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A Puzzle about Ontology

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1 Ontology

Ontology is the philosophical discipline that tries to find out what there is: what entities make up reality, what is the stuff the world is made from? Thus, ontology is part of metaphysics, and in fact it seems to be about half of all of metaphysics. It tries to establish what (kinds of) things there are, the other half tries to find out what the (general) properties of these things are and what (general) relations they have to each other. Settling questions in ontology would bring with it major progress in metaphysics. And it would bring with it major progress in a variety of areas in philosophy outside of metaphysics as well. Many philosophical debates outside of metaphysics are quite directly influenced by how things turn out in ontology. Whether or not there are certain entities will give rise to quite different answers in various philosophical debates. I would like to very briefly describe three debates where ontological questions play a central role. These debates are either directly from metaphysics or from other areas of philosophy and they will be of central importance throughout this paper:

1. **Numbers** One of the main questions in the philosophy of mathematics is the question whether or not there is a domain of mathematical objects that mathematics aims to correctly describe. Depending on what one says about this, it will give rise to quite different conceptions of the nature of mathematics, the nature of mathematical objectivity, the nature of mathematical knowledge, and so on. Thus, if there are (natural) numbers, if reality contains such entities, then mathematics, or at least arithmetic, will be about a domain of entities, and this will bring with it certain views about the nature of arithmetic. To settle the question about the existence of numbers would thus be major progress in the philosophy of mathematics.

2. **Properties** To find out whether or not there are besides individuals also properties that these individuals have would be major progress in understanding individuals and how they relate to each other. And if it turns out that there are properties, then this will give rise to a number of difficult questions in itself: how do these properties relate to the individuals? Are they fully present in each individual that has them? Are they abstract or concrete? On the other hand, if there are no properties, what is it for two individuals to be of the same kind? However the question of the existence of properties will be answered, it will give rise to substantially different pictures of the world of individuals that we are a part of.
3. **Propositions** Ontological questions about propositions are closely related to questions about the content of mental states and utterances, in particular to the question whether or not there are such things or entities as meanings or contents. One side understands belief, and being meaningful, as having some relation to some public entity which is the content of the belief, and which is the thing that is meant. If there are no propositions, however, mental and linguistic content will have to be understood along quite different lines. And if there are propositions, then one central question for a theory of content will be to spell out how our words and thoughts manage to pick out some proposition as their content. Thus, ontological questions are central to issues about content.

To answer ontological questions is thus part of many important philosophical projects, and, of course, a central part of metaphysics. And to answer these questions we need to find out whether there are properties, propositions, numbers, and the like. But ontological questions and our attempts to answer them give rise to a puzzle. This puzzle gets to the heart of the whole discipline of ontology, and it suggests that we don't yet fully understand these ontological questions. This paper hopes to make some progress in understanding this problem better and to solve the puzzle about ontology.

2 The Puzzle

The puzzle about ontology is simply the puzzle that there seem to be two contrary but equally good answers to the question

(Q) How hard is it to answer ontological questions?

Both of these answers seem perfectly good and correct, but it sure seems that not both of them can be true. The two answers are as follows:

2.1 Answer I: Very hard

Ontological questions are questions about what kinds of things make up reality. They are among the hardest questions we have around. In fact, they seem so hard that no real progress has been made in answering most of the ontological questions that are of interest to philosophers in the last 2000 years. The ontological questions listed above are still widely debated, as they have been for centuries. Maybe the best we can do in trying to answer these questions is what Quine suggested: look at the best overall theory of the world, a theory that scientists not philosophers formulate, and see whether or not that theory requires the existence of certain entities. If yes, consider the question about the existence of these entities answered affirmatively, if no, consider it answered negatively. In any case, answering these questions will be at least as hard as coming up with our best overall theory of the world, which is to say: very hard.

2.2 Answer II: Trivial

An answer to the question whether or not there are properties, propositions or numbers follows immediately from the most uncontroversial premises imaginable. And the inferences involved in the derivation of this answer from these premises is so simple and easy that it takes a philosopher to even attempt to dispute them. Here are some examples of how these questions can be answered:

- Propositions
  - Fido is a dog.
  - Thus: It's true that Fido is a dog.
  - Thus: Something is true, namely that Fido is a dog.
  - Thus: There are propositions, among them that Fido is a dog.[1]
- Properties
  - Fido is a dog.
  - Thus: Fido has the property[2] of being a dog.
  - Thus: There is a property that Fido has, namely being a dog.
  - Thus: There are properties, among them being a dog.
- Numbers
  - Jupiter has four moons.[3]
  - Thus: The number of moons of Jupiter is four.
  - Thus: There is a number that is the number of moons of Jupiter, namely four.
  - Thus: There are numbers, among them the number four.

These arguments, simple as they are, are of course subject to controversy. But let's be honest, are there any simpler and more straightforward arguments anywhere in philosophy? Would anyone really doubt these arguments, unless they have some prior philosophical reason to do so? I am not suggesting that we accept these arguments blindly, but I would like to stress just how simple and straightforward they really are. We will look at them in close detail momentarily, but first I would like to point out that they can even be strengthened in several ways.[4]

First, it is not necessary to start with an only contingently true premise, like "Fido is a dog" or "Jupiter has four moons." These arguments can also be formulated by starting with only necessarily true premises, or even only analytic premises, as in the following cases:

- Propositions (properties is analogous)
  - Fido is a dog, or Fido isn't a dog.
  - Thus: It's true that Fido is a dog, or it isn't true that Fido is a dog.
  - Thus: Something is either true or not true, namely that Fido is a dog.
- Numbers
  - There are just as many bachelors as there are unmarried men.
  - Thus: The number of bachelors is equal to the number of unmarried men.
  - Thus: There is a number that is the number of bachelors and of unmarried men.

A second way of strengthening the above arguments is to point out that the introduction of property, proposition and number talk, as it occurs in the inference from the first premise, is in fact not necessary, since we can use uncontroversial premises that apparently already contain it. Let me merely point out two quick examples:

- Properties
  - Being a philosopher is more fun than being an accountant.
  - Thus: Something is more fun than being an accountant, namely being a philosopher.
  - Thus: there are properties, among them being a philosopher.
- Propositions
  - That global warming will turn Michigan into a spring break destination is unlikely.
  - Thus: Something is unlikely, namely that global warming will turn Michigan into a spring break destination.
  - Thus: There are propositions, among them that global warming will turn Michigan into a spring break destination.

The question whether or not there are properties, propositions or numbers can thus be trivially answered by using a simple inference from completely uncontroversial premises, basically every ordinary statement that we all accept will do, and in fact only necessarily true statements are necessary. How could anything be easier?

