

On Quantification and Reality -Why the World is a Lump

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1 Introduction

If ontology addresses the question ‘what is there?’, metaontology concerns itself with the philosophical significance of this question (e.g. is it even meaningful? do correct answers to it reveal facts ‘about the world’, or just artifacts of our own conventions?). In this paper, I will advocate a bold meta-ontological thesis, which however, turns out to yield to a very moderate answer to questions about the philosophical significance of ontology.

I am going to argue that the world is a lump. Metaphorically speaking: the world has parts like a turkey has parts (its internal structure makes some ways of cutting it up more natural than others), not like a set has elements. Less metaphorically speaking, the fact that some sentence of the syntactic form “ $\exists x Fx$ ” (in a language extending first order logic) expresses a truth, doesn’t depend on the world being innately divided up into objects in such a way that some object x is an F (because the world is a lump so it isn’t innately divided up in any particular way). And the cash value of *this*, turns out to be that we shouldn’t always expect to be able to paraphrase meaningful expressions in other

languages, by associating a reference (expressed in our language) to everything that behaves grammatically like a referring expression in their language, (or even by coming up with a tidy paraphrase).

If this is right, it yields a moderate answer about ontology. Ontologists can't claim to be limning the structure of reality by discovering what *elements* the world contains (since the world isn't a set, it doesn't have elements). However, their research will be illuminating in two ways (it can teach us new truths in our language, and reveal structural facts about the world, by showing that theories in certain very economical languages can capture certain aspects of it).

Firstly, insofar as ontologists correctly answer 'are there xs?' questions, they will be stating new and potentially interesting truths. Giving up on the claim that our language's quantificational structure reflects an innate, and uniquely correct, division of the world into parts, in no way entails that we should stop caring to learn new truths statable in our language. Learning that "there are" black holes, or electric eels, or geographical inaccuracies in Shakespeare is obviously interesting.

Secondly, the philosophical cottage industry of paraphrasing theories in such a way as to reduce the number of different kinds of objects which they quantify over, can also provide illumination of a more philosophical/metaphysical nature. Learning that there's an economical way of axiomatizing facts about the behavior of q particles which quantifies over Xs but not Ys tells us something structural about the behavior of q particles - in much the same way that learning that a certain surface can be as efficiently tiled using only x polygons, as it can using y polygons as well, tells us something about the structure of that surface. Returning to the metaphor above: the fact that it's easier to cut a turkey up into 6 or 12 pieces rather than 5 or 19 is an interesting fact about the structure of turkeys (related to e.g. the fact that they are symmetrical),

quite independent of whether the claim ‘turkeys have more than 7 pieces’ is true, false, or meaningless.

OK, but why think that the world is a lump? I will argue that this view, (call it lumpism), provides the only reasonable way to account for certain intuitive judgments about statements in other possible languages, and also (briefly) that it provides a nice solution to the Benacarraf problem about abstract objects.

2 The problem case

Consider an isolated community of people who talked about dearths of jobs in ordinary life, and (to a limited extent) economics and sociology. Presumably, these people would be speaking the truth when they said (in suitable circumstances) “there is a dearth of jobs”. Now, suppose that they all get very excited about first order logic, and decide come to actually speak in a language that extends first-order logic. That is, they start using the backwards E and A in place of “there is”, and the truth functional connectives “ \wedge ” “ \vee ” “ \sim ” in place of the english words, and they follow all the syntactic rules for these connectives that would be found in a logic text book. But (suppose) they don’t paraphrase away the dearths talk. Thus, they say things like “ $\exists x$, x is a dearth of jobs in coconut farming”. Perhaps dearths aren’t very useful to the sociologist, so they rarely mention the dearths. But if queried “ $\exists x$, x is a dearth of jobs in coconut farming?” they would say yes. What shall we say about the truth value of this claim in their language?

