary predicates can “approximately”⁵ be mapped to the linguistic distinction between nouns on one side and adjectives and verbs on the other: nouns allow us to count objects, therefore to settle identities and differences, whereas adjectives and verbs can only describe the features and activities of things that we have already identified. The kind something belongs to is taken as determining its identity and persistence conditions. In general, things can satisfy different predicates at different times, but they cannot change the kind of being they are—their *essence*.⁶ Besides, the kind something belongs to also fixes the further range of predicates the object *can* satisfy: by being a table, this thing in front of us now can be meaningfully (albeit falsely) said to be orange, or round, or dirty, but it does not make sense to claim that this table is left-handed, or heavy-eyed, or primitive recursive.

¹ In van Inwagen's characterization, meta-ontology deals (a) with the *meaning* or *intension* of “being,” as distinct from its extension (so that, whereas the Quinean ontological question is, notoriously, “What is there?”, the corresponding meta-ontological question would be: “What are we asking when we ask ‘What is there?’”); and (b) with “questions about the proper method of [...] ontology” (van Inwagen (2001), p. 3). Such famous Quinean mottos as “No entity without identity” or “To be is to be the value of a variable” therefore belong to meta-ontology, whereas other Quinean theses, such as the proposition that there are no propositions, belong to ontology (see van Inwagen 1998, p. 13).

² See Locke (1975), *Essay*, II-xxvii-1. Aristotle also seems to have taken this for granted: see *Phys* 209a, pp. 6–7.

³ I will always use such expressions as “space–time region” in a physics-for-dummies fashion. This is what most metaphysicians do (including the philosophical contenders we are about to meet), probably believing that their discourses could be meticulously translated in physicist-friendly terms. I doubt it, but this is of little importance for what follows.

⁴ Also called “individuating predicates,” “articulative predicates,” “substance names,” “shared names,” etc. (see Frege 1950, § 54; Strawson 1959, pp. 168–9; Quine 1960, § 19; Lowe 1989; Wiggins 2001, Chap. 3).

⁵ See Strawson (1959, p. 137).

⁶ To be sure, “boy” is also a sortal term and boys become men, but *boy* is, in Wiggins' jargon, a *phased* sortal concept. Now, “a phased or restricted sortal predicate can always be supplanted *salva veritate* by a comprehensive unrestricted sortal predicate or (as I shall say) a substance predicate” (Wiggins 2001, p. 63), and any object has to satisfy its own substance predicate throughout its career as an object. From now on, “sortal predicate” will be taken as a synonym of “substance predicate” in Wiggins' sense.

Or so the usual story goes. But mainstream sortalism entails that two things satisfying different sortal predicates can be in the same place at the same time.⁷ For instance, the place currently occupied by the table in front of us now cannot be occupied by another table at the same time. However, this table and the aggregate (say, the fusion or mereological sum) of the molecules that compose it belong to different sorts, and despite being exactly here, they count as two things.

Isn't claiming that two things can be in the same place at the same time like manifesting "a bad case of double vision?"⁸ No, the sortalist says (from now on, I will often call her the multiplier, borrowing a terminology that has been used in analogous debates within the metaphysics of events).⁹ Suppose a single molecule m composing the table is removed and disassembled into the atoms that constitute it, the table can certainly survive such an irrelevant episode. However, the mereological sum of the molecules that compose the table, by definition, cannot. So, the argument goes as follows:

1. The table in front of us now could survive the destruction of m .
2. The mereological sum of the molecules that compose the table could not survive the destruction of m .
3. The table in front of us now \neq the mereological sum of the molecules that compose the table.¹⁰

This is just an application of the (contraposed) Leibniz's Law, which can be taken here in its formal mode, as a principle of substitutivity *salva veritate* (it may be formulated in material mode, in terms of properties¹¹, but a semantic version works well, at least rhetorically, for our purposes). As such, Leibniz's Law is employed as a tool for establishing ontological distinctions: in order to ascertain whether x is distinct from y , let us look for something true of x but not of y —for some predicate that x , but not y , satisfies.

The multiplier is exploiting some strong modal intuitions attached to the sortal expressions she employs. Once we have accepted that this thing satisfies the kind-term *table*, it is quite plausible to claim that it could survive the destruction of a single molecule: tables tolerate small part annihilation; so (1) comes out true. But surely, once we have accepted that *this* thing satisfies the kind-term "mereological sum of..." we must reject the hypothesis that *it* could survive such a destruction: by definition, a mereological sum of such and such parts consists of these very parts. So, (2) it comes out true.¹² Since they make incompatible modal expressions true, the table and the mereological sum of the molecules that compose the table should be distinguished. "Table" and "mereological sum of..." the multiplier claims, "have different criteria of identity associated with them, and [...] no individual of a sort ϕ can intelligibly be said also to belong to a sort ψ if ϕ and ψ

⁷ See, e.g., Wiggins (1968, 2001).

⁸ Noonan (1988, p. 222).

⁹ See Pfeifer (1989).

