

All Things Must Pass Away

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0. Introduction

The notion of *all things* must pass away from philosophical theorizing. By this, I do not mean that we must reject the set of all things. Rather, we must reject the notion that some things are such that any things are amongst them. This is a claim made in a purely plural language. It may be formulated as follows:

(AT) $(\exists xs)(\forall ys)(ys \text{ are amongst } xs)$

Unfortunately, (AT) is false. The argument against (AT) is quite simple. It involves three premises:

- (1) There are two or more things.
- (2) For any things, there is a unique thing that corresponds to those things.
- (3) For any two or more things, there are fewer of them than there are pluralities of them.

Given (3), if there are some things that are all things and there are two or more things, then there are fewer things altogether than pluralities of them. But, given (2), there is a unique thing that corresponds to each plurality of things. So, there are at least as many things as there are pluralities of things. So, either there are no things that are all things or there are fewer than two things. But, according to (1), there are two or more things. It follows that there are no things that are all things. That is (AT) is false.

Before I defend the argument above, I would like to indicate just a bit of what is and is not at stake in a denial of (AT). Many people might worry, for example, that one consequence of my thesis is that unrestricted singular quantification is impossible. In section 1, I indicate to that

this worry is, to some extent, legitimate. Once we acknowledge that there are no things that are all things, we must recognize a limitation on the usefulness of plurals in logic. In section 2, I show that there is a surprising metaphysical ramification as well. It seems that one formulation of Unrestricted Composition entails that everything is a proper part of something further. The remainder of this paper is devoted to defending the argument outlined above. In section 3, I argue that a certain cardinality thesis involving pluralities is true. That is, I argue for premise (3). In section 4, after indicating several metaphysical views that seem to entail both (1) and (2), I show that a commitment to propositions supports both of these premises. Finally, I consider several objections to my argument. First, in sections 5, I consider an objection that attempts to undercut the support for (2) by endorsing course grained views about entities like propositions. In sections 6 and 7, I consider and respond to an objection according to which my view leads to paradox.

1. Speaking of All Things

Some people might think a denial of (AT) entails that unrestricted singular quantification is impossible. After all, if there are no things that are all things, then there are no things that every single thing is amongst. But, one might think, in order for unrestricted quantification to be possible, it must be that there are some things that every single thing is amongst.¹

At the very least, though, a denial of (AT) is consistent unrestricted singular quantification. That is, a denial of (AT) does not logically entail that our singular quantifiers are indefinitely extensible. Consider any universal statement of the following form:

¹ This thought may simply be an instance of what Uzquiano calls The All-in-Many Principle. According to the All-in-Many Principle, “quantification over objects satisfying a certain condition presupposes that there are some objects which are all and only those objects that satisfy the condition” (2009, 312).

(US) Everything is either identical to α or identical to β or ...

Someone who believes that our singular quantifiers are indefinitely extensible is committed to saying that for any context in which a statement that has the form of (US) is true, there is another context in which that same statement is false. One might say that the domain of any putatively unrestricted singular quantifier is always extensible.²

On the other hand, consider someone who denies (AT). That is, consider someone who accepts the following:

$(\sim\text{AT}) \sim(\exists xs)(\forall ys)(ys \text{ are amongst } xs)$

This person might consistently hold that there is a sentence of the form (US) which expresses a truth in every context. Here is an example to show that this is consistent. Suppose we restrict our attention to things that are finite in number and each one of which is a positive integer. Now, it is clear that the following three claims are consistent:

- (i) There are no integers that are finite in number and are all integers.
- (ii) For every integer, either it is identical to 1 or identical to 2 or...
- (iii) There is no context in which the quantifier of (ii) is expanded to make (ii) false.

Notice that (i) involves the plural quantifier 'there are no integers' and expresses a restricted variant of ($\sim\text{AT}$). Thus, under an appropriate interpretation of our plural language, ($\sim\text{AT}$) expresses (i). Moreover, (ii) involves the singular quantifier 'for every integer' and expresses a restricted variant of (US). Thus, under an appropriate interpretation of our plural language, (US)

² This, though, may be mistaken. On one view, there are certain unrestricted quantifiers that fail to have a domain. Consider someone who believes that domains are sets of things and yet still believes that unrestricted singular quantification is possible. On this view, when an unrestricted singular quantifier is employed, it has no domain. This is because domains are sets and there is no set of all things. Moreover, since there is no set of all things, domains are indefinitely extensible even though the unrestricted quantifier is not. So, on this view, the claim that domains are indefinitely extensible comes apart from the view that quantifiers are indefinitely extensible. The same may be true if domains are pluralities rather than sets and there are no things that are all things.

expresses (ii). Finally, (iii) is just a denial of the indefinite extensibility of the singular quantifiers in (ii). But, since (i)-(ii) are consistent and are appropriate restricted interpretations of (\sim AT) and (US), and since (iii) is a denial of indefinite extensibility under that interpretation, we must conclude that the impossibility of unrestricted quantification is not a consequence of (\sim AT). The denial of indefinitely extensible quantifiers and the denial of the existence of some things which are all things, is a coherent position.³

One lesson we might draw from this is that although we may quantify over absolutely everything, there need not be some things that are all things. However, this lesson may make us worry about the prospects of giving a model theoretic account of logical truth and logical consequence for various languages using plurals instead of sets. After all, if there is no modal theoretic interpretation of an unrestricted quantified sentence that appropriately corresponds to the intended meaning, then perhaps we cannot be sure that the sentence is true even if it is true in all models.

