Words and Objects

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Abstract. A lot of work in metaphysics relies on linguistic analysis and intuitions. Do we want to know what sorts of things there are or could be? Then let's see what sorts of things there must be in order for what we truthfully say to be true. 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*. And so on. In this paper I argue that this way of proceeding is full of traps and is bound to be pretty useless unless we already have a good idea of what sorts of things there are, and of how we are going to count them.

1. Introduction

When we set ourselves to draw up an inventory of the world—a catalogue of all there is, was, and will or could be—we have to face two tasks. First, we have to figure out what sorts of things there are, i.e., we must identify and characterize the categories under which the items in the inventory will fall. For example, we might want to draw a distinction between such things as chairs and tables, on the one hand, and conferences, hurricanes, and stabbings, on the other. And we may wonder what to do when it comes to such things (if such there be) as numbers, jokes, haircuts, smiles, souls, shadows, and so on. The second task is to figure out, for each category, how many different things there are, i.e., how many individual items must be included in that category. Is this chair the same as the chair that was here yesterday? Is it something over and above the mereological fusion of the molecules that constitute it? Am I the same as my body? Is Brutus's stabbing of Caesar the same event as his killing of Caesar? Is it the same as the assassination of Caesar? Is it the same as the violent assassination of Caesar? And so on.

How do philosophers go about addressing these tasks? I think we can say that two main tools have been developed to provide in each case, if not a

fool-proof algorithm for answering each question, at least some help. The first is the method of linguistic analysis. Do we want to know what sorts of things there are or could be? Then let's see what sorts of things there must be in order for what we truthfully say to be true. This, in turn, requires that we pay due attention to what it is that we say when we say something. For obviously we don't want to be misled by the idiosyncrasies of the language we speak. Obviously we don't want to say that there must be such things as age differences (for example) just because the English sentence "There is a difference in age between John and Tom" is true. We don't want to say that there exist such things as holes just because the sentence "There is a hole in that piece of cheese" is true. First we have to uncover the logical forms of these sentences. We have to look at the deep, semantic structures underlying their superficial, grammatical structures, and *then* we can look at what sorts of things must exist in order for those semantic structures to agree with the facts. For example, we can look at the referents of the logically proper names and at the values of the bound variables. Do these include ages? Do they include holes? Does the domain of reference and quantification underlying our English assertions include such things in addition to chairs, people, and chunks of cheese? Does it include conferences, hurricanes, stabbings? Does it also include numbers? Jokes? Haircuts? What else?

The second tool developed by philosophers is the one known as Leibniz's law, broadly understood as a principle of substitutivity *salva veritate*. Is this chair something over and above the mereological fusion of the molecules that constitute it? Well, let's see—is there any statement that is true of the chair but not of the mereological fusion, or vice versa? If there is no such statement—if the chair and the mereological fusion are indiscernible—then they are one and the same thing, or so we may suppose. Otherwise they must be two things. Is Brutus's stabbing of Caesar the same event as his killing of Caesar? Well, if whatever is true of the stabbing is also true of the killing, and vice versa, then the answer is: Yes, they are one and the same event; otherwise the answer is: No. Of course it may actually be impossible to check every statement, so in actual circumstances it may be impossible to be sure that we have one thing or one event rather than two or more. That's the obvious difficulty with one half of Leibniz's law, the one that asserts the identity of the indiscernibles. (This is why it would be good to have some identity *criteria* that are tailor-made for material objects, or for events, or for whatever categories of entities we countenance, for such criteria would allow us to cut down the number of relevant parameters.) However, the other half of the

law—the indiscernibility of identicals—seems easy. If we do hit upon a suitable statement that holds true of the chair but not of the mereological fusion of its molecules, then we can be sure that we are dealing with two distinct things. If we hit upon a suitable statement that holds true of the stabbing but not of the killing of Caesar, then we can be sure that we are dealing with two distinct events. And so on.

All of this is very good, and I think one can hardly underestimate the significance of these two tools—linguistic analysis in general, and the principle of substitutivity in particular. But one thing is their significance and another thing is their usefulness (if I may put it this way), and this is what I want to focus on in this paper. How much help do we get from those tools when it comes to working out our inventory of the world, or to convincing others that our inventory is a good one? How useful are those tools for the working metaphysician? I am afraid the answers that I can give are not very optimistic. Indeed it will be my contention that those tools are pretty useless unless we already have a good idea of what sort of inventory we want to draw up, and of how we are going to count our items. If we do have such an idea then fine: we can rely on linguistic analysis and on the principle of substitutivity to double check our work and to clarify our views. Otherwise we are stuck—which is to say that we have a lot of honest work to do before we can find some use for those tools.

2. Logical Form and Ontological Commitment

Let me first focus on the business of logical form. The guiding idea, here, is one that goes back to Frege and especially to Russell. We know that we must make room for those things whose existence is implied or presupposed by any statement that we can truthfully make. But ordinary-language sentences may have a deceptive grammatical form and therefore questions about their aboutness—questions concerning their ontological commitment, as some like to say—only arise upon suitable logical analysis. Before knowing *what* a sentence is about, or even *whether* it is about anything at all, we must understand the logical form of the sentence itself. For only the logical form is ontologically transparent. The grammatical form is full of ontological traps.

I have already mentioned a couple of examples of the sort of traps that we should beware of, but let me be more explicit. Take such familiar cases as Alice's answer to the White King:

(1) I can see nobody on the road.

Or think of Russell's paradigmatic example involving definite descriptions:

(2) The king of France does not exist.