¹⁰ Among the multipliers who subscribe to this kind of argument are Lowe (1989), Johnston (1992), Baker (1997), and Thomson (1998). Some authors go even further and claim that also things of the same sort can be spatially co-located, yet distinct: see Kit Fine's "double letter" example in Fine (2000).

¹¹ For a thorough analysis of the difference, see Cartwright (1971).

¹² Compare Wiggins' example of the copse and the mereological aggregate of its trees, in Wiggins (2001, p. 52).

have different criteria of identity.”¹³ So, we have two co-localized things of different sorts.

This is also the multiplier's solution to a well-known cluster of puzzles of constitution.¹⁴ According to Michael Rea, who has proposed a common pattern for the whole family, the paradox arises when we have “an object a and an object b that share all of the same parts and yet are essentially related to those parts in different ways.”¹⁵ The multiplier's strategy entails a rejection of what has been called by Rea and others the identity assumption:

(IA) If x and y share all of the same parts at the same time, then $x=y$.¹⁶

This is just a temporally qualified version of (mereological) extensionality, that is:

(Ext) If for all z , z is a part of x iff z is a part of y , then $x=y$,

(The slogans are: “No two things with the same parts” or “Mereological constitution *is* identity”).¹⁷ Now, mereology is often presented as a theory of the part/whole relation belonging to purely formal ontology, on a par with formal logic. However, a principle accepted by most mereologists such as extensionality is definitely called into question by the multiplier.¹⁸ So, the extensional mereologist should take a substantive stance on the identity conditions of tables and mereological sums. And, in fact, various replies have been proposed. I will take into account especially one, which is embedded in a broader meta-ontological strategy. I will call its proponent the unifier and take as paradigm cases of such a reply the works of Michael Della Rocca and Achille Varzi.¹⁹

The meta-ontological strategy behind the unifier's counter-argument to be considered soon is the following:

A lot of work in metaphysics relies on linguistic analysis and intuitions. [...] Do we want to see whether x is distinct from y ? Then let's see whether there is any statement that is true of x but not of y . [...] [T]his way of proceeding is full of

¹³ Lowe (1989, p. 70).

¹⁴ See, famously, Wiggins (1968).

¹⁵ Rea (1997a, p. xxi).

¹⁶ *Ibid.*, p. xxiii.

¹⁷ See the entry “Mereology” in the *Stanford Encyclopedia of Philosophy*, § 3.2 (Varzi 2003).

¹⁸ Puzzles of constitution and coincidence, such as “Dion and Theon,” “Goliath and Lump1,” etc., are sometimes phrased in terms of matter (coincident objects share the same matter), sometimes in terms of spatial coincidence (coincident objects occupy the same space), and sometimes in explicitly mereological terms. Some authors (e.g., Fine 2003, pp. 197–8) have taken this fact as a conceptual confusion and have called for a distinction between different senses of “coincidence” and “constitution.” Others have claimed (e.g., Johnston 1992, pp. 93–5) that the notion of parthood employed in stating and/or solving most of these puzzles is not topic-neutral. I will stick to mereological formulations in the following, but this does not make a substantive difference for our meta-ontological issue: the counter-argument to be exposed below has been claimed by several mereologists to hold against a whole family of nonidentity arguments, also when they are phrased in terms of the material (as distinct from mereological) constitution of objects, and even when they are explained in terms of coincident events: see Varzi (2000, pp. 293–4).

¹⁹ Della Rocca (1996a), Varzi (2000, 2002). To be sure, in some of his papers, Della Rocca wants to save some form of essentialism (see Della Rocca 1996b), whereas Varzi's position is clearly extensional and unsympathetic towards sortalism. However, the line of reasoning pursued by the two against the multiplier is the same. Della Rocca has recently changed his views and abandoned essentialism. Also, David Lewis should be listed among the unifiers, as we shall see.

traps and is bound to be pretty useless unless we already have a good idea of what sorts of things there are, and how we are going to count them. [...] Linguistic analysis is of little guidance when it comes to the first important task involved in the drawing up of an inventory of the world—that of figuring out the ontological categories under which the items in the inventory should fall.²⁰

This methodological claim is what I aim at attacking. Briefly, I shall rise a *tu quoque* against the unifier, to the effect that the (few) ontological distinctions she wants to retain in her inventory of the world can only be detected by resorting to “linguistic analysis and intuitions.” To put it the other way round: if we accept a slight generalization of the unifier's counter-argument to be presented below (a slight generalization which is itself subscribed to by various unifiers), we may not be able to draw *any* metaphysical distinction at all, thereby ending in a form of metaphysical scepticism. Before moving on to a detailed examination of why this is so, let us listen to the promised counter-argument.

2 The Russellian Fallacy

According to the unifier, the multiplier's argument for nonidentity either simply begs the question or relies on a kind of *dicto/de re* confusion—on a *fallacy of verbalism*. In his seminal paper on vagueness, Russell named this way “the fallacy that consists in mistaking the properties of words for the properties of things.”²¹ Thus, I will henceforth call it the Russellian Fallacy. One may say that a Russellian Fallacy is a mistake on where to draw the boundary between ontology (roughly: what belongs to the world) and semantics (roughly: what belongs to how our words and cognitive representations refer to the world). The unifier claims that, in the case at issue, the fallacy depends on the multiplier's meta-ontological confidence that she can understand how things go in the world out there via an analysis of our use of natural language terms. Let us see how, according to the counter-argument, the deceptive boundary is traced.