In the case of first-order logic, this worry is misplaced. Completeness results for first-order logic show that if a sentence is true in all models, then it is provable and, on the assumption that the axioms of that language are true and the inferences truth preserving, we get that all provable sentences are true. Hence, any sentence of such a language which is true in all models is simply true. Of course, the worry is not misplaced when one considers second-order languages. This is because completeness results have not been obtained for various second-order languages. Hence, one might legitimately worry that the prospects for an account of logical truth

³ Here is another way to make the same point. The way that I understand a plurality, a single thing is merely a very sparse plurality. Given this fact, we can simply introduce singular quantification as a restriction on plural quantification. Singular quantification is merely plural quantification restricted to those things that are one in number (McKay 2006). But the argument only shows that there are no things that are all things. As long as there is more than one thing, the argument doesn't show anything about things that are one in number. Moreover, since the argument relied on the premise that there are two or more things, it doesn't show anything about things that are one in number even if there is only one thing.

in a second order language may be encumbered by the fact that there are no things that are all things.⁴

2. *Unrestricted Composition and Junk*

Unrestricted Composition is the thesis that for any things there is something that composes them. This thesis is supposed to be incompatible with the claim that everything is a proper part of something else (that the world is *junky*).⁵ That is to say that these two theses are supposed to be incompatible with one another:

(UC) For any xx , there is a y such that y is composed of xx

(Junk) For any x , there is a y such that x is a proper part of y .

The argument seems to be straightforward. If (UC) is true, then any things compose something. But, that means that all things compose something, namely U . If (Junk) is true, then the thing that all things compose must be a proper part of something else. That is, there must be an object, O , that U is a proper part of. But, since U is composed of all things, it follows that O is a part of U . It is clear, though, that nothing can be a proper part of one of its parts.⁶ So, either (UC) is false, or (Junk) is false. However, this argument clearly relies on the premise that there are

⁴ For more details see (Rayo and Uzquiano 1999) and (Uzquiano 2009). Also see (Williamson 2009) for a related problems for unrestricted quantification. The limitations placed on plural languages by a denial of (AT) may impede certain attempts to solve the problems posed in (Williamson 2009) using plurals.

⁵ Jonathan Schaffer (2010), for instance, says “Classical mereology—with its axiom of unrestricted composition—guarantees the existence of a unique fusion of all concrete objects. Thus there are gunky models of classical mereology, but no junky models. Indeed, a mereologically maximal element is the only individual that classical mereology guarantees on every model.” Einar Duenger Bohn, in both (2009a) and (2009b), has made similar remarks.

⁶ Some people might reject this premise if they think it’s possible for something to be shrunk down and sent back in time to become a part of itself. Although I am a fan of the possibility of such science fiction examples, I will not be discussing the implications of such fantastical possibilities here.

some things that all things are amongst. If there are no such things, then the argument above is unsound.

In fact Unrestricted Composition and (\sim AT) together entail (junk). I have two arguments for this claim. The first is as follows: Assume (UC) and (\sim AT). Now arbitrarily choose an object, hereby named 'Galileo', and consider some xs amongst which can be found every part of Galileo. Given that (AT) is false, there must be some zs that those xs are amongst and that are not amongst those xs . That is, there must be some zs that those xs are properly amongst. Again, by (UC), there is something composed of those zs . Call that thing 'Jupiter'. But, the following principle seems pretty plausible, if some xs are properly amongst some ys , then anything every part of which is amongst those xs is a proper part of anything those ys compose.⁷ It follows that Galileo is a proper part of Jupiter. But, since Galileo was arbitrarily chosen, we may conclude that everything is a proper part of some further thing. That is, (Junk) is true. So, (UC) and (\sim AT) entail (Junk)

Some people might be reluctant to accept the principle that if some xs are properly amongst some ys , then anything every part of which is amongst those xs is a proper part of anything those ys compose. Someone might hold that Galileo is not a part of Jupiter, but rather just shares some parts with Jupiter. Perhaps this kind of view would allow someone to hold (UC) without (Junk). This seems like a plausible position, but my next argument shows that it is mistaken.