Intuitively, I claim, these people are clearly speaking the truth. But here we have a prima facie problem. For another community - that of post Quinean english speaking philosophers - would say that there are, ‘really’, no such things as dearths of jobs, and so talk of dearths should be paraphrased away when we try to state our total theory of the world in the language of first order logic.

They say “ $\exists x$, x is a dearth of jobs in coconut farming” and we say “ $\exists x$, x is a dearth of jobs in coconut farming”. If we are to be understood as speaking the same language as them, and denying the same proposition which they assert, we can’t both be right. So, what shall we say about this case?

We have two sentences which we’d like to come out true (their “ $\exists x$ dearth(x)” assertion, and their “ $\exists x$ dearth (x) assertion”), but they seem to make incompatible claims on the quantificational structure of reality, so they can’t both reflect this structure correctly. Thus, we have three options: to say that our language gets the quantificational structure right, to say that theirs does, and to say that neither do. In each case, one needs to explain how those whose language doesn’t reflect the quantificational of the world, can still count as asserting truths. So, what can we say?

3 Maximalism

The first option I’ll consider is maximalism. This is the view that the world is (so to speak) cut up very very finely. There’s a lot of controversy about how to state the view precisely, but the intuitive idea is that there are abstract objects corresponding to all logically coherent posits, and concreta corresponding to all ‘coherent’ practices of talking about them. Thus there are sets, and numbers, and propositions, and dearths of jobs, and cars and incars. Why think this? One major motivation for maximalism, is the intuition that there’s something wrong with debates about whether some kind of object that everyone agrees we can perfectly coherently talk in terms of really exists. For, according to the maximalist the right answer to these questions will always be ‘yes’.

Another motivation, comes from the nice story which the maximalist can tell about situations like the one at hand. For, the maximalist has no trouble explaining how the islanders can manage to assert truths. There are indeed

dearths of jobs, so they are getting the structure of the world right. But the maximalist also has an explanation for how *we* manage to count as asserting truths when we say that there aren't (really) dearths of jobs. Here, they appeal to implicit quantifier restriction. There are independent reasons for thinking that implicit quantifier restriction occurs. When someone says 'all the beers are in the fridge', in an ordinary context, they assert something that can be true, even if it's not the case that all the beer in the world is in their fridge. Thus, an expression of the form 'for all x $F(x)$ ' seems to be able to take on a more limited meaning like 'for all if $G(x)$ then $F(x)$ '. In the case above, G might be '...is in my house', so that an expression which, in more literal contexts like the philosophy room, would express the proposition 'if x is a beer then x is in my fridge', comes to express the proposition like 'for all x , if x is in my house then: if x is a beer, then x is in the fridge'. The range of the quantifier 'all' is restricted only to thing in my house.

According to the maximalist, our ability to say truly 'there are no such things as dearths' can be understood as a case of this kind of quantifier restriction. Perhaps our quantifiers are implicitly restricted to range only over objects that are made of physical stuff, or only over objects that have some claim to be metaphysically and/or scientifically fundamental. Thus, when we say that there aren't 'really' dearths of jobs, we can count as asserting truths (helpfully clarifying that dearths aren't physical objects, or that they aren't good candidates to take as primitives when writing a theory of economics) even though, literally speaking, there are such things as dearths of jobs. The maximalist even has (as indicated above) a nice way of logically representing the proposition expressed by our earlier - less ontologically enlightening, but nevertheless true- claim that there aren't any such things as dearths of jobs.(we just meant that for all x , if x is a physical object/fundamental object x isn't a dearth).

Thus, maximalism seems to offer an attractive explanation for the puzzle case above. The islanders manage to assert truths with their claim that there are dearths of jobs because there are in fact dearths of jobs, whereas we managed to assert a truth in claiming that there aren't dearths of jobs because our quantifiers were implicitly restricted to range over some narrower class of objects.