First, the unifier will say, the argument for nonidentity is ambiguous between a *de dicto* and a *de re* reading.²² In the *de dicto* reading, the modality expressed by “could” is attached to the whole sentence, so the premises go as follows:

- (1*) It is possible that the table in front of us now survives the destruction of *m*.
- (2*) It is not possible that the mereological sum of the molecules that compose the table survives the destruction of *m*.

On this reading, the premises are certainly true: there is quite clearly some possible world *w* such that, at *w*, “the table in front of us now” refers to something that survives the destruction of *m*. And as for (2*), there certainly is no possible world *w* such that, at *w*, some mereological sum survives the destruction of one of its parts: this holds by the definition of “mereological sum.”

²⁰ Varzi (2002, 1 ff).

²¹ Russell (1923, p. 62).

²² See Varzi (2002, p. 19).

But this is completely beside the point, says the unifier. Certainly, “the table in front of us now” and “the mereological sum of the molecules that compose the table” have different *meanings*, so we could use them to refer to distinct things. But we are inspecting the modal properties of things facing us *here and now*, so we should not look at other possible referents of the terms at issue: our concern is whether “the table in front of us now” and “the mereological sum of the molecules that compose the table” happen to refer to the same thing in this world (compare Quine: it is necessary that nine is greater than seven, but it is not necessary that the number of planets is greater than seven; however, it does not follow that the number of planets is different from the number nine: for “nine” and “the number of planets” happen to pick the same number in this world). The difference in meaning between “the table in front of us now” and “the mereological sum of the molecules that compose the table” should not lead us to infer an ontological distinction.²³

What about the *de re* reading, then? In the *de re* reading, the modality expressed by “could” in (1) and (2) is restricted to the predicate, so the premises should now be read as follows:

- (1**) The table in front of us now is such that possibly *it* survives the destruction of *m*.
 (2**) The mereological sum of the molecules that compose the table is such that *it* could not survive the destruction of *m*.

Now the substitutivity test can be applied, for the substitution takes place within a nonopaque context: the subject terms “the table in front of us now” and “the mereological sum of...” are left outside the scope of the modality.²⁴ However, according to Della Rocca, to say now that both premises are true begs the question against the unifier: a multiplier “can have reason to believe the premises only if [s]he already has reason to believe the conclusion.”²⁵ Certainly, *if* “the table in front of us now” and “the mereological sum of...” pick different things in this world, i.e., if the table in front of us now is not the mereological sum, then (1**) and (2**) may both come out true. But *that* the table is not the mereological sum is precisely what the unifier calls into question. The two premises may turn out to be true only if we presuppose this difference, which was believed to be established by the argument:

To show that nonidentity holds on the basis of the relevant modal intuition, one must first show that nonidentity holds. But, of course, this is just to argue in a circle. Thus [...] one cannot non-question-beggingly argue for nonidentity in this case simply on the basis of modal intuitions.²⁶

The case that the table and the mereological sum of its molecules are one and the same thing cannot be ruled out beforehand on pain of a *petitio*. Now if they are the same, then by Leibniz's Law, one of (1**) and (2**) must be false: either tables cannot survive the destruction of any of their parts, or mereological sums can survive the destruction of some of their parts (don't both claims *sound* quite odd? This is a point I shall return to).

²³ Along this line, see also Robinson (1985), Lewis (1986), and Noonan (1991).

²⁴ See, e.g., Fine (2003, pp. 200–1).

²⁵ Della Rocca (1996a, p. 190). A similar point is made in Neale (1990, § 4.6).

²⁶ *Ibid.*, p. 196.

Now, Della Rocca acknowledges that the unifier's counter-argument is obviously not supposed to establish that the table and the mereological sum are one and the same. Its aim is just to dismantle the allegedly compelling reasoning of the multiplier. Two philosophical lessons, though, are claimed to follow from this: (a) in general, we cannot look at the modal features of things in order to establish identities and differences, *before* we have identified and distinguished such things: we cannot glimpse at *their* modal properties before we have ascertained whether *they* are the same or not²⁷; and (b) by (involuntarily) trading on the *de de/de dicto* ambiguity, the multiplier is mistaking semantic distinctions for ontological differences—which is actually close to double seeing. The different meanings of two linguistic expressions lead her to duplicate things in the world.²⁸ By mistaking distinctions at the level of semantics for actual differences in the world out there, the multiplier commits a kind of Russellian Fallacy.

On the contrary, according to the unifier's philosophical tenets, the table and the mereological sum may well be one and the same thing (for no part of the former is not a part of the latter and vice versa). Out there, there may be just one thing, was described in different ways. Our categorizing things under different sorts and kinds by using such predicates as table, man, book, and the like may not have a big ontological significance after all. An account of this fact should be provided by cognitive psychology or linguistics: disciplines dealing with our cognitive apparatus, our ways of representing the world, and how language reflects them. Ascribing features of our representation of the world to the world itself (fallacious) lack modesty on the side of human beings.