The second argument is as follows: Consider some arbitrary thing. Call that thing 'Chunk' and call all of its parts 'Bits'. Now, if (AT) is false, there are some things that Chunk's parts are properly amongst. Call those things 'Bits+Pieces'. Now, there are some things

⁷ This principle is entailed by Classical Extensional Mereology.

amongst Bits+Pieces that are not parts of Chunk. Those things that are amongst Bits+Pieces which are not parts of Chunk are Pieces. According to (UC) there is something composed of Chunk and Pieces, namely Big Chunk. Chunk is a part of Big Chunk. Moreover, since Big Chunk has parts that are not parts of Chunk, namely Pieces, it follows that Chunk is a proper part of Big Chunk. So, there is something that Chunk is a proper part of. But, since Chunk was arbitrarily chosen, it follows that for anything whatsoever, there is something that it is a proper part of. So, (Junk) is true. Again, (UC) and (\sim AT) entail (Junk).

Both of these arguments rely on the assumption that for any composite object, there are some things that are all of its parts. One may, of course, deny this assumption and hold that (UC) and (\sim AT) are both true and yet (Junk) is false. But, of course, the denial of this assumption is, in itself, an interesting mereological result.

3. *“The more you approach infinity, the deeper you penetrate terror”*⁸

I would like to start by considering the third premise of my argument first: (3) for any two or more things there are fewer of them than there are pluralities of them. This is just as true of pluralities as it is of sets. However, unlike sets, there really aren't any entities which are the pluralities. Admittedly, I seemed to reify pluralities to state this cardinality thesis.⁹ But, we can write out, individually, each claim if we have to. For example, if we have three things, A, B, and C, then in addition to the three singulars (which are merely very sparse pluralities) there are the things: A and B; the things: A and C; the things: B and C; and the things: A and B and C. Here,

⁸ Gustave Flaubert.

⁹ Literally speaking, something is a cardinal number only if it numbers the members of some set. I am going to use the notion of a cardinal number in an extended sense. On the notion I will be employing, something is a cardinal number if it numbers some things, whether or not they form a set.

A, B and C are fewer in number than the items on a list of things amongst which just A, B, and C are individually found; there are only three things, whereas there are seven items on the list. If we help ourselves to a perplural language, we can say that there are three things and there are seven things total.¹⁰ In fact, we can make our general claim in a language of per plurals: For any two or more things, there are fewer of those things than there are things amongst which just those things are found. It may sound weird to talk about things, but I think it makes the cardinality thesis rather clear.¹¹ Formally, the cardinality thesis can be stated in a second-order language with plurals as follows: There is no relation R, such that for any x s there is a y such that that all and only those x s stand in R to y . However, in the remainder of this section, I will speak informally of lists that pair-up pluralities with individuals.

It will be worthwhile to present an argument for the cardinality claim. The argument has two steps. We begin by assuming that there are at least two things and attempting to make a list that contains in one column all the things that are one in number, all the single things, and contains in the second column all the things that are any number whatsoever. If the cardinality thesis is false, then there should be such a list, each individual uniquely paired with a plurality

¹⁰ Hazen (1993) introduced a language of per plurals. Hazen, however, tried to use the sensibility of such a language to argue against plural quantification. However, I think we can understand the language and need not accept Hazen's rejection of plural quantification. Perhaps, we can understand the language through a convenient fiction according to which pluralities are real entities over which perplural quantifiers range. The fictional interpretation of the language need not lead to inconsistencies as long as we stipulate that the plural quantifiers of such a language range only over the non-fictional entities of the universe. The plural quantifiers will have their ordinary meaning whereas the per plurals will have a fictional meaning that merely helps us in our counting.

¹¹ Something like it follows from a plurals version of Cantor's theorem. Stewart Shapiro (1991) has a proof of a second-order version of Cantor's theorem and George Boolos (1984) has famously suggested that we can reinterpret second-order statements in a language of plurals. If Boolos's method of doing so is adequate, then Shapiro's proof and statement of Cantor's theorem should be reinterpretable in a language of plurals. Something like the cardinality claim immediately follows. In the remainder of this section, I present a Cantorian argument for the cardinality principle. See also (Rayo 2002).

and no plurality left unpaired. Our first step is to show that some individual on that list must be paired with a plurality that that very individual is not amongst.