Sentences such as these—we are to understand—are not about the entities they seem to be about. It's not that there is this guy, Mr. Nobody, whom Alice is seeing ("And at that distance too!", as the King would remark in a fretful tone.) It's not that there is this fellow, the present king of France, who does not exist (as Meinong and others supposedly held). To think so would be to be misled or deceived by superficial grammatical features. It would be to treat as designators expressions which are not, in fact, meant to designate anything at all. Deep down such sentences have an entirely different form and that is the form that matters when it comes to assessing their ontological import—or so the story goes. The first sentence is the negation of an existential perceptual report:

(1') It is not the case that there is at least one person whom I can see on the road.

The second amounts to the negation of a statement of existence and uniqueness:

(2') It is not the case that there is one and only one king of France.

Now, the traditional wisdom is that precisely this sort of consideration is or should be at work when it comes to any sort of existential claim, including assertions that involve an explicit existential quantifier of the form 'There is a *P*' or 'There are *P*s'. The first example I mentioned earlier was from Morton White:

(3) There is a difference in age between John and Tom.

Let us suppose that this sentence is true. Do we want to say that this fact requires the existence of a suitable entity satisfying the existential quantifier—the existence of an age difference? Of course not. That would be falling in a trap. Here is what we are supposed to do instead:

> We might begin by saying that we understand the relational predicate 'is as old as' and that we test statements of the form '*x* is as old as *y*' without having to see that *x* has some queer thing called an age, that *y* has one, and that these ages are identical. In that event, the belief of the ordinary man that there is a difference in age between John and Tom

> would be rendered in language that is not misleading by saying instead, simply, 'It is not the case that John is as old as Tom'. . . . We *need not assert the existence* of age differences . . . in communicating what we want to communicate.[1]

In other words, when dealing with a sentence such as (3) we should first of all recognize that the statement it makes can be rephrased more perspicuously as

(3') It is not the case that John is as old as Tom.

And this statement carries no commitment whatsoever to a category of individual ages. Likewise, if I say

(4) There is a hole in this piece of cheese

I need not be taken to be asserting something that commits me to the existence of a truly immaterial entity—a hole—located in this piece of cheese. The existential phrase "There is a hole in" is misleading, or so people have been telling me. Here is how things are explained by the nominalist materialist featured in David and Stephanie Lewis's classic dialogue:

> I did say that there are holes in the cheese; but that is not to imply that there are holes. . . . When *I* say there are holes in something, I mean nothing more nor less than that it is perforated. The synonymous shape-predicates '. . . is perforated' and 'there are holes in . . .'—just like any other shape-predicate, say '. . . is a dodecahedron'—may truly be predicated of pieces of cheese, without any implication that perforation is due to the presence of occult, immaterial entities.[2]

So we can truly assert sentence (4). But the underlying logical form is not an existential statement but a simple subject-predicate statement:

(4') This piece of cheese is perforated.

Here are some more examples of logical analyses of this sort, taken somewhat randomly from the literature:

(5) There is a strong chance that Professor Moriarty will come.
(5') It's very likely that Professor Moriarty will come.[3]

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[1] White (1956), pp. 68–69.
[2] Lewis and Lewis (1970), p. 4.
[3] Burgess and Rosen (1997), pp. 222–233.

(6) Sue was dancing a waltz.
(6') Sue was dancing waltzly.[4]

(7) The average star has 2.4 planets.
(7') There are 12 planets and 5 stars, or 24 planets and 10 stars, or . . .[5]

(8) This tomato and that fire engine have the same color.
(8') This tomato and that fire engine agree colorwise.[6]

(9) There are many virtues which Tom lacks.
(9') Tom might conceivably be much more virtuous than he is.[7]

Nor are these the only sort of cases that philosophers have been worrying about. All of these are examples that illustrate an *eliminativist* strategy: they show that we can analyze sentences which seem to involve ontological commitment to certain entities as expressing propositions that are, in fact, ontologically neutral with respect to those entities. But there are also cases where the analysis goes in the opposite direction, i.e., cases where the logical form discloses a hidden quantifier, thereby introducing ontological commitments that do not appear at the level of surface grammar. Davidson's account of the logical form of action sentences is a good example of this *introductionist* strategy. If I say

(10) Brutus stabbed Caesar with a knife

I am not just talking about Brutus, Caesar, and a knife (says Davidson). I am not just saying that these three entities stand in a certain three-place relation, *x stabbed y with z*, for otherwise I could not explain why my statement logically implies

(11) Brutus stabbed Caesar

(a statement that would involve a different, two-place relation). Rather, for Davidson (10) and (11) are to be understood as statements about a certain event—a certain stabbing that took place a long time ago. Deep down they are supposed to have the following forms:

(10') There was a stabbing by Brutus of Caesar, and it was done with a knife.
(11') There was a stabbing by Brutus of Caesar.

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[4] Ducasse (1942), p. 233.
[5] Melia (1995), p. 224.
[6] Loux (1998), pp. 66–67.
[7] Alston (1958), p. 47.

And once we see that these are the statements corresponding to the sentences in (10) and (11), the entailment is logically straightforward. In Davidson's words:

> There is, of course, no variable poliadicity. The problem is solved in the natural way, by introducing events as entities about which an indefinite number of things can be said.[8]

3. Is This of Any Help?

All of this is standard lore. Some of these analyses are so naturally accepted that they are now found in introductory textbooks in logic. This is true of Russell's analysis of definite descriptions but also, for example, of Davidson's analysis of action sentences.[9] Still, I think that there are severe problems with this general picture. Some of these problems are well known but some are less obvious and, I think, rather worrisome, especially if we keep in mind the tasks of the working metaphysician.