This situation, that in a sense ontological questions are the hardest questions, and in a sense they are completely trivial, is something that has plagued ontology for a long time. And it is partly what makes ontology seem like such a silly discipline to many people. Ontology seems silly because, on the one hand, philosophers try to find out whether there are numbers, even though every mathematician believes that there are infinitely many prime numbers, and nobody would disagree with that. But on the other there is the almost impossibly hard task to find out whether the world contains besides the usual things in space and time also other stuff, equally real, but nonetheless neither in space and time, nor in causal interaction with us, namely numbers.

The two answers to the question how hard it is to answer ontological questions correspond to two reactions that philosophers often have to the question, say, whether or not there are properties. One reaction is that this is a substantial, difficult, and unresolved question in metaphysics. The other is that of course there a properties. Being a dog is one, and being a cat is another.

2.3 What to do?

This situation asks for a closer investigation. How can it be that substantial metaphysical questions have apparently trivial answers, answers that are immediately implied by ordinary everyday statements that we all accept and that apparently are not disputed among those who disagree about ontology? There are a number of reactions that one can have to this situation, and we will have to see which one is the appropriate one.

A first reaction is to be inclined to accept the trivial arguments and conclude that the ontological questions are trivial. But it is hard to see how this can be a satisfactory answer. The questions of ontology, as they are intended by the metaphysician, surely seem like substantial questions to answer. They are questions about what kinds of things make up reality, and these kinds of questions surely sound like it's more likely that they will be too hard for us to answer, rather than trivial. Anyone accepting this answer will have to do some explaining why these questions seem to us like substantial and difficult questions, even though they are in fact trivial. This won't be easy to do.

A second reaction is to accept that ontology is hard and to somehow reject the trivial inferences. Maybe in one of the steps in these inferences there is an error, maybe one of these steps is invalid. But this won't be easy either. After all, these steps on the face of it seem like pretty good inferences

to make. A proponent of this strategy will have to explain why we are fooled into making such inferences even though they are invalid, and they will have to explain why the inferences do seem good to us.

A third and different reaction is possible as well. According to it we do not yet fully understand ontological questions and how to answer them. Once we have a better understanding of what we are asking when we ask ontological questions, we will see that the above puzzle disappears. How this is supposed to happen is, of course, a further question. To take this line one would have to spell out what we misunderstand about ontological questions, why this misunderstanding arises, and how the puzzle is solved once the misunderstanding is put aside.

Whichever way one will go, it is worthwhile to look at the apparently trivial inferences in more detail and see what precisely is going on in them. This should help us see whether or not the second strategy, the one that rejects the trivial inferences, is a feasible strategy. These inferences had apparently a very similar form, whether they led to the conclusion that there are properties, propositions, or numbers. They all used two main steps:

- **Step 1: Nominalization.**[5] The first step in the trivial arguments is to reformulate a sentence by introducing a new noun phrase[6] or singular term while apparently preserving the truth conditional content of the sentence. To understand this step is to understand what is the difference between

  (1) Fido is a dog.
  and

  (2) Fido has the property of being a dog.

- **Step 2: Quantification.** The second step is to make a quantifier inference, using that new noun phrase in the premise of this inference. Once this is done we have quantification over properties, propositions, and numbers, and thus our ontological commitment has been made explicit. These quantified statements then trivially imply that there are properties, propositions, and numbers. To understand this step is to understand what is going on in the inference from

  (3) Fido has the property of being a dog.
  to

  (4) There is a property that Fido has.

In the following we will look in some detail at each one of these inferences. The conclusions we will draw from this investigation will suggest that the

third reaction to the puzzle is closest to the truth and that we have to have a more careful approach to ontological questions. Even though ontological questions can be formulated with only three words: "Are there numbers?", they are quite a bit more complicated than this would suggest.

3 Nominalization

3.1 A puzzling pair

The first step in the trivial inferences is quite similar in the cases of numbers, properties and propositions. It is making the transition from a *metaphysically innocent statement*, a statement that seems to have as little to do with metaphysics as anything, like

(5) Fido is a dog.

or

(6) Jupiter has four moons.

to their *metaphysically loaded counterparts*, statements like:

(7) Fido has the property of being a dog.
(8) It's true that Fido is a dog.
(9) The number of moons of Jupiter is four.

I call the latter metaphysically loaded counterparts because they are apparently truth conditionally equivalent to the corresponding innocent statement, but they do not seem to be metaphysically innocent any more. Whereas the innocent statements only talked about Fido, Jupiter, and Jupiter's moons, the metaphysically loaded counterparts seem to talk about numbers, propositions, properties, and truth. This seems hardly metaphysically innocent. But on the face of it, they do seem to be equivalent, and thus the implication goes both ways. Not only does (5) imply (7) but also the other way round, and similarly for the other pairs.

The apparent equivalence between an innocent statement and its metaphysically loaded counterpart is puzzling all by itself. They apparently are truth conditionally equivalent. After all, how could it be that Jupiter has four moons, but the number of moons of Jupiter isn't four? Or that the number of moons of Jupiter is four, but Jupiter doesn't have four moons? The truth of one seems to guarantee the truth of the other. Furthermore, the truth conditional equivalence is obvious, maybe even a priori. But on the other hand, the innocent statements and their metaphysically loaded counterparts appear to be about different things. (5) is only about Fido, but (7) is about both Fido and some other thing, a property. Similarly, (8) is about a proposition, and only indirectly about Fido. But how can there be an

obvious equivalence between two statements when they are about different things? True enough, there might be a metaphysical equivalence between (5) and (8) in the sense that it is metaphysically necessary that (5) is true just in case (8) is true. But why would this equivalence be obvious to ordinary speakers of English? Why would it be obvious even to speakers who have never heard of metaphysics, propositions, and the rest? And furthermore, if the innocent statements and their loaded counterparts indeed are equivalent, why would our language systematically have two ways to communicate the same truth conditions? Would we ever use one or the other in ordinary everyday situations of communication, or is their only communicative role to make metaphysical commitments explicit? To understand what is going on in the nominalization inference, we will have to make progress on these questions.

Some proposals have been made in the literature on how to understand statements like the metaphysically loaded ones above, and whether or not they are indeed equivalent to the innocent statements. Frege, for example, proposed[7] that in (9) the words "the number of moons of Jupiter" and "four" are singular terms that stand for objects. Thus (9) is an identity statement, one that asserts that what two singular terms stand for is the same. In this way (9) is like

(10) The composer of Tannhäuser is Wagner.