Assume that there are at least two things and that we can uniquely pair-up each individual with a plurality, leaving no plurality unpaired. Arbitrarily choose a very sparse plurality consisting of one thing and name it 'Tom'. Either Tom is paired with itself or it is not. If it is not, then there is at least one individual that is paired with a plurality that that individual is amongst (namely the individual paired with Tom). So, assume that Tom is paired with itself. Now arbitrarily choose another sparse plurality and name it 'Dick'. Again, either Dick is paired with itself or it is not. If it is not, then there is at least one individual paired with a plurality that it is not amongst. So, assume Dick is paired with itself. Now, consider Tom and Dick. They cannot be paired with either Tom or Dick, since Tom is already paired with Tom and Dick is already paired with Dick. So, they must be paired with some new object, Harry, which is not amongst Tom and Dick. Hence, if there are more than two things and there is a pairing of individuals to pluralities, then there is at least one individual that is paired with a plurality that it is not amongst.¹²

The second step in our argument is to show that if there are more than two things, then there cannot be a list that pairs every plurality with an individual and leaves no plurality unpaired. We know from the first step that if there is such a list, then there must be at least one individual paired with some things that it is not amongst. Suppose there is such a list and let those individuals that are not amongst the pluralities they are paired with be called 'sinful individuals'. Consider all and only the individuals that are not amongst the pluralities they are paired with; all and only the sinful individuals. Call that plurality 'The Fallen'. The Fallen must

¹² Thanks to Karen Bennett for this argument.

also be paired with an individual, call that individual, 'Eve'. Now we may ask: is Eve amongst The Fallen or not?

If Eve is amongst The Fallen, then Eve must be a sinful individual. This is because The Fallen are a plurality of only the sinful individuals. But, if Eve is a sinful individual, then Eve is not amongst The Fallen. Because sinful individuals (by definition) are not amongst the pluralities they are paired with. So, if Eve is amongst The Fallen, then Eve is not amongst The Fallen.

On the other hand, if Eve is not amongst The Fallen, then Eve is a sinful individual. This is because Eve is not amongst the plurality it is paired with. But, if Eve is a sinful individual, then Eve is amongst The Fallen. After all, The Fallen are a plurality of *all* the sinful individuals. So, if Eve is not amongst The Fallen, then Eve is among The Fallen.

It clearly follows that Eve is amongst The Fallen iff Eve is not amongst The Fallen. But, of course, either Eve is amongst The Fallen or Eve is not amongst The Fallen. If the first disjunct is true, then Eve both is and is not amongst The Fallen. If the second disjunct is true, then, again, Eve both is and is not amongst The Fallen. Either way, we are lead to a contradiction. So, it must be that our original supposition is false. But, our original supposition was that there is a list that pairs every plurality with a unique individual. So, there cannot be such a list.

As I mentioned before, if the cardinality thesis is false, then there must be a list that pairs every plurality with an individual and leaves no plurality unpaired. Since we have just shown that there cannot be any such list, we must conclude that the cardinality thesis is correct. So, for any things, there are fewer of them than there are pluralities of them. Hence, premise (3) of the argument against all things is true.

4. *Something for Everyone*¹³

Certain metaphysical views commit us to the existence of two or more things and to a unique thing for each plurality of things. That is, if certain metaphysical views are true, then premises (1) and (2) are true as well. Which metaphysical views have such consequence? There are lots of them. Some people, for example, believe in states of affairs. If there are states of affairs, then there are at least two of them, one that obtains and one that does not. Moreover, if there are states of affairs, then for any things, there is a state of affairs of just those things existing. Other people believe that there is an omniscient God. If there is an omniscient God, then there are at least two things, God and God's first person existential thought. Moreover, if there is an omniscient God, then for any things, God has some thought about just those things (the thought that they exist, for example). There are even those who believe in possible and impossible worlds, or ways for the world to be. If there are possible and impossible worlds, then there are at least two worlds, one possible and one impossible. Moreover, if there are such worlds, then for any things, there is a world where just those things exist.¹⁴ Views like these commit one to the thesis that there are no things that are all things.¹⁵

I'd like to consider, in more detail, one view that seems to commit us to (1) and (2).

Consider the view that there are truths and falsehoods; the view, in other words, that there are

¹³ The argument of this section is similar to, but distinct from, arguments I presented in my (2006). However, I am indebted to Greg Fowler for many helpful discussions about some puzzling aspects of my previous argument. These discussions helped me to see some of my underlying assumptions and develop the argument that appears here.

¹⁴ Many of these worlds will be impossible worlds since many things cannot exist without other things also existing. For example, I cannot exist without the number two also existing.

¹⁵ One more view that commits us to two or more things and a unique thing associated with any things is a robust view of properties. According to a robust view of properties, there are many properties and for any things, there is a property that they and only they have in common.

propositions. If there are propositions, then there are at least two things. First, there is the proposition that some propositions are true. Second, there is the proposition that every proposition is false. These are two distinct propositions because they must have different truth values; the first must be true whereas the second must be false. So, on the view that there are propositions, there are at least two propositions.¹⁶ So, on the view that there are propositions, statement (1) is true.

Now, for any things, there is a proposition just about those things. I think it is fairly clear what it means to say of some things that a proposition is about them. The proposition that Nicholas and Brie both exist is, for example, about Nicholas and Brie. Some philosophers might use the word ‘about’ in an extended sense. They might say that, in addition to being about Nicholas and Brie, the proposition that Nicholas and Brie both exist is also about the property of existence. But, I do not intend to use the word in this extended sense. The way I am using ‘about’, the proposition that Nicholas and Brie both exist is about Nicholas and Brie and is not at all about the property of existence. There are, of course, propositions that are about properties (or at least I think there are). The proposition that existence is monadic is about the property existence. But, it should be clear, now, that it is not also about the property of being monadic.