3 Question-Begging Predicates and the Discernibility Problem

So much for the counter-argument. Now, for the promised slight generalization which I find, meta-ontologically speaking, quite dangerous for the ontological enterprise as a whole. By generalizing on the choice of predicates and sentences tentatively used in order to establish differences via Leibniz's Law, the unifier easily reaches the following pronouncement²⁹:

(DP) Given a true sentence, one cannot establish whether the sentence obtained by substituting in it one designator “*x*” with another designator “*y*” (in a

²⁷ Hence comes also one of the positive arguments for identity the unifier can advance: the one based upon the so-called modal supervenience thesis (to be found in various forms, for instance, in Jubien 1993, Levey 1997, Sider 1999, and Olson 2001). We have seen that our multiplier is trying to ground differences in the actual world on modal intuitions. But modal differences in their turn have to be grounded on actual differences. How can this table and the mereological sum of its molecules differ in modal properties, when they coincide in their actual properties? After all, they have the same shape, size, weight, etc. Where could modal differences come out from? For a possible line of reply, see Rea (1997b).

²⁸ This was also David Lewis' position: “we have one thing. What we have two of, besides names for it, are ways of representing. There is some kind of equivocation built into representation *de re*, and the equivocation shows up when we get conflicting answers. [...] It reeks of double counting to say that here we have a dishpan, and we also have a dishpan-shaped bit of plastic that is just where the dishpan is, weighs just what the dishpan weighs (why don't the two together weigh twice as much?), and so on. This multiplication of entities is absurd on its face” (Lewis 1986, p. 252).

²⁹ See Varzi (2002, p. 21).

nonopaque context) is true before the issue whether $x=y$, that is, whether x and y refer to the same thing, has been settled.

“DP” stands for Dummett's Point, for it can be found in *Frege: Philosophy of Language*.³⁰ But DP can also be read as the Discernibility Problem. It amounts to a claim to the effect that substitutivity salva veritate cannot be used as a general tool for deciding on identities and differences—on the truth and falsity of identity statements.

Let us say that a predicate P is *question-begging* iff we can wonder whether $P(x)$ but not $P(y)$ (or vice versa) only when we already know that $x \neq y$. For a neutral observer of the unifier–multiplier controversy, (DP) raises the problem of where we should draw a line between question-begging and non-question-begging predicates. And we face the danger of reaching a situation in which *too many* predicates turn out to be question-begging. Such a situation, I shall argue, would spell troubles also for the unifier's parsimonious ontology: it may lead to a complete scepticism on the possibility of finding metaphysically relevant boundaries in the world (or maybe to an extreme form of Spinozian monism).³¹ Let us see why.

4 A Converse Russellian Fallacy

Which non-question-begging predicates could we resort to in establishing metaphysically relevant distinctions? *Temporal* predicates will not do, for they are obviously as question-begging as modal ones. To use Wiggins' familiar example,³² according to the multiplier the claim:

Tibbles the cat = Tib + tail

(where Tib + tail is the mereological sum of Tibbles' tail and of Tib, the rest of its body) is false: Tibbles and Tib + tail fall under two different sortal terms (“cat” and “mereological sum of...”) entailing different persistence conditions. Suppose that tomorrow—at time t —Tibbles' tail is destroyed in an unfortunate accident, then we have:

4. After time t , Tibbles still exists.
5. After time t , Tib + tail no longer exists.
6. Tibbles \neq Tib + Tail.

The sortalist's intuition here is that, whereas “cat” picks a kind of things that can persist (albeit painfully) through such changes as the destruction of a tail, this cannot be truly claimed of mereological sums. But the unifier can now reply by asking to distinguish a *de dicto* and a *de re* reading of the premises, and then by claiming that, on the *de dicto* reading, the argument is fallacious (we didn't want to talk about the future referents of “Tibbles” and “Tib + tail”, did we?) and on the *de re* reading the multiplier is begging the question. To be sure, the unifier will say, “cat” and “mereological sum of cat parts” do not mean the same. The multiplier may go and

³⁰ See Dummett (1973, p. 544–545).

³¹ This extreme case will not be considered here but is examined in Fine (2003) as a useful analogy to understand the implausibility of the unifier's position.