Frege also held that (9) and (6) are equivalent. Others, like Field in (Field, 1989), disagree with Frege on the issue of equivalence, but agree with Frege on the issue of how the sentence (9) is to be understood when taken literally. Field thinks that the equivalence only holds assuming that there are numbers. Thus, strictly speaking, (6) and (9) are not equivalent. Field agrees, though, that (9), taken literally, is an identity statement between two singular terms that attempt to refer to objects.

However, to understand (9) as being an identity statement and analogous to (10) overlooks a central feature that (9) has, one that it shares with the other metaphysically loaded statements mentioned above but not with (10). Understanding this feature is the key to understanding the relationship between the innocent statements and their metaphysically loaded counterparts.

An account of the relationship between the innocent statements and their metaphysically loaded counterparts will have to include the following:

1. An account of the intuitive judgments of their truth conditional equivalence
2. An account of what, if any, difference in communicative role there is between these statements
3. An account of whether or not the inference from one to the other is indeed valid

This might seem to be a substantial task, but once we notice that there is a striking difference between the loaded counterparts and the innocent statements, and once we compare them to an analogous case, a view will suggest itself that answers these questions quite directly.

3.2 Focus constructions

The relationship between an innocent statement, like (6), and its loaded counterpart, like (9), is in interesting ways similar to the one between other pairs of sentences, for example the following pairs:

(11) Johan likes soccer.

and

(12) It is Johan who likes soccer.

or

(13) It is soccer that Johan likes.

They seem to be truth conditionally equivalent, and obviously so. And one member of these pairs, (11), is syntactically simpler than the others, which involves a more complicated syntactic structure, more words, and the like. But there also is a clear difference between them in communicative function. Even though (11), (12), and (13) all communicate the same information, they do so in different ways. (11) communicates the information neutrally, with no special emphasis or stress on any particular aspect of it. (12) and (13), on the other hand, stress a particular aspect of what is said, and they stress different ones. (12) stresses who likes soccer, whereas (13) emphasizes what Johan likes. This phenomenon is commonly called *focus*, and its a widely discussed topic in linguistics.[8]

In spoken language a focus effect is commonly achieved through intonation, as in

(14) Johan likes SOCCER.[9]

or

(15) JOHAN likes soccer.

An utterance of one of (14) or (15) would not present the information neutrally. It would rather stress the fact that it is Johan who likes soccer, and not someone else, in the case of (15). Or that it is soccer that he likes, and not something else, as in the case of (14).

We can thus say that there are at least two ways to achieve focus in natural language. One is through intonation and phonetic stress. Let's call this *intonational focus* Another is through the use of certain syntactic constructions, like the so-called cleft-construction, which is what (12) and (13) are based on. Let's call this *structural focus*. The distinction between intonational and structural focus is not one in kind of focus, but rather in the source of the focus effect.

Focus is an important feature of communication. It relates to correcting misinformation, presenting certain aspects of the information as new, presenting something as important, and many more. One very vivid role that focus has in communication is its interaction with questions. Consider the question

(16) Who likes soccer?

Giving (13) as an answer is quite infelicitous, even though what one said is correct, and even communicates all the information that is relevant for a proper answer to the question. But by focusing on soccer one stresses the wrong thing. That it is soccer that is liked was commonly understood. The question was who it is that likes soccer. Giving (12) as an answer, on the other hand, is perfect. Even though these two sentences are truth conditionally equivalent, their role in communication and their interaction with questions are quite different.

The precise role of focus in communication, and the precise relationship between intonation and focus, as well as between syntactic structure and focus, is a substantial and difficult question for linguistics to address. We don't have to answer these questions here. One lesson to learn, however, form the cleft construction as well as similar constructions, is that there are what are called *focus constructions*: ways to present information syntactically that are directly related to the focus effect that will result, but that have no other direct effect on the truth conditions.[10] And the cleft-construction is a good example of this. Focus constructions can be nicely explicated using the metaphor of movement and extraction commonly used in syntax. In the cleft construction it seems that the syntactic item that carries the aspect of the information that is focused is moved into a special position, one where it will achieve special prominence. It is, so to speak, extracted from its usual position and moved into a new and special position. And this occurs quite frequently, not merely in the case of the cleft construction. Consider also the pair

(17) Mary spoke softly.
(18) Softly is how Mary spoke.

and many more. This way a focus effect is achieved without special intonation, but by using a special syntactic construction. To be sure, the details

of this are quite complicated. It is far beyond the scope of this paper to say more precisely which syntactic constructions give rise to which focus effects. The fact that this phenomenon occurs, and along what general lines it is to be understood, will be enough for us here.

3.3 A new account

Now, time to get back to the innocent statements and their metaphysically loaded counterparts. One of the key question for understanding their relationship is to see if they have a different role in communication. If they indeed are truth conditionally equivalent, would we ever take recourse to one rather than the other in particular situations of communication, and if so, what effect does this have? It turns out that there indeed is a different role they play in communication. To see this, consider the following example:

> I visit your town for the first time, don't know my way around well, and would like to get a quick lunch. You suggest a pizza place and a bagel shop that are close. Half an hour later you see me again and ask me what I had for lunch. I reply
>
> (19) The number of bagels I had is two.

Obviously, this is odd. To be sure, what I said is correct, and it gives you the information that I went to the bagel shop. But in putting it the way I put it, I did not bring out directly whether I had bagels or pizza. What I stress is how many bagels I had. Since this is not of importance here, and not what you asked me about, it makes my utterance somewhat off. If I had said

(20) I had two bagels.

then this wouldn't have been odd. Here how many bagels I had isn't focused on (assuming no special intonation). Here I told you that I had two bagels. With (19) I tell you that I had two, and furthermore that it was bagels. But how many I had isn't important for this conversation. Only what I had matters. That's why emphasizing how many I had makes it odd.

(19) has a focus effect. It has the effect of putting special emphasis or stress on how many bagels I had. The occurrence of this effect does not require a special intonation. Using this sentence alone will bring with it the focus effect. No special intonation is required to get the focus effect that produces the awkwardness of (19). The question is, how can we explain that an utterance of this sentence has this focus effect? Understanding this is key for understanding what the relationship is between the innocent statements and their metaphysically loaded counterparts.