It is obvious that for any things there are some propositions about them. After all, for any things, it is obvious that there are some truths about them; that they exist, perhaps, or have some kind of being. But, I want to make a slightly stronger claim. I believe that for any things there is *a* proposition about them. Moreover, I believe that for any things, there is *a* proposition *just*

¹⁶ Moreover, there is also at least one more proposition. Not every proposition has its truth value necessarily. Some propositions are contingent. But, since each of the two propositions above have their truth values necessarily, it follows that there is at least one more proposition. So, on the view that there are propositions, there are at least three things.

about them. That is to say that for any things there is at least one proposition about those things and there are no further things that that proposition is also about. We can state this Propositions Thesis a bit more formally as follows:

(PT) for any xs , (i) there is a proposition about those xs and (ii) for any ys which are not the same as the xs , there is a different proposition about those ys .

If (PT) is true, then statement (2) is true as well.

One way to support (PT) is to indicate a certain type of proposition that is such that for any things whatsoever, some proposition of that type is just about those things. That is, indicate some propositions that correspond, in the appropriate way, to all the various pluralities in the world. It seems to me that existential propositions are good candidates for the appropriate correspondence. If that is correct, then the following Existential Propositions Thesis might be true.

(EPT) For any xs , (i) there is the proposition that those xs exist and (ii) for any ys which are not the same as the xs , the proposition that those ys exist is distinct from the proposition that those xs exist.

If (EPT) is true, then for any things there is a proposition, an existential proposition, just about those things.¹⁷ Hence, (PT) is true and so is (2).

¹⁷ Admittedly, there are some who deny the first tenet of (EPT). Some people think that existence is not a first order property of either individuals or pluralities. Rather, existence is a higher order property of properties. Thus, we cannot, for any individual x , say that x exists. Rather, we can only say, for some property F , that there are Fs . Furthermore, some people might claim that for all we know, there may be some things that share no properties. Thus, we cannot say of them that they exist because we cannot say of some property they all share that some things have that property.

However, this worry should not be too worrisome since any things have the property of being just those things. This is a property that they have and any other things lack. So, even if existence is a second order property, we can say of any things that existence applies to the property of being just those things.

In addition to existential proposition, there are also compositional propositions. That is, propositions that say of some things that they compose a further thing.¹⁸ Of course, some people believe that some things cannot compose a further thing. However, even if there are some things which cannot compose a further thing, there is still a compositional proposition just about them. After all, if it is necessarily false that they compose some further thing, then some proposition about them is necessarily false. So, perhaps the following Compositional Propositions Thesis is true:

(CPT) For any xs , (i) there is the proposition that those xs compose something and (ii) for any ys which are not the same as the xs , the proposition that those ys compose something is distinct from the proposition that those xs compose something.

If (CPT) is true, then (again) for any things, there is a proposition, this time a compositional proposition, just about those things. Hence, (PT) is true and so is (2).

Finally, there are doxastic propositions, propositions that say of some things that someone or other is thinking about them. Again, it seems intuitively correct that for any things there is a proposition that someone is thinking about those things. Moreover, this seems right even if it turns out that most such propositions are false. So, it seems that the following Doxastic Propositions Thesis is true:

(DPT) For any xs , (i) there is the proposition that those xs are thought about by someone and (ii) for any ys which are not the same as the xs , the proposition that those ys are thought about by someone is distinct from the proposition that those xs are thought about by someone.

¹⁸ Even if existence is not a first order property of plurals, surely the property of composing something is such a property.

If (DPT) is true, then for any things there is a proposition, a doxastic proposition, just about them.¹⁹ Hence, (PT) is true and so is (2).

So, if any of (EPT), (CPT), or (DPT) are true, then (PT) is true as well. That is, each of the three theses above supports the claim that for any things there is a proposition just about those things. Of course, if (PT) is true, then so is (2). But, we need not appeal to the existence of particular types of propositions to support (PT).

It is easy to show that for any things, there is a proposition just about them; that is, it is easy to show that (PT) is true. Suppose, for reductio, that there are some things of which there is *no* proposition just about them. Let's say that $a_1 \dots a_n$ are some such things. Then, it is true that $a_1 \dots a_n$ are such that there is no proposition just about them. But, since every truth is a proposition, it is clear that there is at least one proposition about them, namely the proposition that $a_1 \dots a_n$ are such that there is no proposition just about them. Moreover, this proposition is just about them.²⁰ So, there is at least one proposition just about them. But, this contradicts our claim that there is no proposition just about them. Hence, the supposition that there are some

¹⁹ Notice that the denial of (DPT) entails that there can be no omniscient being. For, if there could be an omniscient being (even a non-actual one), then for any things whatsoever, that being would believe that they possibly exist.