³² See Wiggins (1968, p. 92) and passim. See also Oderberg (1996).

have a nice conversation on this with her friends, the semanticists of the department nearby. But we were supposed to do metaphysics here. The philosophical point the unifier is pressing is that, in order to ascertain identities and differences *now*, we should not look at other times—at the past history of an object, for instance.³³

However, nobody (even mereologists privately talking to their pets) refers to cats as “mereological fusions of such and such parts.” This fact calls for explanation, but the unifier may be forced to say that it has to do only with our semantic conventions: we can regard a given thing *as* a cat or as a mereological sum of such and such parts, and depending on how we conceive it, or on the time at which we make certain claims, some predicates will be more appropriate than others to describe that thing. Compare: it would have been linguistically inappropriate to refer to Kurt Gödel with the expression “the man who proved the completeness of first-order logic” before 1929, but this does not mean that the proof of the completeness of first-order logic entailed the birth of a new man besides the old one, so that now “Kurt Gödel” and “the man who proved the completeness of first-order logic” refer to two different persons.³⁴

As Kit Fine has pointed out, the multiplier may try to establish differences between coincident entities without relying on modal or temporal intuitions, by resorting to predicates that appear not to convey any modal or temporal feature. Would such predicates be question-begging too? Fine's example refers to a statue and the alloy that makes it up: one could wonder whether the statue is *insured*, *admired*, *Romanesque*, or *well made*. *Prima facie*, there is no modal element here. And how could we meaningfully assert, or deny, such predicates of a piece of alloy? A piece of alloy is not the kind of thing that can be, or not be, Romanesque, or well made. Sortal distinctions, Fine argues, mark the boundaries of the meaningful application of predicates. However, this extremely pervasive linguistic phenomenon has to be disregarded by the unifier. She is forced to present what looks like a nonsense as a bizarre mode of expression—and, notice, this does not even get close to a self-contained semantic theory; on the contrary, one has the impression that such a semantic trick is introduced with the only ad hoc purpose of serving the metaphysical view. As we shall see, keeping up the trick will become increasingly difficult.

The unifier may also be conflating material objects and *events* or *processes*. Such an identification is most unwelcome to mainstream sortalism: according to Wiggins, material objects are three-dimensional things that persist through change—“things with spatial parts and no temporal parts”; whereas, events have temporal parts—events “take time,” and “admit the question, ‘How long did it last?’ only in the sense ‘How long did it take?’”; therefore, “there appears to be a terrible absurdity in such claims as ‘a material object is just a long event.’”³⁵

³³ Contrast David Wiggins: “the singling out at time *t* of the substance *x* must look backwards and forwards to times before and after *t*” (Wiggins 2001, p. 7). As a parenthetical remark, it should be noted that the whole issue presupposes that contingent identity has been ruled out: if things can be contingently identical, then there is no problem in claiming that this table and the mereological sum of... or Tibbles and Tib + tail, happen to be identical but can be different at different worlds or times (see Gibbard 1975). After the publication of *Naming and Necessity* contingent identity has lost much of its popularity—however, see Yablo (1987) and Gallois (1998) for approaches to the puzzles of constitution that reject the necessity of identity.

³⁴ See Anscombe (1979) for the pervasiveness of such a phenomenon.

³⁵ Wiggins (2001, p. 31 and fn. 13).

But also this kind of metaphysical distinction may begin to fade, as we take the (DP) more and more seriously. Consider a star—say, Alpha Centauri. Alpha Centauri was born when the nucleus of some huge mass of hydrogen reached the critical pressure and nuclear fusion of hydrogen into helium began. Call “Alphusion” the prolonged event consisting of such a nuclear fusion. Alpha Centauri will end its career as a star when Alphusion ceases. Now Wiggins may want to argue, in multiplier fashion:

7. Alpha Centauri has no temporal parts.
8. Alphusion has temporal parts.
9. Alpha Centauri \neq Alphusion.

But the unifier who takes the (DP) seriously may reply that the multiplier is begging the question again. For here is Alpha Centauri, and here is Alphusion: where the one is, the other is. When the one begins and ceases, the other begins and ceases. Now if Alpha Centauri *is* Alphusion—which cannot be ruled out beforehand on pain of begging the question—then either (7) or (8) must be false (and a four-dimensionalist unifier will claim that the false one is (7): what we refer to as “material objects” are nothing but monotonous events).³⁶

Here, the unifier's position falls foul of a variety of linguistic data; in a way that calls for explanation even more than Kit Fine's Romanesque piece of alloy. Why does the unifier not go around making such claims as “That nuclear fusion is round?” The multiplier has a nice story to tell on this: a process, unlike a material object, is not the kind of thing of which it makes sense to claim that it is, literally, round. There are no literally round processes. The unifier is forced to claim that, at most, it is *inappropriate* to refer to something of which we claim that it is round by means of event-kind words such as “nuclear fusion.” If Alpha Centauri *is* Alphusion—the process of a nuclear fusion—and Alpha Centauri is round, then by Leibniz's Law, the process of a nuclear fusion is round. But we certainly don't talk this way, and the unifier definitely owes us an explanation on how we *might* talk this way. Lacking further clarifications, the unifier can be accused of what we may call a *Converse Russellian Fallacy* or a fallacy of anti-verbalism: the fallacy that consists in reducing worldly differences to (cognitive or) semantic minutiae.

How does the unifier's world out there look like? The multiplier's world out there is organized in kinds of being, and the good ontologist's job has to do with carving reality at the joints. To be sure, sortalism faces numerous and well-known problems in distinguishing real and fictitious boundaries and genuine and fake kinds: how come that “man” picks a sort, but “woman-pillar,” the predicate supposedly satisfied by the kind of all and only those things that are women before time t , and pillars after time t ,³⁷ does not (not to mention Davidson's “emerose,” Eli Hirsch's “incar,” and the like)? Nevertheless, at

³⁶ See, e.g., Goodman (1951).