This is quite straightforward now, given what we have seen above. The focus effect in (19) is a case of structural focus. It arises without special intonation. The underlying syntactic structure is thus a focus construction. This explains the occurrence of the focus effect independently of any special intonation. This explanation of the focus effect has direct consequences for our main debate. For one, it is at odds with the Frege-style understanding of (9). According to the Frege-style analysis (9) is analogous to (10). It is an identity statement between two singular terms, and both of those singular terms aim to stand for some entity or other. However, such identity statements generally don't bring with them a structural focus effect. Any focus effect that comes from an identity statement comes from intonation. Identity statements are not based on focus constructions. Just consider (10). There is no focus, unless you phonetically stress some aspect or other. Thus if the structural focus explanation of the focus effect is correct, and I see no other way to explain it, then appearances to the contrary, (9) is not (semantically) an identity statement formed with two (semantically) singular terms. The (syntactically) singular terms "the number of moons" and "four" as they occur in (9) thus must have a different semantic function than to refer to entities. And we have seen, in outline, what this would be. These singular terms are the result of movement and extraction that places particular parts of the syntactic material of the sentence in special positions.[11]

The account of the relationship between the innocent statements and their metaphysically loaded counterparts outlined above explains all the features that needed to be explained about their relationship:

1. It explains our judgments of truth conditional equivalence. Just as in the case of such judgments about the cleft-construction, they come from our linguistic competence, not from metaphysical insight.
2. It gives an account of the role that the metaphysically loaded counterparts have in communication, namely to achieve a focus effect, besides communicating a certain information.
3. And it gives an account of the validity of the inference. Just as in the case of the cleft construction, the innocent statement and the loaded counterparts are truth conditionally equivalent. The difference is only in how the same information is presented, with focus or without.

This might all seem fine and plausible, if there were not the quantifier inferences. How could it be that the respective singular terms do not refer, but the quantifier inferences are valid, as they sure seem to be? If "the number of moons of Jupiter" and "four", in these uses, do not stand for some entity, why does (9) imply that

(21) There is a number which is the number of moons of Jupiter, namely four.

It seems that the quantifier inference is in tension with the account of (9) proposed above. To see whether this is indeed so, and to see what is going on in this inference, we will have to have a closer look at quantification.

4 Quantification

Whether or not the quantifier inferences show that the nominalizations have to denote some entity will depend on what the correct large scale view is of the function of quantifiers in natural language and their relation to issues about ontology. We will thus have to look at this in some more detail.

4.1 Quantification and ontology

There is no doubt that there is a close connection between the truth of some quantified statements and ontology. For example, an ordinary utterance of

(22) Something ate my cheese.

will only be true if reality contains an object or entity that ate the speaker's cheese. The truth of this utterance refutes any ontological views that deny cheese eaters. In one sense there is thus a close connection between quantification and ontology.

But what is at issue here is whether or not all uses of quantifiers have this function and this close connection to ontology. I will deny that this is so. But it is important to note in the following that I deny it on empirical grounds, not because I try to explain something away for philosophical reasons. I think the correct understanding of the function of quantifiers in natural language shows us that quantifiers sometimes have a different function, and that we have reason to believe this independently of issues about ontology. I will make the case for this next.

4.2 Semantic underspecification

Semantic underspecification is a general phenomenon in natural language, one that occurs all over the place and in a variety of different ways. It is the phenomenon that the contributions that the language makes to the truth conditions of an utterance of a sentence does not completely determine the truth conditions of that utterance. The sentence uttered is thus semantically underspecified, and it can have different readings: different truth conditions that an utterance of that sentence can have. In these cases the semantic aspect of the utterance, that what belongs to the language and the sentence uttered, does not fully determine the truth conditions of an utterance. How this phenomenon is supposed to be understood more precisely, and what

theoretical framework can best accommodate it, is controversial. That it occurs can hardly be denied. We can remain neutral on how best to theoretically account for semantic underspecification, and instead see how far it extends. I would like to mention a few cases of semantic underspecification, cases that are themselves quite different in various respects, but that are very illustrative for our discussion to follow.

I will use the term semantic underspecification broadly here, to include cases like the fixing of the values of demonstratives and indexicals or the contextual restriction of quantifiers. These are quite uncontroversial cases, and in the next few pages I would like to remind you just how diverse and widespread this phenomenon is in natural languages. Some of the following cases are more complicated and elusive than fixing values of indexicals and contextual restrictions of quantifiers. Here are some examples:

Genitive. An utterance of

(23) John's car has a flat.

will usually be true if and only if the car John owns has a flat. But it can also have the truth conditions that the car John rented has a flat, or the car that John borrowed, or even the car that John is standing next to, and many more. In short, the genitive "'s" does not always contribute to the content of the utterance the relation of ownership. It will depend on the certain aspects of the utterance what relation is supposed to hold between John and a car, and what relation is contributed to the content of an utterance of (23).

Plural. Consider the difference between

(24) Three philosophers carried four pianos.

and

(25) Three philosophers carried four books.

A standard utterance of (24) will be true just in case three philosophers together carried four pianos one after the other. Whereas a standard utterance of (25) will be true just in case three philosophers each carried four books together. Not that in some context (24) couldn't be used to say that three philosophers each carried four pianos together. But given what we know about the weight of pianos and the strength of philosophers, this is ruled out as a reasonable interpretation of what has been said in standard contexts. So, plural noun phrases have a *collective* and a *distributive* reading. They can be used to talk about a collection of things, or the things in that collection. And it will depend on the utterance which one is the right one in individual cases.[12]

Reciprocals. Another case of semantic underspecification is reciprocal expressions, expressions like "each other". Consider the different interpretation of the reciprocal in the following two utterances:

(26) On the Santa Monica freeway the exits are no further than one mile from each other.
(27) Everybody gathered in the center of the room where they all could look at each other.

In (26) it isn't required that each exit is only a mile away from every other exit. Rather it is required that there is another exit every mile for the utterance to be true. In the case of (27) it is required that everyone can look at everyone else (except themselves) for the utterance to be true. The difference comes from a different contribution that the reciprocal expression makes to content.[13]

Polysemy. Polysemy is the widespread phenomenon that individual words can make different, but related, contributions to the truth conditions of utterances of sentences in which they occur. This is very common with verbs, as in

(28) John's driver's license expired on Tuesday, his parrot expired on Wednesday.

Many widely used verbs, like "get" or "run", have many different, but not unrelated meanings, as in getting home, getting drunk, getting a beer, or running a race, and running a company.[14] Polysemy is different from ambiguity, like the ambiguity of "bank", in that it is not accidental. The different uses of "bank" as a financial institution and the edge of a river are not related to each other; it is an accident that these two different words are pronounced the same way. Not so with polysemy. Here there is an explanation why the same word can make these different contributions to the truth conditions. There is some common core of meaning that can give us such an explanation. This will be of importance later.

In natural languages words and phrases can make more than one contribution to the truth conditions. There is a variety of different cases of this general phenomenon, and these cases fall into a variety of different categories. Some of these cases could be seen as involving contributions from context, others might have to be understood along different lines. How this is to be understood more precisely is beyond the scope of this paper and is a substantial and difficult question. That it occurs and is a widespread phenomenon is what matters in the following.