²⁰ One might wonder whether this proposition really is *just* about $a_1 \dots a_n$. I have to admit that I have no criteria for determining whether or not a proposition is just about some things. However, the following seems intuitively correct to me. P is about some *xs* if those *xs* are some of the things that make P true and they are the only such things that are such that P logically implies that they have some feature or other. For example, Nicholas and the property of being tall both help to make the proposition that Nicholas is tall true. But, the proposition that Nicholas is tall logically implies that Nicholas has some feature or other. It does not logically imply that the property of being tall has some feature or other. Moreover, there are no other things that help to make that proposition true. So, the proposition is about Nicholas and not tallness. Similarly, being blue and being a color are the only things that help to make it true that blue is a color. However, the proposition that blue is a color logically implies that blue has some feature or other but does not logically imply that being a color has some feature or other. So, that proposition is about the property of being blue and not about the property of being a color. Now consider the proposition that $a_1 \dots a_n$ are such that there are no propositions about just them. It seems that $a_1 \dots a_n$ are things that make that proposition true and that proposition logically implies that $a_1 \dots a_n$ have some property or other (namely being such that there are no propositions about them). Moreover, there are no other things that help to make that proposition true which are also such that that proposition logically implies they have some property or other.

things of which there is no proposition just about them is false. So, for any things, there is a proposition just about them. That is, (PT) is true.

So, It seems clear that the thesis that there are propositions commits us to rejecting the claim that there are some things that are all things. For, if there are propositions, then there are two or more of them. Hence, statement (1) is true. But, if there are propositions, then (PT) is true. Moreover, if (PT) is true, then for any things, there is a unique thing that corresponds to just them. Hence, statement (2) is true. Moreover, the cardinality thesis I argued for in the last section says that for any things there are fewer of them than pluralities of them. Hence, statement (3) is true. But, as I have shown, from (1)-(3) it follows that there are no things that are all things. That is, it follows from (1)-(3) that (AT) is false. Hence, (AT) is false.

The remainder of this paper is devoted to defending this argument from objections. In the sections 5, I consider a popular view about propositions that might undermine the support for premise (2) in the argument. In section 6, I consider an objection that says premise (2) leads to paradox. Finally, in section 7, I consider an objection according to which my response to the paradox of section 6 undermines my argument.

5. On the proposition that there are a plurality of worlds

In addition to the claim that for any things there is a proposition about them, I also endorse the claim that for any things there is a proposition *just* about them. That is to say that for any things there is a proposition about those things and there are no further things that that proposition is also about. Some people, though, believe in a sparse view of propositions

according to which propositions are merely sets of possible worlds.²¹ A proposition, P, is true at a world, w, just in case P is identical to a set of possible worlds and w is a member of that set. On this view, for any propositions P and Q, if it is necessary that P is true iff Q is true, then P=Q. But, now consider the proposition that the number 2 exists and the proposition that the number 7 exists. Since, numbers are necessarily existing entities, it is impossible for one of those propositions to be true without the other proposition also being true. But, then it follows, on this view, that the proposition that the number 2 exists is the same as the proposition that the number 7 exists. Hence, the proposition that the number 2 exists is not *just* about the number 2, it is also about the number 7. On this view, it might turn out that although it is true that for any things there is a proposition about them, it is false that there is a proposition just about them. Hence, if this sparse view is true, then (PT) may be false and part of the support for (2) may be undermined.

²¹ A better view might be that propositional attitudes (and other properties and relations that seem to take propositions as objects) are really irreducibly plural. The fundamental belief relation, on this view, is irreducibly plural in its second place and, hence, it will have the form 'S believes those *x*s' where the plural variable is satisfied by worlds. Consider the sentence 'grass is green'. On this view, that sentence picks out, plurally, all those worlds where grass is green. Moreover, if someone believes the content of that sentence, then she stands in the belief relation to those worlds. This view might be favored by those who believe that some worlds are too numerous to form a set. If propositions are sets, then there is no proposition that corresponds to some worlds that are too numerous to form a set. However, if (speaking vulgarly) propositions are pluralities, then those worlds that are too numerous to form a set are still propositions and might still be expressed and believed.

One down side of this view is the following. There are some truths about propositions that seem to be irreducibly plural. For example, when I say that Nicholas's beliefs are consistent, I seem to be saying something irreducibly plural about propositions. However, if propositions are pluralities, then I must be saying something irreducibly perplural. As I mentioned before, some people think that there's no way to make sense of a perplural language without reifying pluralities (which is exactly what we want to avoid). The only hope for a defender of this view is to find a way to paraphrase away those claims that *seem* to be irreducibly plural; like the claim that Nicholas's beliefs are consistent. Gabriel Uzquiano (2004) has a good discussion of the prospects for paraphrasing seemingly irreducible plural claims in another context. Much of what Uzquiano says will apply in this circumstance as well. Luckily, nothing that I say in the remainder of this section depends on whether propositions are sets of worlds or pluralities of worlds. So, I will simply focus on the former view.