One obvious problem is that we can hardly eliminate or introduce anything by mere armchair speculation. Philosophers do speak as though we could *banish* entities from existence just by helping ourselves with Occam's razor, or *bring* entities into existence just by adding some quantifiers. But this is eerie and we'd better take it as a *façon de parler*. All we can do is to show how the existence or non-existence of certain entities would allow us to explain certain facts, just as scientists sometimes posit the existence or non-existence of certain entities in order to explain certain natural phenomena. In any case, it is obvious that logical analysis *per se* can do very little. Paraphrasability of sentences about holes does not *per se* eliminate holes from the world just as the assertibility of such sentences does not automatically introduce holes. Paraphrasability is a necessary condition if we want to avoid *commitment* to such things, and assertibility is a sufficient condition if we want to proclaim commitment, but neither is necessary or sufficient to affect the ontology itself.[10]

A second obvious problem concerns the very idea that the logical form of a sentence may allow us to withhold our commitments *while still commu-*

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[8] Davidson (1967), pp. 116–117.

[9] For example Forbes (1994).

[10] One author who has emphasized this sort of skepticism towards the use of logical analysis in ontology is P. M. S. Hacker (1982).

nicating what we want to communicate. What test can we apply to see whether a given English sentence can be understood as having a certain logical form? How do we know, for example, whether the logical form of a sentence such as (3) is correctly represented by (3'), where there is no mention of age differences? Pretty clearly, if we want to use (3') to communicate what we would be communicating using (3), then (3') must express the same proposition as (3). It must be the case that in uttering (3') we would be making the same assertion as we would make if we uttered (3). Otherwise (3') would not represent a legitimate analysis of (3). But then, in uttering (3') we would be talking about the very same things we would be talking about if we uttered (3). And why should one utterance be better than the other? Why should (3') be ontologically more transparent than (3)? As William Alston pointed out a while ago, this bears more than a passing resemblance to the paradox of analysis:

> In any context where questions of existence arise the problem is whether or not we shall assert *that* so-and-so exists, not whether we shall choose some particular way of making this assertion.[11]

We can also put the problem as follows. Whether or not the truth of our statement implies (or presupposes) the existence of age differences does not depend on the words that we utter to make that statement—it doesn't depend on the sentence that we use. So let's assume that sentence (3') can be used to make the same statement as sentence (3), though in a way that does not mention age differences explicitly. Then we may as well say that (3) itself is a sentence that can be used to make the same statement as (3'), though in a way that does mention such things explicitly. So from left to right (so to say) the analysis results in an elimination; but from right to left it results in an introduction. How do we choose?

Let me elaborate.[12] The idea behind the use of logical analysis is that in order to assess the ontological commitment of ordinary-language sentences one must first provide suitable logical paraphrases that are "intrinsically non-misleading" (as Ryle put it [13]) and therefore *ontologically transparent.* This amounts to a sort of linguistic reconstructivism: the truth conditions of our sentences are determined by the truth conditions of the corre-

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[11] Alston (1958), p. 50.

[12] This paragraph elaborates on a point made in Carrara and Varzi (2000), which in turn owes much to Marconi (1979).

[13] Ryle (1931-32).

sponding paraphrases and do not therefore require an independent ontology. Very well. The question is: Where do these paraphrases come from? On what grounds should we look for the logical forms that underlie our ordinary statements? Plainly, the very issue of *which* sentences must be logically paraphrased—let alone *how* they ought to be paraphrased—can only be addressed against the background of one's own philosophical inclinations. When Russell, for example, says that (2) must be paraphrased as (2') it is because Russell holds that the former, as it stands, is incompatible with our sense of reality, with that robust "feeling for reality which ought to be preserved even in the most abstract studies"[14] (and which lies behind that "aesthetic sense of us who have a taste for desert landscapes",[15] as Quine later put it). The analysis yields no ontological discovery. It is Russell's own ontological convictions that lead him through the quest for an appropriate logical form for (2), not *vice versa.* So much so that a philosopher such as Meinong might feel no need to take any action. For him the grammatical form of (2) may well coincide with its logical form because for him the present king of France does have ontological dignity. It is just one among many characters that a complete inventory of the world should include.[16]

If things are so, however, then here is the problem: How shall we go about determining whether or not a given sentence can be taken at face value? How do we know whether or not it needs to be analyzed or rephrased before we can look at its ontological import? In the case of a sentence such as (3) we may be inclined to look for a paraphrase that avoids any reference to age differences because these would be "queer things" (in White's own terminology) to be included in our inventory. But if we thought that such things are not queer, then we wouldn't need any paraphrase. We could still accept the analysis but we might be more inclined to read it from right to left and observe that whoever says that John is not as old as Tom is actually asserting the existence of an age difference between them.

For another example, let's go back to the holes in the cheese. If we are inclined to rewrite (4) as (4') it is because our strong "feeling for reality" prevents us from taking this to be a statement *about* a hole: if holes are not real then our statement can only be about the cheese. This is understandable and may even justify the enormous amount of work that will be involved in

[14] The phrase is in Russell (1919), p. 169.

[15] Quine (1948), p. 3.

[16] I'm going along with the received doctrine here, but see Oliver (1999).

analyzing *every* natural-language sentence that seems to refer to or quantify over holes as expressing a proposition which only involves reference to or quantification over perforated objects. Consider, for instance:

(12) There are seven holes in that piece of cheese.
(13) One hole in that piece of cheese is shaped like a doughnut.
(14) There are as many trefoil-knotted, doughnut-shaped interior holes in that piece of cheese as there are cookies on your plate.