³⁷ This comes from Lot's wife being turned into a pillar of salt during the destruction of Sodom and Gomorrah in *Genesis*, 19 (see Wiggins 2001, p. 65). As Wiggins admits: “if we could invent sortal concepts simply at will, then the real content of the assertion that something lasted till t and then ceased to exist would be trivialized completely. For if one were unconstrained in the invention of a substantial concept by which to represent that a thing persisted, one would be equally unconstrained in the invention of a substantial concept by which to represent that it failed to persist” (Ibid).

least some kinds and sorts according to the multiplier are out there³⁸—and her aim is to follow Plato in dividing “things by classes, where the natural joints are,” without cutting the wrong way, “after the manner of a bad carver.”³⁹

On the contrary, the unifier may direct herself towards conventionalism about modalities and towards taking all predicates, so to speak, as *role-playing* predicates.⁴⁰ In some extreme versions of this view—those that have been grouped under the label of *stuff theory*—objects are taken as mere spatiotemporal occupiers (“objects in extenso,” to quote Fine).⁴¹ What actually is out there is just *stuff*; our carving activities select some spatiotemporal portions of it, but this depends on our conceptual scheme, not on the world itself. We tend to carve, and to qualify as “objects,” those four-dimensional hunks of matter that display interesting or salient features⁴²; then, in Van Fraassen's words, “we raise [...] certain attributes to the status of natures. In the formal mode, this means that some statements assume the office of assumptions which may be tacitly used in all reasoning, and certain predicates are chosen to form a classificatory scheme.”⁴³ However, in the world out there, there are no types, sorts, or essences.⁴⁴

Spatiotemporal occupiers? The unifier may end up unable to distinguish even between material objects and the *regions of space* they occupy—and this would be quite hard to swallow. Here is an example of how this further unification may occur. It is everyday jargon, and a commonsensical truth, to claim that this table in front of us now occupies a place in the world, a certain region of space—call it *s*. Now taking the (DP) seriously may entail that even such a commonsensical truth is misguided: it is not that this table occupies this place, *s*, because the table simply is *s*.

But isn't there an obvious difference between material objects and the places they inhabit? We could just move the table a bit, and then reason as follows:

10. The table has been moved.
11. *s* has not been moved.
12. The table \neq *s*.

Now our unifier should be aware of the interdiction expressed by the (DP) and answer that we are resorting to a question-begging predicate. (10) and (11) are true only *on the presupposition* that the table is not *s*. If, on the contrary, the table is *s*, then either (10) or (11) is false, for one cannot both move and not move the very same thing.

³⁸ This corresponds, roughly, to what Rea calls “realism about material objects,” defined as the position according to which at least some of our sortal terms pick intrinsic sortal properties of objects: see Rea (2004, pp. 8–11).

³⁹ *Phaed.* 265c.

⁴⁰ Notice that this is not mandatory, though, nor is it true of all the critics of the multiplier's arguments for nonidentity. For instance, Burke's essentialist solution to the puzzle of Dion and Theon consists in denying that there are different coincident entities while keeping kinds and essences, via the famous argument of the “dominant sortal” (see Burke 1992, 1994).

⁴¹ Fine (2003, p. 200). On this metaphysical view, see Sidelle (1989), Heller (1990), and Jubien (1993).

⁴² “Matter, or stuff, is the real, mind-independent stuff of the world. It is prior to objects because it is what we, more or less informed by our interests, carve up *into* objects” (Sidelle 1998, p. 432).

⁴³ Van Fraassen (1977, part IV).

⁴⁴ Some stuff theorists may claim that the only essential property around in the material world is *being the occupier of some spatiotemporal region*, but from the point of view of mainstream sortalism, this would be a trivial sortal property indeed.

Here again, the unifier would be committed to the meaningfulness of various extreme linguistic oddities: even such apparently nonsensical sentences as “I’m going to fix the fourth leg of this region of space” would be, at worst, inappropriate ways of expressing oneself. It is not that a region of space is, metaphysically speaking, the kind of thing of which it does not make any sense to claim that it has (fixable) legs—for there are no kinds out there. It is not that one simply *cannot fix space regions’ legs*. It is just that, given our semantic conventions and conceptual schemes, it is inappropriate to call this thing a space region when we want to claim of it that it has legs. If we want to say that this thing has legs, we had better refer to this thing as a table. But what we had better say depends somewhat on good manners and does not sustain the metaphysically demanding claim that *here* we have two things, a material object and the place it occupies.

Is this all? Can the unifier simply extend to this point the analogy with the inappropriate use of “the man who proved the completeness of first-order logic” to refer to Gödel before 1929? I think not. If someone’s theory entails that material objects cannot be moved, or that space regions can be moved, we would say that she simply has a bad metaphysics of material objects and places, or that she denies the *existence* of material objects, or of places (or both).