There are two things that I would like to say in response to this objection. First, the best sparse theory of propositions is one according to which propositions are sets of worlds. But, it seems to me that this view of propositions is mistaken. In what follows, I will say a bit about why I think this sparse view of propositions is mistaken. I recognize, however, that there are some who have very reasonable defenses of the sparse view of propositions. So, I will close this section by noting that there are many metaphysical views that support premises (2) of my main argument against all things. Endorsing a sparse view of propositions in order to avoid commitment to (2) is merely the first step on a dark path to a generally sparse metaphysics.

Let's start by considering a sparse view of propositions. Let's consider a bare bones view according to which (i) for any proposition P, P is possibly true iff there is a possible world, w, such that P is true-at-w, and (ii) for any possible world, w, and any proposition, P, of the form *there are Fs*, P is true-at-w iff P is identical to a set of F-worlds and w is a member of that set. At the very least, if the sparse view of propositions is correct, then (i) and (ii) must both be true.

Unfortunately, (i) and (ii) are not both true. Let's suppose that necessarily, for any proposition, P, P is possibly true just in case there is a possible world, w, and P is true-at-w. But, it is necessary that there are merely possible truths; claims that are not true but are possibly true. It follows from these last two claims that necessarily, there is a merely possible world; worlds, distinct from the actual world, at which the merely possible truths are true.²² Since, necessarily, there is a world that is not merely possible, namely the actual world, it follows that necessarily

²² Strictly speaking this does not follow from the last two claims. On Lewis's view, a merely possible de re modal truth about me may be true because there is some other *actual* individual who is my counterpart. However, it is necessary that there are merely possible de dicto truths. The claim that there is a world distinct from the actual world follows from the claim that there are merely possible de dicto truths and the claim that necessarily, for any proposition, P, P is possibly true just in case there is a possible world, w, and P is true-at-w.

there is more than one possible world. That is, the following claim turns out to be necessarily true:

(PW) There are (quantifiers wide open) a plurality of possible worlds.

So, if (i) and (ii) are both true, then (PW) is necessarily true.

But, if (i) and (ii) are both true and (PW) is necessarily true, then (PW) is identical to the set of all worlds. After all, given that a necessary proposition is one the negation of which is not possibly true (that is, given the duality of necessity and possibility), it follows from (i) that a necessarily truth is true at all worlds. But, according to (ii), if (PW) is true at all worlds, then (PW) is identical to the set of all worlds. If (PW) is identical to the set of all worlds, then (PW) is identical to any other proposition that is true at all worlds; in particular, (PW) is identical to the proposition that arithmetic is incomplete. (PW), however, is not identical to the proposition that arithmetic is incomplete. Many of us believe the latter but disbelieve the former and, moreover, Gödel proved the latter without also proving the former. So, (PW) is not the set of all worlds. So, either (i) or (ii) is false. Since the sparse view of propositions is true only if both (i) and (ii) are true, it follows that the sparse view is mistaken.

As I mentioned before, although I take the above objection to be sound, I recognize that there are some who have very reasonable defenses of the sparse view of propositions. Many of the defenders have plausible things to say about objections like the one above. But, there is something that I find more troubling about this style of response to my argument against all things. This style of response seems to be merely one step down a dark path to a generally sparse metaphysical view. As I noted at the beginning of section 4, there are several metaphysical views that seem to support premise (2) of my argument. I chose to focus on the view that for any things there is a proposition just about them. However, I could have easily

focused on the view that for any things, there is a state of affairs of just those things existing; or the view that for any things there is a property of being just them; or the view that for any things there is a possible or impossible world were just they exist. Any of these metaphysical views supports premise (2) in my argument against all things. So, anyone who wishes to avoid the conclusion of my argument must accept not only a sparse view of propositions, but also a sparse view of states of affairs, properties, and worlds; one must accept a generally sparse metaphysics.

Moreover, if one accepts a generally sparse metaphysics in response to my argument, then one must also hold that how these entities are sparsely distributed over individuals must match-up. That is, one must reject the view that for any things there is either a proposition just about them or a state of affairs of just those things existing or a property that just they have, etc. In other words, in order to undermine all hope of support for premise (2), one must accept a generally sparse and rather radical metaphysics.²³

6. We Must Pass Over in Silence

In the last section, I considered a sparse view of propositions which some might have taken to be both true and inconsistent with (PT). If such a view were true, then the primary support for premise (2) would be undermined. However, it seems that the sparse view is false.