4.3 The communicative functions of quantifiers

A similar phenomenon is true for ordinary quantifiers, and there is good reason why this is so. I will argue that ordinary quantifiers are semantically underspecified and that they can make (at least) two different contributions to the truth conditions. It is clear what one of them is. It is the reading of the quantifier that we have seen above, and it is the one that applies in standard utterances of

(29) Something fell on my head.

Such an utterance is true if there exists an object out there in reality that is such that it fell on my head. I will call this reading of the quantifier the **external reading** or the **domain conditions reading**. The former for reasons to be spelled out later, and the latter because in this reading the quantifier imposes some condition on the domain of entities that our discourse is about. In this case the condition is that there is a non-empty intersection between all the things there are and the things that fell on my head. This reading of the quantifier is the one that we usually have in mind when giving a model theoretic semantics of quantifiers. However, there is also another one, and we have this reading for reasons quite independently of any issues in metaphysics or philosophy.

I will motivate that in natural language quantifiers play at least two roles in the following way. First, I'd like to argue that we have a need for quantifiers to have a certain inferential role. This can be motivated, for example, by considering a certain situation in which we have to communicate in partial ignorance, and where we know about our ignorance. Secondly, I will argue that the domain conditions reading does not give quantifiers their inferential role in natural languages, even though it is closely related to that inferential role. I will have to be brief and sketchy at various steps, but more details are in (Hofweber, 2000).

One of the uses we have for quantifiers is to communicate information that is in certain respects lacking with sentences that have quantifiers in them, and apparently have them essentially (given the information we have). Consider the following situation:

(30) You are supposed to write a psychological profile of Fred, and you learn the most valuable information that Fred admires Nixon very much. This is most useful to you since it allows you to make a number of conclusions about what kinds of things Fred values, and what kind of person he is. However, the next day, when you sit down to write up the profile you just can't remember who it was that Fred admires. All you remember is that whoever it is, this person is also admired by many Republicans. This is still very useful information, and you can communicate it to someone else as follows:

(31) There is someone Fred admires very much and that person is also admired by many Republicans. Who is that, again?

Now, this situation is completely general. It doesn't matter who it is that was admired here. The same applies when the person admired is Sherlock Holmes. Suppose you learned that instead, and again forgot who it is the next day. You might still remember that whoever it is is also admired by many detectives. This is still valuable, and can be communicated with

(32) There is someone whom Fred admires very much and that person is also admired by many detectives. Who is that, again?

And once you remember you will say "of course, it's Sherlock!".

We can see quite directly what role this use of the quantifier has here. First of all, the quantifier has mainly the role of a placeholder for the forgotten part of the information.[15] If we had not forgotten who it was, we could have used a name or some other term for this person instead of the quantifier. But given that we forgot we have to use a quantifier to communicate less than the complete information. Furthermore, it doesn't matter here whether or not the person admired is real and exists. In either case we can get useful information out of what we know about Fred. Whether the person admired is real is not of importance here. The quantifier has to be a placeholder no matter what the original term was, whether or not it referred to some entity, failed to refer, or had some completely different function. In any case, we need to take recourse to a quantifier in this situation. Simply leaving out what we forgot, and uttering

(33) Fred admires . . . and . . . is also admired by many detectives.

isn't an option since this isn't even grammatical. But, in effect, that's just what we want to say. We just want something in place of the forgotten part. In addition, what we want to say has to be independent of what it turned out we forgot. We want to say something that is true whether it was Nixon, Clinton, Sherlock, or anybody else, who was admired. So, with whatever complete information we started out with, once we forgot a certain aspect, whatever it was, we should end up with the same incomplete information. In short, we want the quantifier to have a certain inferential role. We want the information expressed with the quantified statement to be less specific than whatever we might have started out with. If what we started out with is true, then the less specific information should be true, too, independently of what we started out with. So, we want the quantifier to have the inferential role that "F(. . . t . . .)" implies "F(. . . something . . .)", for whatever "t" might be.

We have a need for some uses of quantifiers to have this inferential role to communicate what we want to communicate. And we can see that the domain conditions reading of the quantifier doesn't fulfill that need, even though (particular) quantifiers in their domain conditions reading are closely associated with that inferential role. In simple artificial languages the particular quantifier does have this inferential role, and the domain condition's truth conditions give it this inferential role. But this is only so because these simple languages are very simple. All singular terms in them denote some entity in the domain of quantification. In natural languages, however, this is not so. And this is not so for a variety of different reasons, and there is a variety of different, independent cases, that illustrate this. We used one such case in the example above, where we combined empty names with intentional transitive verbs. There are also a number of other kinds of examples that make this case just as well. In natural languages we have a number of expressions and phrases that are syntactically like terms that can occur in true sentences, but their semantic function is not to pick out any entities in the domain of discourse. One plausible case of this is generic noun phrases, as in

(34) The tiger is fierce.

Another is extractions, like so called pseudo-clefts, as in

(35) What I like to do on Sundays is take long walks.

and many many more.[16] In natural languages inferential role and domain conditions come apart. We have a need for both, and we do have both available to us. The best way to understand this is to say that quantifiers are semantically underspecified and have another reading besides the domain conditions reading. In this other reading they contribute to the truth conditions in such a way that they have a certain inferential role. Let's call this second reading of a quantifier the **inferential role reading**, or also the **internal reading**. As we have seen, the internal and the external readings of the quantifier are not unrelated and are not a case of accidental ambiguity, like "bank". They are more like a case of polysemy, where the different contributions to the truth conditions are related, and we can explain why one and the same expression makes these different contributions to the truth conditions. Internal and external readings of the quantifiers correspond to two different functions that quantifiers have, and in simple languages one and the same contribution to the truth conditions can fulfill these two roles. In natural languages they come apart.