5 Tu quoque

The only way available to the unifier in order to stop the slippery slope and overcome these troubles, it seems, is to go back to linguistic analysis and intuitions. The extensional mereologist who sticks to the “one object to one place” maxim, but wants to avoid conflating objects and places, may rely on very general linguistic structures that appear to be common to different natural languages. She may claim that even for her not everything is conventional: our linguistic practices and conceptual schemes are also shaped with the help of the world. For instance, linguistic structures displayed by verbal conjugations and prepositions mirror a deep-rooted difference between material objects and their position in space and time; expressions designating processes and events, such as “nuclear fusion,” “Tibbles’ jump,” “the motion of the planets,” employ terms with a verbal root pointing at actions—fusing, jumping, and moving—and the distinction between nouns and verbs is trans-linguistic, shared by quite different natural languages. Unifiers like Varzi have resorted to the so-called semantic universals,⁴⁵ or else to fundamental common features of ordinary languages, such as the subject–predicate distinction or the noun–verb distinction, and have claimed that their being trans-linguistically ubiquitous suggests their mirroring basic distinctions between the corresponding ontological categories. They have then traced a sharp division between (a) this strongly homogeneous grammatical structure (corresponding, roughly, to what Talmy calls the “closed or grammatical” morphemes) and (b) issues concerning lexical systems (“open or lexical” morphemes).⁴⁶ The former is relatively invariant

⁴⁵ Defined by Talmy as “any aspect of meaning that is somehow represented in all languages” (Talmy 2008).

⁴⁶ See Talmy (2000, Chap. 1). Resorting to Talmy is somewhat ironic, since Talmy’s theory has strongly anti-realistic features entailing that the world is literally structured by our cognitive and semantic apparatus.

from one language to another and from one culture to another, thereby sustaining such very general distinctions as those between objects, places, and events, whereas lexical systems differ from case to case and are widely shaped by the different cultures and environments. Now, it is by resorting to merely lexical distinctions that the multiplier seeks her metaphysical discriminations between cats and cat-fusions, between sortal concepts and ordinary properties, and between essential and accidental features of beings.

Fair enough. But can the unifier be still allowed to add the meta-ontological claim according to which she is proceeding in a way *methodologically* different from the multiplier? Sortalists present their theory as entailed by the analysis of language, the unifier might perhaps say, whereas we are just taking language as a starting point. But this would be unfair towards the multiplier. As we have seen, sortalists cheerfully admit that not all the terms whose linguistic function appears to be that of identifying kinds of being can stand for real sortal concepts. Mere linguistic analysis could lead us to admit that *woman-pillar* is a genuine sortal concept, but such an approach would quickly lead to a trivialization of the notion. The demarcation between real and fake sortal concepts has never been claimed to come at the outset or after a quick consultation of the metaphysician with the semanticists of the department nearby. It is, on the contrary, the ideal aim of a research program. After all, as Quine (not an essentialist for sure) has pointed out, science itself proceeds this way: a part of the scientific progress consists in devising a vocabulary that more closely matches differences that are out there⁴⁷ (which is why, apart from sortal predications, we prefer “green” to Goodman’s famous “grue” and “bleen”: “green” seems to get closer to cutting nature at the joints). Sortalists do not appear to be presenting their position as straightforwardly *warranted as true* by linguistic analysis: they appear to be presenting a genuine metaphysical theory starting from very strong, albeit not untouchable, linguistic intuitions.

More generally, the boundary between question-begging and non-question-begging predicates—therefore, between question-begging and non-question-begging applications of Leibniz’s Law in order to ascertain differences in the world out there—may be traced via a holistic set of criteria involving both reference to semantic intuitions and general metaphysical options concerning material objects, events, and the like. From the meta-ontological point of view, the unifier and multiplier appear to be in the very same boat: neither is allowed to take metaphysical claims as straightforwardly entailed by our cognitive representation of the world or by the way such a representation is mirrored in the functioning of our language; but both have to begin their metaphysical task with linguistic analysis and intuitions, for this is how the world is given to us: via our cognitive apparatus and the language we use to speak about it. Just as there is no straightforward method to know what is out there via linguistic analysis and intuitions, so there is no detour to out there that can entirely dispense with them.

References

Anscombe G.E.M. [1979], “Under a Description”, *Noûs* 13: 219–33.

⁴⁷ See Quine (1969).