I am happy to assume that we could paraphrase these sentences as well as every other.[17] But what if I like holes (so to say)? What if I think that a hole in the cheese is just a proper undetached part of the cheese's complement, just as the crust of the cheese is a proper undetached part of the cheese itself? Shall I still regard the paraphrases of these sentences as expressing their *logical form*? Perhaps I should do exactly the opposite. I should say that it is *because there is a hole in it* that the piece of cheese is perforated, in which case it would be (4) that supplies an "ontologically transparent" paraphrase of (4'), not vice versa. Likewise in all other cases. If I like holes then there is no reason for me to take the paraphrases into serious consideration—on the contrary. So here is the impasse: On the one hand we have the hole-enemies, who warn us against the dangers of *ontological hallucination*: we may have the wrong impression of seeing holes where in fact there is nothing at all. On the other hand we have the hole-realists, who warn us against the danger of *ontological myopia*: holes are ephemeral entities but they are real nonetheless, and we shouldn't pretend that they are not. Does linguistic analysis help us in making up our mind?

Historically this tension has been particularly manifest in the case of events. The standard, Davidsonian analysis is that a sentence such as (10) should be analyzed as (10'), i.e., as involving quantification over events. But there are also philosophers who view things the other way around; for those philosophers it is (10) that provides the logical form for (10') and there is no need whatsoever to posit the existence of an event—a stabbing—which had Brutus as an agent and Caesar as a patient.[18] The reason for this different conception is that such philosophers do not think that events are entities of a kind, so for them the sentences in question cannot really be *about* stabbings. They are about Brutus, about Caesar, and perhaps about a knife. And if this

[17] Though I am in fact skeptical: see Casati and Varzi (1994), chapters 3 and 12.
[18] See Horgan (1978) for a representative statement.

gives rise to complications when it comes to explaining the logical validity of certain inferential patterns (such as the adverb-dropping inference from (10) to (11)), that simply means that we have a problem to solve. For example, we need a logic of adverbs. But we would seem to have that problem anyway, wouldn't we? For instance, we need a logic of adverbs to explain the inference from (15) to (16):

(15) This mathematical series converges slowly.
(16) This mathematical series converges.

(Or do we want to say that these sentences are about an event of convergence?[19]) So here we are again. On the one hand, the logical form of a simple atomic sentence is said to involve hidden existential quantification over events. On the other hand, the situation is reversed and what looks like a quantification is explained away by means of a simple atomic sentence, just as what looks like a quantification over holes in (4) is explained away by means of a simple atomic sentence in (4'). How do we choose?

We can also get perverse results once we start playing this game. For example, suppose you are a Davidsonian about action sentences. In fact, suppose you think that stative sentences deserve a similar treatment, as Terence Parsons has suggested, so that to explain the valid inference from (17) to (18):

(17) John loves Mary passionately
(18) John loves Mary

we would have to understand these sentences as involving hidden quantification over individual states:[20]

(17') There is a loving state in which John is with respect to Mary, and it is passionate
(18') There is a loving state in which John is with respect to Mary.

Suppose, on the other hand, that your robust feeling for reality makes you an eliminativist with regard to holes. Then you might want to say that a sentence such as

(4) There is a hole in this piece of cheese

really has the form

[19] The point is made in Bennett (1988), p. 176.
[20] See Parsons (1987–88).

(4') This piece of cheese is perforated,

which really has the form

(4") There is a holey state in which this piece of cheese is.

Mirabile dictu, what seemed to be a quantification over holes in the cheese turns into a quantification over states in which the cheese is. This may well be fine. But the question of whether (4") really represents the logical form of (4), rather than vice versa, seems to me to be entirely up for grabs. Let us just say that depending on what we think there is we attach a meaning to what we say. Let us theorize explicitly about what there is rather than attribute our views to the language that we speak, and hence to the speakers who share our language. What would entitle us to do that?

4. Revolution and Interpretation

Here is another way of pressing this point. As far as ordinary practice goes, the only way one could ultimately evaluate the success of a logical analysis is by testing it against our pre-analytical intuitions—by comparing it with our understanding of the original sentence. How else could we determine whether the analysis is acceptable? However, this means that in order to analyze and eventually paraphrase a sentence it is first necessary to *understand* it. We must attach a meaning to the original sentence prior to the analysis. And how can we do that without the background of a corresponding ontology?

In their recent book on nominalism in mathematics, John Burgess and Gideon Rosen distinguish two ways in which the link between a sentence *A* and its "transparent" paraphrase *A'* can be understood.[21] The first is what they call the *hermeneutic* understanding. This is basically what Russell and Davidson (and many others) have in mind when they propose their logical analyses of certain types of natural-language sentences. The analyses uncovers the *deep* structure of those sentences—it reveals the truth conditions of the analysanda, those conditions which are supposed to take us straight to the truth makers. The second way to understand a paraphrase is what Burgess and Rosen call the *revolutionary* way. On this understanding, the paraphrase or logical form is a genuine *revision* of the given sentence. This is not what Russell and Davidson have in mind but it is, for example, what Quine

[21] Burgess and Rosen (1997).

had in mind. In *Word and Object* (section 33: "Aims and Claims of Regimentation") Quine adamantly insists that a logical paraphrase does not reveal the meaning of a sentence but changes it. Ultimately the purpose of a paraphrase is to resolve ambiguity. And

> if we paraphrase a sentence to resolve ambiguity, what we seek is not a synonymous sentence, but one that is more informative by dint of resisting some alternative interpretations.[22]

I think this is also what motivates the linguistic analyses of philosophers who find themselves on the business of massive paraphrasing, such as the Lewisean nominalist mentioned earlier. Let me quote again:

> When *I* say there are holes in something, I mean nothing more nor less than that it is perforated. . . . I am sorry my innocent predicate confuses you by sounding like an idiom of existential quantification. . . . But I have my reasons. You, given a perforated piece of cheese . . . employ an idiom of existential quantification to say falsely 'There are holes in it.' Agreeable fellow that I am, I wish to have a sentence that sounds like yours and that is true exactly when you falsely suppose your existential quantification over immaterial things to be true. That way we could talk about the cheese without philosophizing. . . . You and I would understand our sentences differently, but the difference wouldn't interfere with our conversation until you start drawing conclusions which follow from your false sentence but not from my homonymous true sentence.[23]

Thus, the revolutionary analysis is not meant as an ontologically transparent paraphrase of what a given sentence *really* means. It is an analysis of what the revolutionist means when *she* uses that sentence. The sentence as such can be used to mean different things by different speakers and the revolutionist is urging us to follow her practice. She is not interested in understanding language. To the contrary her manifesto reads: *Philosophers have hitherto tried to understand language; now it's time to change it.*

Now my point is that revolutionary paraphrases are perfectly all right, but they don't play any role in our metaphysical investigations. They play no role because they presuppose that we already have a cause to fight for—that we already have a view about the way things are. We just want to make sure that people don't draw the wrong inferences from what *we* say, so we pro-

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[22] Quine (1960), p. 159. I am indebted to Chris Partridge on this point.
[23] Lewis and Lewis (1970), p. 4.

vide (only upon request, perhaps) all the necessary linguistic amendments. On the other hand, the hermeneutic paraphrases *could* be of great help, because they could be truly revealing; yet it is very unclear where we can look for the relevant evidence. In fact, it is not even clear whether there can be any evidence, or whether the hermeneutic approach delivers a picture of natural language that is intelligible at all. For the picture would be this: our daily language—the language that we have learned and made ours since our very first contacts with the surrounding world—that language would consist of sentences whose real meaning often eschews us. It would consist of sentences most of which are only acceptable as loose talk. It would at best qualify as a sort of metalanguage with regard to the regimented language of philosophy, the latter being the only genuine object language and thus the only language that can express our genuine ontological commitments. Is this an acceptable picture?

We thus come to what I regard as the main problem with the whole idea of ontological transparency. As it turns out, both strategies involve a duplication of languages. For neither is willing to give up natural language altogether. Whether you are a revolutionist or a hermeneuticist, you want to carry on speaking with the vulgar, hence you are going to emphasize the pragmatic indispensability of ordinary language against the philosophical value of the regimented language (ontologically impeccable but practically unspeakable). However, this duplication of languages only works fine for the revolutionist. For only the revolutionist is always in a position *to tell which language is being spoken.*

Take the Lewisean hole-eliminativist once again. When speaking with the vulgar she can give expression in English to the fact that some cheese is perforated by asserting (4), but when speaking the regimented language of philosophy she would assert the negation of (4). More generally, she can assent to (19) when speaking loosely, and to (20) when speaking strictly and literally:

(19) There are holes.
(20) There are no holes.

This may be confusing to some people but the revolutionist will always know when is when, and she will be happy to explain. Not so for the hermeneuticist. If you are a hermeneuticist you do not have the same leeway. To the extent that (19) is to be interpreted as (19'), (20) will have to be interpreted as (20'):

(19') Something is perforated.
(20') Nothing is perforated.

This is because (20) is just the negation of (19), so the paraphrase of one must be the negation of the paraphrase of the other. But this is bizarre. After all, if one thinks that holes do not exist, then (20) seems to be a perfect way of expressing that view. Yet its paraphrase (20') is plainly false. So the only way out for the hermeneuticist would be to say that (20), unlike (19), *is* to be taken strictly and literally. Unlike (19), (20) is *not* to be paraphrased. But this, too, is very bizarre. For then the distinction between grammatical form and logical form becomes utterly arbitrary, and there appears to be no principled way of discriminating the loosely true from the strictly false.

From this perspective, the situation is not different from what happens when linguistic revisions take place in science. To use an analogy suggested by Peter Van Inwagen,[24] suppose we hear a Copernican astronomer say something like

(21) It was cooler in the park after the sun had moved behind the elms.

Would this be incoherent with the speaker's official view to the effect that the sun does *not* move in the sky? Of course it wouldn't. For our astronomer would hasten to add that in uttering (21) she was speaking loosely. If necessary, she could be more accurate and she would utter a sentence that does not suggest that the sun has actually moved—for example:

(21') It was cooler in the park when, as a result of the earth's rotation, the elms ended up being in front of the sun

(or something much more awkward than this). She can do that and she knows how to do it because she is a revolutionist; when she uses certain sentences of English she actually means something that goes beyond the literal or customary meaning of her words. (She means to express propositions that have a different form, if you like.) Now suppose *I* utter a sentence such as (21). Am I to be taken to imply that the sun has moved? Well—no. I suppose in this case you are entitled to reinterpret my statement too in a way that makes it consistent with the heliocentric theory: you may be *charitable*. ("Achille Varzi couldn't possibly mean to say that the sun had moved! He must have been speaking loosely.") But that's only because you take me to be part of the gang. You assume that I have myself subscribed to the revolu-

[24] See Van Inwagen (1990), p. 101.

tion, and that assumption justifies your hermeneutic attitude. I do have my Copernican views on astronomy, and you know that, and you also know that if the need arises I can be more precise on the basis of that theory. You know this so well that you can take care of that *on my behalf*. But metaphysics is not like physics, and when it comes to metaphysics you can hardly base your interpretation of what I say (or what anybody says) on the basis of the principle of charity. Ordinary speakers do not need to be astronomy experts to know that the sun does not move and the hermeneuticist may rely on this fact. But most people who assert common-sense sentences about holes, or about events, or about other "queer entities", are totally unaware of any metaphysical theories about such things (if such there be). So how should one reinterpret *those* assertions? "The speaker couldn't possibly mean to say that *there is a hole* in this piece of cheese! She was speaking loosely. She meant to say that *the cheese is perforated*." Is this legitimate? Isn't it a biased interpretation? Or consider Van Inwagen's own form of linguistic revisionism. Strictly speaking, a sentence such as

(22) There is a table in the kitchen

should be understood as expressing the following proposition:

(22') There are *x*s in the kitchen, and such *x*s are arranged tablewise.