Assuming that quantifiers have an internal as well as an external reading, the question remains, though, what contribution to the truth conditions a quantifier in its internal reading makes. We know that the truth conditions

have to be such that a certain inferential role results, but can we say more? Well, the quantified statement would have the inferential role it is supposed to have if it is truth conditionally equivalent to the disjunction over all the instances that are supposed to imply it. That is, 'F(something)' would have to be truth conditionally equivalent to the disjunction of all the 'F(t)'s. These truth conditions make clear that this reading of the quantifier deserves the name 'internal' reading, since the disjunction that it is equivalent to is based on all the instances within one's own language. The truth conditions of a quantified statement in its internal reading are closely related to statements within ones own language, rather than directly to some language independent, and external, domain of entities. Since there are infinitely many instances within one's own language, the disjunction (or conjunction, in case of a universal quantifier) that the quantified statement is equivalent to will have to be infinitary, i.e., have infinitely many disjuncts. This, of course, does not mean that the quantified statement itself is infinitely long, only that it is equivalent to one that is infinitely long.[17]

Before we get back to our puzzle about ontology, let me summarize the view about quantification defended here, if only in outline. Quantifiers, like many other expressions and sentences in natural languages, are semantically underspecified. Depending on the particular utterance in which they occur, they can make at least two different contributions to the truth conditions. On the one hand, they can be used in their external, domain conditions reading. In this use the truth of the sentence in which they occur has a close connection to ontology. The truth of such a sentence will depend on what entities are out there in reality. On the other hand, quantifiers can also be used in their inferential role, or internal, reading. In this use they make a different contribution to the truth conditions, and they behave differently in valid inferences. In fact, in their internal use the inference from 'F(t)' to 'F(Something)' is always and trivially valid, no matter what 't' is. Quantifiers in their internal reading are not directly related to ontological issues, i.e., the truth of 'F(something)' or 'Something is F' with the quantifier in its internal use, does not by itself settle the ontological question about Fs. It pushes the issue back to the quantifier free instances.

Now we are ready to see what the solution to our puzzle about ontology is.

5 The solution to the puzzle

With what we have seen so far we can now propose an account of what is going on in the trivial arguments, and this allows us to solve the puzzle about ontology that we started out with. All this is now quite straightforward, but it should be useful to briefly go over again what is going on in the two steps of the trivial arguments.

In the first step we make the transition from an ordinary, metaphysically innocent statement, to another one which is truth conditionally

equivalent to it, but which uses a focus construction to bring out and emphasize a certain aspect of the information communicated. This inference, just as in the case of the cleft construction, is valid, and is indeed trivially valid. Linguistic competence alone allows us to see that it is valid.

In the second step we make a trivial quantifier inference from a sentence that contains a (syntactically) singular term to one that contains a particular quantifier instead. This inference exploits the inferential role reading of the quantifier, and according to it such a transition is always valid, no matter what the semantic function of the singular term is. Using the inferential role, or internal, reading of the quantifier, the second step in the trivial inferences is thus also valid, and trivially so.

Thus the trivial arguments are indeed good arguments, and they are indeed trivial. But the conclusion of the trivial arguments only follows trivially if the quantifier in them is used internally, in its inferential role reading. In particular

(36) There are numbers.

or

(37) There are properties.

trivially follows from (1) or (6). But this inference is only trivially valid if the quantifiers in (36) and (37) are understood internally. Whether or not (1) or (6) also imply this when the quantifiers are understood externally is left an open question.

Thus we have the following solution to our puzzle: the trivial arguments are indeed trivially valid, but they do not answer the substantial questions of ontology. What the trivial arguments imply does not answer the question we want answered in ontology. This is so even though the ontological questions can be expressed with the words:

(38) Are there numbers?

and the conclusion of the trivial arguments can be expressed with the words

(36) There are numbers.

There is no contradiction in this since these questions are only ontological questions if the quantifier in them is used in its external reading, and the trivial arguments are only trivially valid if the quantifier in them is used in its internal reading.

6 Ontology, once more

The trivial inferences to quantified statements do not answer ontological questions. And we have seen why. Quantifiers are semantically underspecified, and quantifier inferences are only trivial when used in their inferential role reading. They are not trivial otherwise since it is not trivial whether or not a singular term in a premise of a quantifier inference is a referring (or denoting) singular term, or whether the singular term has a quite different semantic function, like being part of a focus construction. But then, how should we answer ontological questions? What follows from the above for the discipline of ontology? Quite a bit, I think, since ontology as it is mostly done today relies on the view that quantifiers are only used in one way, and always make the same contribution to the truth conditions. In this section I would like to briefly outline what follows for ontology, the philosophical discipline, from what we have seen so far.

6.1 Quine, Carnap and Ontology

The nowadays dominant view of how to achieve results in ontology is commonly associated with Quine. According to Quine, simply put, ontological commitment is directly associated with the acceptance of quantified statements.[18] And this might seem quite reasonable, since after all, what else could ontological commitment to Fs be other than accepting something which implies that there are Fs? Quine's view, however, assumes that quantifiers are always the same. It is certainly true that quantified statements sometimes bring with them ontological commitment, but do they always? In the above I argued that they don't, and this view has certain similarities with the position that Quine reacted against: Carnap's.

Carnap was an anti-metaphysical philosopher, but, nonetheless, he made some very insightful remarks about ontology, the metaphysical discipline. Carnap thought that general questions about what there is, questions like "Are there numbers?", "Are there material objects?", etc., have completely trivial affirmative answers. Once we adopt the 'framework' of number talk, it is trivial 'within the framework' that there are numbers. But this can't be what the metaphysicians are after when they ask "Are there *really* numbers?" After all, their question is supposed to be a substantial and difficult question. The metaphysicians, Carnap thought, are trying to ask a different question. They are trying to ask a question which is not one internal to the framework, but rather a question external to it, a question about whether the framework correctly mirrors reality. And this question these philosophers also express with the words "Are there numbers?", maybe with extra emphasis, as in "Are there *really* numbers?" But the only meaning these words have is internal to the framework, and understood this way the question is trivial. What the metaphysicians are trying to ask can't be asked. The external questions are meaningless, or so Carnap thought. Consequently, ontology,

the philosophical discipline that tries to answer these questions, is based on a mistake.[19]

The present view overlaps with Carnap's in certain ways, but also disagrees with him in others. The present view holds, with Carnap, that there is a difference between internal and external questions about what there is, that general internal questions have trivial affirmative answers, and that external questions are the ones that are the questions of ontology. But, contrary to Carnap, I believe that the external questions are fully meaningful. This difference comes from the different ways in which the internal-external distinction is understood. For Carnap, the internal-external distinction is based on his view of language-frameworks that are adopted for certain purposes, and the philosopher's attempt to use words which only have meaning in the framework to ask about the framework as a whole and how it corresponds to reality. On the present view, the internal-external distinction comes from semantic underspecification of quantifiers in natural language, and multiple semantic functions of noun phrases and singular terms. With Quine, and against Carnap, the present view holds that ontology is a meaningful discipline. But with Carnap, and against Quine, the present view holds that the acceptance, or truth, of a quantified statement by itself does not settle ontological questions, or ontological commitment. Ontological commitment is carried by quantifiers used externally, in their domain conditions reading. Internal quantifiers are by themselves not ontologically loaded. Thus the methodology for settling questions about ontological commitment will have to be to see what statements with external quantifiers we accept and believe to be true. What statements with external quantifiers in them will be true will depend on what the truth about ontology is.