- Baker L.R. [1997], "Why Constituton is Not Identity", *Journal of Philosophy* 94: 599–621.
- Burke M.B. [1992], "Copper, Statues and Pieces of Copper: a Challenge to the Standard Account", *Analysis* 52: 12–7.
- Burke M.B. [1994], "Dion and Theon: an Essentialist Solution to an Ancient Puzzle", *Journal of Philosophy* 91: 129–39.
- Cartwright, R. [1971], *Identity and Substitutivity*, in Munitz [1971]: 119–34.
- Della Rocca M. [1996a], "Essentialists and Essentialism", *Journal of Philosophy* 93: 186–202.
- Della Rocca M. [1996b], "Recent Work on Essentialism (Parts 1 and 2)", *Philosophical Books* 37: 1–13 and 81–9.
- Dummett M. [1973], *Frege. Philosophy of Language*, Duckworth, London.
- Fine K. [2000], "A Counter-Example to Locke's Thesis", *The Monist* 83: 357–61.
- Fine K. [2003], "The Non-Identity of a Material Thing and Its Matter", *Mind* 112: 195–234.
- Fraassen B. Van [1977], "Essence and Existence", *American Philosophical Quarterly Monograph*.
- Frege G. [1950], *The Foundations of Arithmetic*, Blackwell, Oxford.
- Gallois A. [1998], *Occasions of Identity*, Clarendon Press, Oxford.
- Gibbard A. [1975], "Contingent Identity", *Journal of Philosophical Logic* 4: 187–221.
- Goodman N. [1951], *The Structure of Appearance*, Harvard University Press, Cambridge, Mass.
- Heller M. [1990], *The Ontology of Physical Objects*, Cambridge University Press, Cambridge.
- Inwagen P. van [1998], "Meta-ontology", *Erkenntnis* 48: 233–50, repr. in van Inwagen [2001]: 13–31.
- Inwagen P. van [2001], *Ontology, Identity, and Modality. Essays in Metaphysics*, Cambridge University Press, Cambridge.
- Johnston M. [1992], "Constitution is Not Identity", *Mind* 101: 89–105.
- Jubien M. [1993], *Ontology, Modality and the Fallacy of Reference*, Cambridge University Press, Cambridge.
- Levey S. [1997], "Coincidence and Principles of Composition", *Analysis* 57: 1–10.
- Lewis D. [1986], *On the Plurality of Worlds*, Blackwell, Oxford.
- Locke J. [1975], *An Essay Concerning Human Understanding*, Clarendon, Oxford.
- Lowe E.J. [1989], *Kinds of Being. A Study of Individuation, Identity and the Logic of Sortal Terms*, Basil Blackwell, Oxford.
- Neale S. [1990], *Descriptions*, MIT Press, Cambridge, Mass.
- Noonan H. [1988], "Reply to Lowe on Ships and Structures", *Analysis* 48: 221–3.
- Noonan H. [1991], "Indeterminate Identity, Contingent Identity and Abelardian Predicates", *Philosophical Quarterly* 41: 183–93.
- Oderberg D.S. [1996], "Coincidence Under a Sortal", *Philosophical Review* 105: 145–71.
- Olson E. [2001], "Material Coincidence and the Indiscernibility Problem", *Philosophical Quarterly* 51: 337–55.
- Pfeifer K. [1989], *Actions and Events. The Unifier-Multiplier Controversy*, Peter Lang, Frankfurt a.M.
- Quine W.V.O. [1960], *Word and Object*, MIT Press, Cambridge, Mass.
- Quine W.V.O. [1969], "Natural Kinds", in *Ontological Relativity and Other Essays*, Columbia University Press, New York.
- Rea M.C. (ed.) [1997a], *Material Constitution. A Reader*, Rowman & Littlefield, Lanham.
- Rea M.C. [1997b], "Supervenience and Co-Location", *American Philosophical Quarterly* 34: 367–75.
- Rea M.C. [2004], *World Without Design*, Oxford University Press, Oxford.
- Robinson D. [1985], "Can Amoebae Divide Without Multiplying?", *Australasian Journal of Philosophy* 63: 299–319.
- Russell. B. [1923], "Vagueness", *Australasian Journal of Philosophy and Psychology* 1: 84–92, repr. in Keefe and Smith [1996]: 61–8.
- Sidelle A. [1989], *Necessity, Essence, and Individuation*, Cornell University Press, Ithaca, NY.
- Sidelle A. [1998], "A Sweater Unraveled: Following One Thread of Thought for Avoiding Coincident Entities", *Noûs* 32: 423–48.
- Sider T. [1999], "Global Supervenience and Identity Across Times and Worlds", *Philosophy and Phenomenological Research* 59: 913–37.
- Strawson P.F. [1959], *Individuals. An Essay in Descriptive Metaphysics*, Methuen, London
- Talmy L. [2000], *Towards a Cognitive Semantics, I: Concept Structuring Systems*, MIT Press, Cambridge.
- Talmy L. [2008], "Universals of Semantics", forthcoming in Hogan [2008] - available at <http://linguistics.buffalo.edu/people/faculty/talmy/talmyweb/Recent/universals.html>.
- Thomson J.J. [1998], "The Statue and the Clay", *Noûs* 32: 149–73.
- Varzi A. [2000], "Mereological Commitments", *Dialectica* 54: 283–305.

Varzi A. [2002], *Words and Objects*, available at <http://www.columbia.edu/~av72/papers>.

Varzi A. [2003], "Mereology", *The Stanford Encyclopedia of Philosophy*, CSLI, Stanford, CA, available at <http://plato.stanford.edu/entries/mereology>.

Wiggins D. [1968], "On Being in the Same Place at the Same Time", *Philosophical Review* 77: 90–95.

Wiggins D. [2001], *Sameness and Substance Renewed*, Cambridge University Press, Cambridge.

Yablo S. [1987], "Identity, Essence, and Indiscernibility", *Journal of Philosophy* 84: 293–314.