This is because for Van Inwagen tables don't exist; a thing would have to possess certain properties in order to be properly called a 'table', and nothing has those properties. I take it to be obvious that Van Inwagen is a revolutionist, and that's perfectly fine. But now suppose that someone else utters sentence (22). "The speaker couldn't possibly mean to say that *there is a table* in the kitchen! She must have been speaking loosely. She meant to say that *there is stuff arranged tablewise* in the kitchen." What sort of charitable reading is this? This is plain misconstrual.

5. Leibniz's Law and the Counting Problem

So much for this part of the story—the tool of linguistic analysis. The only way I can make sense of it is as an honest revolutionary tool. But revolutions cannot be improvised and I would not engage in one unless I had already sorted out my views in advance. Linguistic analysis can be useful as a tool to clarify what I mean when I use certain sentences—or what we all *should* mean—but not what those sentences *must* mean. Hence it supplies no short-

cut to metaphysical investigation. In particular, 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. Let me now move on to the second task—that of figuring out a way of counting the items in each category. As I mentioned, here it is customary to rely on the general tool provided by Leibniz's law, broadly understood as a principle of substitutivity *salva veritate*. If we are smart, for some categories we may have concocted some kind of identity criterion, but generally speaking the principle of substitutivity supplies at least a negative test for identity: If we hit upon a statement that holds true of something *x* but not of something *y*, then we can be sure that *x* and *y* are distinct.

Also in this case, I am afraid I have mostly negative things to say. It seems to me that the basic intuition behind this strategy is seriously flawed and that it only succeeds in raising a dust that obstructs the real difficulty involved in our metaphysical task. To make my case, let me briefly review some concrete examples of how this strategy is typically implemented.

Consider again this chair in front of me and the mereological fusion of the molecules that constitute it. Are they the same thing? Well, it seems plausible to suppose that the chair would survive the annihilation of a single molecule. But—the argument goes—surely the mereological fusion would not: that fusion of molecules must consist of those very molecules, it must include them by definition.[25] Hence the chair and the fusion of its molecules have different properties (different modal properties) and should be distinguished by Leibniz's law. For a second, standard example, consider a statue and the lump of clay that constitutes it: two things or just one? Well—the argument goes—the artist made the statue this morning. But the clay was already there yesterday. So the statue and the clay came into existence at different times. Hence they have different properties (different temporal properties, in this case) and should be distinguished. The same line of argument is familiar also from the literature on events. Take Brutus's stabbing of Caesar. Is it the same event as Brutus's killing of Caesar? Well, it seems reasonable to suppose that Caesar could have survived the stabbing. But surely Caesar could not have survived his very killing. So, once again, an appeal to Leibniz's law would allow us to conclude that the stabbing and the killing

[25] The fusion of a bunch of *x*s is defined as something that overlaps those things that overlap some of the *x*s. See Simons (1987), ch. 1, and Casati and Varzi (1999), ch. 3.

are distinct events. And so on and so forth. This line of argument is very popular and very pervasive indeed.[26] But is it legitimate?

Let us focus on one instance—say the chair and the mereological fusion of the molecules that compose it, $x_1 \ldots x_n$. In that case the argument has the following structure: we come up with a statement which is true of the chair but false of the fusion, and we conclude that the statement must be about two things. Schematically:

(23) The chair in front of me could survive the annihilation of molecule x_i.

(24) The fusion of molecules $x_1 \ldots x_n$ could not survive the annihilation of molecule x_i.

Hence

(25) The chair in front of me is not the fusion of molecules $x_1 \ldots x_n$.

Of course, if this argument is accepted, then by the same pattern we could also distinguish many other entities occupying the same region of space in front of me: the mereological sum of molecule x_1 plus the rest of the chair, the mereological sum of molecule x_2 plus the rest of the chair, and so on. There would really be lots of entities in that region of space, not just one or two. But we need not go into this complication now. Let us just ask: Is the argument above a good one?

Well, are the premises true? Obviously this depends on how we read them. And there are two different ways of reading the premises, depending on whether the terms occurring therein are understood *de dicto* or *de re*. On a *de dicto* reading both premises are clearly true:

(23') There is a possible world *w* such that the thing which is the chair in front of me in *w* lacks molecule x_i.

(24') There is no possible world *w* such that the thing which is the fusion of molecules $x_1 \ldots x_n$ in *w* lacks molecule x_i.

To deny the first would amount to making very strange assumptions about what worlds are possible and what are not: there is nothing about molecule x_i which makes it necessary for it to belong to whatever chair is in front of me

[26] For example, the first case (an object vs. the fusion of its parts) is illustrated by Simons (1987) and Lowe (1989); the second case (an object vs. its constitutive matter) is illustrated by Johnston (1992), Baker (1997), and Thomson (1998); and the event case is illustrated in various forms by Goldman (1971), Thomson (1971), and Brand (1977).

in every world *w*. As for the second premise, it simply reflects the meaning of the term 'fusion of molecules $x_1 \ldots x_n$', so it is indeed true "by definition". On a *de dicto* reading, both premises are therefore true. However, this is obviously beside the point. If we are interested in the modal properties of the entity or entities that are in front of me in the actual world, then we should not look at the possible referents of our terms, 'the chair in front of me' and 'the fusion of molecules $x_1 \ldots x_n$'. Plainly, if these terms have different senses (as they do), then they may have different referents in different worlds. But that is not the issue. The issue is not whether our terms *could* have different referents. It is whether they *do* have different referents, whether they have different referents in this world. And of course this is not an issue that we can solve by looking at their senses. That would be a well-known fallacy.