But, there's a problem. The maximalist strategy depends on saying that whatever objects the community to be translated talks in terms of really exist. But, as pointed out by Boolos and Eklund, we can cook up pairs of practices which are each internally coherent but such that objects corresponding to both of them couldn't both exist. Thus we will have to draw the line somewhere, and say that certain coherent practices don't really have objects corresponding to them. This brings us to the next account: the traditional view.

4 The traditional view

The traditional view says that we are the ones whose language gets ontology right. The people who speak in terms of dearths of jobs manage to assert truths because they are not really quantifying over dearths of jobs or claiming that such items exist. Rather, there is some paraphrase of their claim " $\exists x$, x is a dearth of jobs in coconut farming" into language which doesn't quantify over dearths, and this paraphrased sentence (which doesn't quantify over dearths) is what the islanders are really asserting when they write the sentence above.

Taking the traditional view, gets us off the hook of having to add arbitrary (and potentially incompatible) objects to our ontology, in order to make sense of people like the islanders. But, in what sense are the islanders supposed to be implicitly asserting a sentence with a different syntactic structure when they utter the sentence above? Presumably we aren't assuming that this paraphrase has some kind of psychological reality (e.g. that the islanders are muttering

the longer sentence under their breath when they make claims about dearths). Nor would it suffice to say that the paraphrased sentence in our language has the same truth conditions, and logical consequences, as their sentence - for this relationship is perfectly symmetric, and wouldn't justify the claim that when the islanders say something which superficially has one form, they really mean to be asserting something with a different form - that of the paraphrase.

Saying that when the islanders say 'there is a dearth of jobs...' they must 'really mean' 'it is not the case that there are jobs such that..' seems a bit like Wittgenstein's example of saying that when the builders say 'slab!' they must "really mean" 'give me a slab!'. Why think that the meaning of, or possibility for understanding, either of these expressions must go by way of the other?

And why think there will be a satisfactory paraphrase, in all cases where we intuitively want to say that people are asserting truths? One can imagine meeting some community of creatures that use a term "sfork" in what appears to be an organized way, so that e.g. they consider every fork to be an sfork and some, but not all, sporks to be sforks, and yet being unable to give necessary and sufficient conditions for what makes the difference between sporks that count as sforks and sporks that don't in our own language. In fact, isn't this pretty much what always happens when we learn a new word, outside the context of math class? Who can give adequate necessary and sufficient conditions for claims about tables, or melancholy or snarky comments which paraphrase these words away? Whether in other languages or our own, it would seem that inability to produce paraphrases hardly inclines us to deny that people can assert truths by using a certain term. We are happy to say things like 'she has what the french call "chic"' or 'that's what the such and such people call an "sfork"'.

Thus, it seems prima facie implausible to suppose that there will always be an adequate paraphrase available, when we want to say that some community

is asserting a truth by their claim with the form $\exists x Fx$ but deny that there are any things with the property expressed by “F”. If we can’t give an adequate paraphrase for ‘there is a chair’ why think we would be able to give an adequate paraphrase for ‘there is a dearth of jobs’? And, even in cases where such paraphrases exist, it seems unmotivated to claim that this paraphrase must be what the people in question are “really” asserting - in any sense which is supposed to go deeper than the mere fact that this sentence in our language has the same truth conditions as the sentence in theirs.

5 Lumpism

This brings us to the view I want to advocate, Lumpism. Recall that lumpism says there’s no tight connection between the structure of the world, and what sentences of the form $\exists x F(x)$ in languages extending FOL, can express truths. The world is a lump. It has structure, but it’s not intrinsically cut up into distinct elements like a set. As a result quantifier-like expressions in different languages can still be used to assert truths, even though they carve the world up into elements for domains of quantification in different ways.