Carnap's internal-external distinction about questions about what there is is usually taken to be anti-metaphysical and part of an attempt to show that the traditional discipline of ontology is based on a mistake. This is, of course, correct for the historical Carnap. But as an assessment about the subject matter, I think it is mistaken. In fact, I think the opposite is true. An internal-external distinction saves ontology as a substantial metaphysical discipline. This, of course, can't be used to argue for such a distinction, but any friend of ontology should be happy if it turns out that such a distinction can after all be defended. If it can be defended then one might be able to argue that there is a metaphysical question "Are there numbers?" which is not immediately answered by the trivial mathematical statement "There is a number between 6 and 8." To be sure, how this will turn out in individual cases, like numbers or properties, is a substantial issue, but an internal-external distinction about such questions opens up the possibility of ontological questions as something that goes beyond obvious truths. Only Carnap's version of defending such a distinction is anti-metaphysical in spirit.

6.2 How not to motivate an ontological project

Even though defending an internal-external distinction in the way done above is pro-metaphysical, and does not have any of the negative consequences for ontology that Carnap drew from his version of the internal-external distinction, there are consequences for the internal-external distinction as defended above that show that certain motivations for metaphysical and ontological projects are based on a mistake. I would like to briefly discuss one case of this: a certain way to motivate the problem of universals as a substantial metaphysical problem.

The problem of universals can be motivated in several different ways, and what I say in the following does not apply to all ways in which it can be motivated. Whether or not the problem of universals is a substantial metaphysical problem is not easily answered, and we will see a bit more on this below. However, one not uncommon way to motivate it is based on a mistake, and we can now see quite clearly what this mistake is. Here is an argument, simply put, that is often part of a motivation that the problem of universals is a substantial metaphysical problem:

(39) a. Fido is a dog, and Fifi is a dog.
b. Thus: There is something that Fido and Fifi have in common, namely being a dog.
c. Thus: There is some thing or entity which they have in common.
d. Question: What is this entity and how does it relate to Fido and Fifi?

Answering this last question is then the starting point for years of metaphysical research. However, that this form of reasoning is mistaken should now be clear. The inference from (39a) to (39b) is correct and trivial only if the quantifier in (39b) is understood in its internal reading. But when the quantifier in (39b) is understood this way then the inference from (39b) to (39c) is invalid. This inference presupposes an external reading of the quantifier in (39b). And only with the external reading of the quantifier can we motivate the question of what this entity is that we quantify over.

The question

(40) Is there something Fido and Fifi have in common?

could be understood in at least two ways. On one way of understanding it, the quantifier in (40) is an internal quantifier. Then the answer is, trivially, yes. Of course there is something they have in common, they are both dogs, or to put it differently, what they have in common is being a dog. However, the answer to the question so understood does not motivate a metaphysical project that tries to investigate how what they have in common relates to

Fido and Fifi. This answer does not motivate holding that there is an entity that they have in common, an entity about which substantial metaphysical questions can be asked. If the quantifier in (40) is understood as an external quantifier, however, then an affirmative answer to this question would motivate a substantial metaphysical investigation into what this entity is and how it relates to Fido and Fifi. But the above argument does not give an answer to this question understood this way. The inference from (39b) to (39c) is invalid. So much follows from our defense of the internal-external distinction given above.

We have seen that the trivial ways to get results in ontology are based on a mistake. However, external questions are just as meaningful and factual as internal question. What, then, is the answer to the external questions? Even if there are no trivial answers to the ontological questions, what is the answer to the external questions about properties, propositions and natural numbers? I would like to conclude by briefly outlining two ways in which this question can be answered.

6.3 Internalism and the external questions

Even though the trivial arguments do not answer the external questions, and even though not all quantified statements bring with them ontological commitment, the question remains whether our talk about properties, propositions and numbers in general is about some domain of entities. This question is closely related to the question of what function such talk has, both in ordinary everyday discourse, as well as in theoretical enterprises like philosophy or semantics. What are we doing when we say things like

(41) He has every characteristic one could wish for.[20]

or

(42) There is something we have in common.

Are we, in an ordinary use, talking about some domain of entities, the properties, or are we doing something else? Is this quantifier an external or an internal quantifier? Let's call **externalism** the view that in ordinary everyday communication quantification over properties is external quantification, and thus aims to be about some domain of entities. Correspondingly, an externalist will believe that property nominalizations, at least in standard cases, are singular terms that stand for entities in that domain. Most likely, if externalism is true then the entities that make up this domain will be mind and language independent entities, entities that exist independently of our talking and thinking about them. Thus according to externalism, talk about properties is talk about some mind and language independent domain of entities. On the contrary, **internalism** is the view that

talk about properties is not talk about some domain of entities, and that such talk rather serves a different function. Naturally an internalist will hold that ordinary quantification over properties is internal quantification, and that such quantifiers are used in their inferential role reading. An internalist can hold that we take recourse to such quantifiers for the increased expressive power they give rise to, but that this increased expressive power is metaphysically innocent, and merely a logical device. An internalist might naturally connect the increased expressive power that quantification over properties gives rise to with a standard motivation for a minimalist theory of truth, which holds that the main use for a truth predicate is a certain metaphysically innocent and merely logical increased expressive power. An internalist will also naturally hold that property nominalizations have a different function than to stand for or refer to some entity. What this function is will have to be spelled out, of course, and can be a point of contention among internalists.[21]

Both internalist as well as externalist views about talk about properties are compatible with everything we have said so far. Which one of these two is correct is a substantial further question, one well beyond the scope of this paper. In particular, it is a separate question for properties, propositions, numbers, or any other domain of discourse. What we can note here, though, is that an answer to the external, ontological questions is closely connected to whether or not internalism or externalism about a domain of discourse is correct. Either way, this will bring with it an answer to the external questions.

If externalism is true, and we do quantify over properties using quantifiers in their domain conditions reading, then in doing so we commit ourselves to the existence of properties. Thus if what we say about properties is at least sometimes true then properties exist, and the ontological question about properties is answered. Thus if externalism is correct then the truth of our ordinary statements about properties determines an answer to the ontological question about properties: properties exist, and reality contains besides the individuals we encounter in space and time also properties. It is left open, of course, what entities properties are, and whether they are in space and time themselves. But the external question: "Are there properties?" as been answered, assuming that what we say about properties is at least sometimes true.