So it is the *de re* reading that matters if we want to apply Leibniz's law. On that reading the argument is valid. But on that reading the truth conditions of the two premises (23) and (24) are hardly obvious:

(23") The chair in front of me—*that* particular entity—is such that there is a possible world *w* in which *it* lacks molecule x_i.

(24") The fusion of molecules $x_1 \ldots x_n$—*that* particular entity—is such that there is no possible world *w* in which *it* lacks molecule x_i.

If the chair is *not* the same as the fusion of its molecules, then fine: we are talking about two different entities and perhaps we can say that (23") and (24") are both true.[27] Perhaps molecule x_i is an essential part of the fusion but not of the chair. But this opposition would be *prior* to our thought experiment—it cannot be inferred from it and calls for independent grounds. How could we have *de re* intuitions about the chair and about the fusion if we didn't even know whether they are one thing or two? How could we compare *their* properties if we didn't know what *they* are—if we didn't even know whether they are distinct? Besides, why should we be able to settle identity issues in this world by looking at what goes on in other worlds? Don't we need to know how many passengers we are bringing along before we can embark in other-worldly philosophical excursions? On the other hand, if the chair *is* the same thing as the fusion of its molecules—and to rule that out would be to beg the question—then *that particular entity* is the

[27] One can formulate these statements in terms of counterpart theory, if desired, but here I'll go along with the standard formulation in terms of cross-world identity.

same in both cases, so (23") and (24") cannot be both true. And which one of them is false is a genuine metaphysical question: maybe molecule x_i is an essential part of that entity, in which case (23") would be false; maybe it is not an essential part, in which case it is (24") that would be false. (Of course, it would then be awkward to *assert* the true sentence of which (24") is the negation, i.e., to say that the fusion of $x_1 \ldots x_n$ could survive the annihilation of x_i. It would be better to make the same statement by asserting (23"). But that awkwardness is a heritage of our inclination to oscillate between *de dicto* and *de re* readings: it is not a falsehood indicator and it is only relevant from a pragmatic perspective.) It doesn't matter now which premise is false. As I said, that would be a genuine metaphysical issue. As far as the argument goes the point is that we cannot simply assume that both premises are true on pain of begging the question. We can have a priori reasons to accept both premises only if we already have reasons to distinguish between the chair and the fusion of its molecules in the first place, and that is supposed to be the conclusion of the argument. As it stands, on a *de re* reading (the only one that makes the argument valid) the argument is either unsound or viciously circular. Hence it is useless.

The same diagnosis applies to the other non-identity arguments mentioned above, as well as to other statements along the same lines. In each case, I submit, the reasoning is either invalid (if read *de dicto*) or question begging (if read *de re*). Thus, surely the terms 'the statue' and 'the lump of clay' have different senses; but it doesn't follow that they have different referents. And if their referent is the same, if they name the same thing, then either *that thing* was already there yesterday or *it* was not. (If it was, of course it would have been awkward to refer to it as a statue prior to this morning, when the artist actually shaped it as a statue; but that awkwardness would be purely linguistic or ideological and would have no bearing on the ontological level.) Or take the events. Surely the predicates 'stabbing' and 'killing' have different intensions, which entails that the event descriptions 'Brutus's stabbing of Caesar' and 'Brutus's killing of Caesar' have different senses. It does not, however, follow that the two descriptions have different referents. And if their referents are the same, if they describe the same event, then either *that event* could have been survived by Caesar or *it* could not. (If it could, it would of course be awkward to refer to it as a killing when counterfactualizing about Caesar's survival. We should rather refer to it as a stabbing. But once again that awkwardness would be purely linguistic, or ideological, and would have no bearing on the ontological level.) And so on

and so forth. To be sure, there is a difference between this last case—the event descriptions—and the cases of the chair and the statue. Perhaps Brutus's stabbing of Caesar was his killing of Caesar, but there are lots of other stabbings that are not killings. On the other hand, if this chair in front of me is the same as the fusion of its molecules, then that chair next to you is also the same as the fusion of its own molecules. Every chair must be the same as the fusion of its own molecules, or else no chair is. Likewise, either every statue is identical with the lump of matter that constitutes it, or else no statue is. I take these to be important metaphysical tenets. But having said this, the trouble with the argument is the same in all cases.

Let me stress also that the trouble concerns the form of the argument, not the conclusion itself: whether the entities in question are one or two remains open. Moreover, the analysis is not quite neutral with respect to the issue of contingent identity. If you think that a chair can be identical with the fusion of its parts in some worlds but not in others (or at some times but not at others), then the objection would not quite apply.[28] In that case we could speculate about the modal or temporal properties of the chair and of the fusion, and perhaps we could discover that these properties are distinct without begging the question of whether the chair and the fusion are in fact distinct. However in that case it would remain to be shown how we can use Leibniz's law to go from the observation that there are worlds in which the chair and the fusion have different properties to the observation that the actual chair and the actual fusion have different properties—that is, different modal properties. And unless we can do that the argument, though formally non vicious, would still be pretty useless. Ditto in the other cases.