The Lumpist agrees with the other views just mentioned, that there’s no problem about how both we and the islanders can manage to assert truths, because sentences involving the backwards E express different propositions when said by us, and when said by the islanders. BUT unlike the maximalist, he is not committed to our quantifier being a mere domain restriction of their quantifier, and unlike the traditionalist, he is not committed to their sentences being informatively paraphrasable into our language. We can, of course, expand our language to include expressions like “We are in a situation where, as the islanders would say ‘there’s a dearth of jobs’”. But we have no reason to expect that there’s a tidy relationship between the way that our quantifiers cut up the

world and the way that theirs do - for there's no intrinsic quantificational structure which true assertions in any language would have to (directly or indirectly) reflect.

6 Knowing about abstract objects

Finally, accepting that the world is a lump provides a way of diffusing worries about how we can know existential claims a priori. There are many people who don't find it puzzling that we can know logical statements a priori, but do find it puzzling that we can know mathematical statements, such as 'there are infinitely many primes' a priori. This is because the latter claims tell us that something exists, whereas the former don't. Intuitively: you can learn a priori that walrus are mammals because this is just part of your conception of what it would take to be a walrus (something which you would be free to arbitrarily stipulate), but you can't learn a priori that there are 30 walrus because this requires the cooperation of the world - that there actually be some things that live up to your standards for being a walrus.

But, if we take the lumpist picture of the world, it's just as much a matter of convention how we carve the world up into objects, as how we set the standards for having some term like "walrus" apply. On the old view, the world determines what items exist, and then linguistic convention fixes what it takes for an x to be an F - while being forced to accept the unique meaning for the quantifier " \exists ", which the logical structure of the world forces on all languages extending first order logic. Thus, there is always the specter of non-cooperation on the part of the world. In contrast, on the lumpist view, linguistic convention plays just as much a role in determining how we should think of the world as cut up into objects in the domain of it's quantifiers, as it does in fixing which objects (after this cutting up) concept words like "walrus" shall apply to.

Thus, insofar as linguistic convention lets us insure that, no way the world could be would count as one in which there are non-mammalian walruses, linguistic convention also allows us to insure that no way the world could be would count as one in which there is no number three.

However, the expression “insofar as”, in the sentence above, is pretty important. It’s easy to overestimate our freedom to make linguistic stipulations. Distinct stipulations can be incompatible with one another - as, for example, with the word ‘tonk’ which is supposed to have the introduction rules for ‘or’ and the elimination rules for ‘and’. Famously, if you allow both stipulations for how the word ‘tonk’ is supposed to function, and allow the word tonk into your language, you will find yourself able to derive any statement from any other. Thus, we are not free to make arbitrary combinations of meaning stipulations - regardless of whether the term being stipulated is a concept expression, an object expression or a term for a connective like tonk.

The result is that knowing an existential claim (like ‘there are infinitely many primes’) a priori is no harder, or easier, than knowing anything else a priori. For a creature to get at truths, it just needs to have some consistent structure of a priori reasoning, and be inclined to combine this reasoning with experience in a suitable way. There is no further requirement that the use of the backwards E in your language should correspond to some innate way the world is cut up into objects, which all languages which extend FOL would have to accept.

7 Conclusion

In this paper, I have argued that the world is a lump -that it is not in any way intrinsically individuated into distinct objects. This grand metaphysical sounding claim turns out to have a very concrete upshot. If the world isn’t intrinsically cut up into objects, it can’t be a necessary condition on any language

with some kind of ‘quantification’ (i.e. any language that obeys that extends first order logic and contains the relevant inference rules for the \exists and \forall) that its quantifiers range over these objects. Thus, we need not expect that there will be a tidy paraphrase which connects the truth conditions for existential claims in one language to the truth conditions for existential claims in another.

I have argued that, via this consequence, lumpism provides a nice way of addressing the problem case where a community seems to be able to assert truths by making existential claims that we would deny. I have also suggested that lumpism helps resolve worries about how a priori knowledge that certain objects exist is possible - by holding that the way a language carves the world up into objects is just as much a matter of linguistic convention as the way it delineates what does vs. doesn’t count as falling under a given concept.