That externalism brings with it an answer to the question about the existence of properties, or at least our commitment to the existence of properties, is pretty clear. I'd like to point out, though, that the truth of internalism would answer this question as well, given that properties are understood a certain way. But the answer from internalism is negative. The argument for this is simply as follows. If internalism is true then ordinary quantifiers over properties are internal quantifiers, and property nominalizations do not attempt to refer to entities, but are rather non-referring expressions. Thus talk about properties is not talk about any entities. This

is so not because such talk aims to be about any entities, and fails because the entities do not exist, but rather this talk does not even aim to be about entities. If internalism is true then talk about properties has a different function than to be about some domain of entities. And if talk about properties does not aim to be about any entities, then whatever entities are out there, none of them will be properties. If "being a dog" or "the property of being a dog" doesn't aim to stand for some entity then whatever entities are out there, none of them is the property of being a dog. For an entity to be the property of being a dog, it would have to be the entity that our expression "the property of being a dog" stands for. But if internalism is right this expression stands for no entity since it doesn't even attempt to stand for an entity. Thus whatever entities there are, none of them are properties. Thus the external question "Are there properties?" is answered negatively, assuming internalism about talk about properties.

The above argument relies on a particular conception of properties. It assumes that properties are whatever expressions like "being F" or "the property of being F" stand for. There is, however, also a different conception of properties. This conception of properties, the *role conception of properties*, takes properties to be whatever entities, if any, play a certain role, like the role specified in some metaphysical theory. The internalist position about talk about properties does not rule out that there are entities that play the role specified in some metaphysical theory. But it does rule out that properties exist if properties are understood along what can be called the *being F conception of properties*. If properties are whatever expressions like "being a dog" stand for, then there are no properties out there, assuming internalism.

This illustrates that to answer external questions, the questions of ontology, investigations into the function of certain talk can lead to negative answers as well as positive answers (assuming that some of the things we say are true). These considerations can't rule out that there are abstract objects, but only show that whatever objects or entities there are, properties are not among them. And this gets at the heart of what many philosophers sympathetic with nominalism find objectionable about abstract objects. The existence of abstract objects isn't philosophically problematic, but that their existence is required for the truth of our ordinary statements is much more suspicious. Internalist views about talk about certain kinds of things can accommodate this.

7 Conclusion

Ontological questions are hard, and the trivial arguments are perfectly valid. However, they do not answer the hard questions of ontology. We have seen how that can be so. Quantifiers themselves are semantically underspecified, playing two different, but related, roles in ordinary communication. This leads to a version of an internal-external distinction about questions about what there is, and a version of a neo-Carnapian view about ontology that

affirms ontology as a meaningful enterprise. We have also seen that to answer the meaningful ontological questions we have to modify Quine's methodology and rather look at what the function of property talk is in ordinary communication and in theoretical enterprises. This is a substantial and difficult question that has to be addressed separately for each case. And this is where the ontological questions will be answered.[22]

Notes

[1] Here and elsewhere I take it that propositions are whatever that-clauses stand for.

[2] Or in more common English: the feature or characteristic. I will ignore this in the following.

[3] This is, of course, Frege's example from the *Grundlagen*, see (Frege, 1884). Let's ignore the fact here that Jupiter actually has more than four moons.

[4] Stephen Schiffer has also stressed this aspect of properties and propositions. He calls the fact that talk about them can be introduced without apparent change of truth conditions the *something-from-nothing feature* of properties and propositions. However, he draws quite different conclusions from this than I will in the following, in particular about what the real difference between the corresponding statements is. See (Schiffer, 1996).

[5] I use this term broadly here to include that-clauses and the other relevant phrases.

[6] I should better say: noun phrase or clause, but the precise syntactic category of these expressions that are introduced are of no central relevance here.

[7] See his (Frege, 1884).

[8] See, for example, (Rochemont and Culicover, 1990), (Herburger, 2000), or (Rooth, 1985) for much more on focus and its relation to syntax and semantics. We can only scratch the surface of these issues here.

[9] The capitals here represent phonetic stress. We will ignore the complicated issues of different kinds of phonetic stress.

[10] Focus can have an effect on the truth conditions, for example when a sentence contains "only", and in other situations. This is not relevant for our present discussion, however, so I will put it aside here.

[11] The details of this account, and of the arguments in its favor, are spelled out in (Hofweber).

[12] A survey of a number of issues related to plural and quantifiers can be found in (Lønning, 1997). See also (van der Does, 1995) on different attempts to locate the source of the readings. (Bach, 1982) contains a discussion connecting plural quantifiers to semantic underspecification, or 'nonspecificity', as he calls it.

[13] See (Dalrymple et al., 1998) for a discussion of such cases.

[14] For a discussion of this phenomenon from different angles, see the essays in (Ravin and Leacock, 2000).

[15] Another aspect, which I will sideline in the following, is to make sure that the same placeholder goes where it should go. So, in the above case, it should not be lost that it is the same thing that is admired by Fred and many detectives.

[16] In (Hofweber and Pelletier) we discuss a larger list of candidates of noun phrases that are neither quantificational nor referential, which we label "encuneral NPs". All these could be used as well to motivate the position about quantifiers defended here.

[17] Such infinitary quantification raises many interesting issues in its own right. It closely relates to substitutional quantification, but it is also interestingly different from it. For one, the present proposal does not directly employ substitution, but models the truth conditions of (particular uses of) natural language quantifiers directly with an infinitary formal language. More importantly, in the traditional debate about substitutional vs. objectual quantification the

issue was which one of them corresponds to the natural language quantifiers. According to the present proposal, aspects of both can be found in different uses of natural language quantifiers. It is crucial to see how quantification can exhibit both of these features. These differences may seem subtle, but they are of central importance in the proper understanding of quantification and its relation to ontology. Some of these issues are discussed in (Hofweber, 2000), and others are developed in forthcoming work. One important modification of internal quantification as we set it up here is discussed in (Hofweber, 2005). This modification is not relevant for our present discussion, but is indispensable for a defense of internalism about properties and propositions, which is discussed below.

[18] The *locus classicus* is (Quine, 1980).

[19] Carnap's views are spelled out in his famous essay (Carnap, 1956). A contemporary version of Carnap's rejection of ontology can be found in (Yablo, 1998).

[20] I take it that talk about properties in everyday life is often talk about them under a different name, like feature, characteristic, etc..

[21] This way of characterizing internalism and externalism about talk about properties is, of course, somewhat rough. We shall not discuss the details of this here, but see (Hofweber, 2005) for more.

[22] I would like to thank Sol Feferman, John Perry, Johan van Benthem, Stephen Schiffer, Ed Zalta, Robert Kraut, Peter Godfrey-Smith, Kent Bach, Rich Thomason, Jason Stanley, and Peter Ludlow for many helpful conversations and/or comments on earlier drafts.

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