Now, I don't want to insist too much on this analysis here.[29] In its general form it goes back to a point that Dummett made several years ago in his first book on Frege, where he observed that whether or not Leibniz's law can be used as a definition of identity, it cannot be made to serve as a criterion for deciding the truth of identity statements.[30] More recently, the same sort of consideration was put forward by Michael Della Rocca in the context of his discussion of essentialism and by Stephen Neale in his analysis of event-referring descriptions.[31] It's an obvious point, uncharitable as it may

[28] This is the line taken by Gibbard (1975) and by Yablo (1987) and recently defended by Gallois (1998).

[29] For further elaborations I refer to Varzi (2000) and Pianesi and Varzi (2000), § 3.

[30] Dummett (1973), pp. 544–545.

[31] See Della Rocca (1996) and Neale (1990), §4.6.

sound towards those philosophers who do engage in non-identity arguments of this sort. In fact, I do not even want to claim that Leibniz's law can *never* be used to provide grounds for a non-identity statement. I suppose that there are circumstances where one may find grounds for recognizing that a predicate which is true of the bearer of one term is false of the bearer of another term prior to any decision concerning whether the terms have the same bearer. For example, I believe I have sufficient grounds for making the statement

(26) Professor Bottani is sitting in this room.

Now we hear a scream coming from the room next door and I feel entitled to assert:

(27) The person who just screamed is not sitting in this room.

From these two statements, together with the assumption that people cannot be in two places at the same time, I can conclude that Professor Bottani is not the person who screamed. Likewise, the truth of (26) together with that of

(28) Professor Bottani is not wearing a hat

is sufficient ground for me to conclude that, given the axioms of set theory, the set of people sitting in this room is not the same as the set of people wearing hats. All of this is fine. My point is, rather, that the sort of *evidence* we need to rely on in cases such as these, where the application of Leibniz's law is not question-begging, stems from a complex web of factors. Among other things, the evidence builds on a background theory about people and about sets. It certainly does not lie in linguistic intuitions about the truth values of the relevant English sentences, and perhaps that is why the non-identities that we can infer come as no surprise. By contrast, it is typically linguistic intuitions that seem to underlie ordinary non-identity arguments about such things as chairs, mereological fusions, statues, and the like. And these intuitions—I submit—are not warranted except on a *de dicto* reading. Hence they are not warranted if we intend to apply Leibniz's law.

Some will reply that this is precisely the point to be stressed: Somehow there is a *theory* behind the claim that the premises of a non-identity argument are true. It is not *just* linguistic intuitions. It is intuitions correlating the sortal terms that we use to talk about the entities at issue—the sortals 'chair', 'statue', 'lump of clay', etc.—and the identity conditions that the

theory associates with the entities falling under those sortals, exactly as with people and sets. On this view, every sortal comes with its identity and persistence conditions built in. And it is such identity and persistence conditions that we rely on when it comes to assessing the premises of a non-identity argument.

I don't intend to deny this. To the contrary I find this view perfectly reasonable. But it seems to me that the view is only acceptable *provided* that the background theory is taken for what it is—a genuine piece of metaphysics. If we want to say that a chair and a fusion of molecules have different persistence conditions—that there are different kinds of change that can and cannot be survived by the chair and by the fusion, respectively—then we must do this properly. We must say that it is a matter of what kind of thing a chair is, and what kind of thing a mereological fusion is. We must do that before resorting to Leibniz's law. And we can hardly do that simply by looking at our linguistic practices and intuitions concerning the sortal terms 'chair' and 'fusion of molecules'. So, for example, David Wiggins and Jonathan Lowe have famously argued that *every* individual is necessarily an individual of a kind, or sort, and that the kind or sort of thing that an individual is determines its identity and persistence conditions. Moreover, one fully grasps the nature of a given kind or sort of thing, and hence the sense of a sortal term designating it (or even the sense of a singular term that can be used to refer to a specimen of it), only when one grasps the associated criterion of identity. In the cases under discussion, these philosophers would say for instance that the sortal terms 'chair' and 'fusion of molecules'

> 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 have different criteria of identity.[32]

Very well. I have no objections against this. But that's precisely because I don't think that our linguistic practices and intuitions concerning the sortal terms 'chair' and 'fusion of molecules' provide any evidence *for or against* the idea that these terms have different criteria of identity associated with them. Some philosophers think they do; other philosophers do not.

In the terminlogy introduced earlier, we can also say that the link between a sortal term and its identity criterion—if we want to insist on it—can only be viewed as part of a revolutionary analysis, not as a piece of natural

[32] Lowe (1989), p. 70. See also Wiggins (1980), passim.

language hermeneutics. Or do we really think that there is something about our use of the word 'chair' that determines whether this word picks out entities that differ from the fusions of their constitutive molecules? Do we really think that there is something about our use of the word 'statue' that determines whether this word picks out entities that differ from the lumps of stuff that constitute them (or whether it picks out three-dimensional rather than four-dimensional entities, for that matter)? Answering in the affirmative would, I think, amount to assigning the words of our language a metaphysical strength that they do not and cannot have. Exactly as with the case of logical form, rather than directly theorizing our ideas about what there is and how things are we would surreptitiously attribute our ideas to the language we share with others. We would surreptitiously attribute them to all the speakers of our language even if our ontological intuitions are very different from those of others. And *this* is the step that I find illegitimate.

6. Conclusion

I realize that the picture that I have presented is mostly a negative one. If we are interested in the tools of metaphysics—the tools that can help us draw up an inventory of the world—then I have only offered skeptical arguments against some common practices. Still, I don't intend this to be exclusively a negative picture. To the contrary, all of this suggests that we have to take metaphysics seriously, since we cannot hope to derive it from our linguistic practices. And to me this is a positive thing. This is the very beginning of the conference, so I thought I could take the liberty of looking at the dark side first. By the end of the conference this fog of negativity will have dispelled and most of the problems—most of the genuinely metaphysical problems—will (I am sure) have been solved.

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