²³ To make the darkness of this path more acute, note that one who accepts that propositions are merely sets of possible worlds should say exactly what a possible world is. But, the standard views of possible worlds cannot be held given a sparse metaphysical view. We cannot, for example, say that a possible world is a complex state of affairs or a complex property or even a complex sentence in a lagadonian language (where everything is its own name and every property is a predicate that expresses itself). For if any of these resources are rich enough to use in our construction of possible worlds, then they are also rich enough to generate support for premise (2). I see three options available to the defender of a sparse metaphysics. First, one could, of course, simply endorse Lewis's unorthodox view according to which possible worlds are concrete things composed of individuals which are appropriately related. Second, one could accept Magical Ersatzism according to which there is no true account of how possible worlds represent ways the world could be (i.e. they just do). Finally, one could accept a poor world making language and allow most representation to be implicit. However, I think few of us are willing to accept the counterintuitive costs of Lewis's concrete modal realism or Magical Ersatzism (though see (van Inwagen 1986) for a defense of the latter). So, the third option seems most plausible.

Moreover, regardless of whether or not it's false, one would have to accept a generally sparse and radical metaphysics to undermine all potential support for premise (2). In this section, I consider what I take to be the strongest objection to (PT). According to this objection (PT) entails a contradiction all by itself, and hence must be false. However, if (PT) is false, then our primary support for (2) is undermined. Moreover, the form of this objection can be applied to any robust metaphysical view. So, if this objection were successful, it would indicate path in support of a generally sparse metaphysics.

The objection to (PT) is fairly clear.²⁴ First, assume that (PT) is true; that is, assume that for any things there is a proposition just about them. Now, it is clear that some propositions are not about themselves. For example, the proposition that Parmenides was born in Elea is not about itself (at most it is about Parmenides and Elea). Let, all and only those propositions that are not about themselves be called 'humble propositions'. Since there are some humble propositions, by (PT), there must be a proposition that is just about the humble propositions (perhaps the proposition that they exist or the proposition that they are humble). Arbitrarily choose any proposition that is just about the humble propositions and call it 'Confusion'.

Given the reference fixing description used to name Confusion and the definition of 'humble proposition', the following two claims are true.

- A. For any proposition P, Confusion is about P iff P is humble.
- B. For any proposition P, P is humble iff P is not about P.

But, by universal instantiation on (A) and (B) respectively, we get (C) and (D).

- C. Confusion is about Confusion iff Confusion is humble.
- D. Confusion is humble iff Confusion is not about Confusion.

²⁴ A version of this argument is presented by Rayo and McGee (2000).

And, of course, (E) follows from (C) and (D).

E. Confusion is about Confusion iff Confusion is not about Confusion.

But, (F) is a logical truth and (G), (H) and (I) all follow by classical logic.

F. Either Confusion is about Confusion or Confusion is not about Confusion.

G. If Confusion is about Confusion, then Confusion both is and is not about Confusion.

H. If Confusion is not about Confusion, then Confusion both is and is not about Confusion.

I. So, Confusion both is and is not about Confusion.

This contradiction followed from the supposition that for any things there is a proposition just about those things. So, there must be some things that no proposition is about. That is, (PT) must be false. But, since (PT) was our primary support for premise (2), it looks like our support for (2) has been undermined.

This is a very powerful argument against (PT). However, I do not believe the argument is sound. I do not accept (F).²⁵ This may seem shocking, given that (F) seems like a logical truth. But, it turns out that propositions of the form P or $not-P$ are not logical truths. This is one lesson we should take away from the Liar Paradox. Consider the English sentence, hereby named '(LIAR)': "(LIAR) does not express a truth". If we accept that either (LIAR) expresses a truth or it does not, then contradiction immediately follows. So, we must not accept that either (LIAR) expresses a truth or it does not. But, that means that there is at least one proposition of the form p or $not-p$ which is unacceptable and hence, not a logical truth.

²⁵ The view that I present is very similar to the view presented by Field (2008) and is inspired by Soames's (1999) view of truth.

Now, I said that I do not accept (F). But, I do not accept that Confusion is neither about itself nor not about itself either. To move from not accepting (F) to accepting the negation of (F) is to make the same mistake as before. Such a move presupposes that (F) or not-(F) is true. Rather, we must remain silent about whether (F) is true and we must remain silent about whether Confusion is about itself.²⁶

It turns out that ‘is not about itself’ and ‘does not express a truth’ express partial properties. Let’s call those things that are instances of a property the ‘metaphysical extension’ of that property.²⁷ Partial properties are properties that have a definite metaphysical extension and a definite metaphysical anti-extension. An atomic proposition of the form *a is F* is true if *a* lies within the metaphysical extension of the property *F*. The negation of an atomic proposition of the form *a is F* is true if *a* lies within the metaphysical anti-extension of the property *F*. However, there are some things that lie outside both the metaphysical extension and the metaphysical anti-extension of partial properties. If *a* lies outside both the metaphysical extension and the metaphysical anti-extension of *F*, then we must remain silent about whether *a is F*; that is, *a is F* is unacceptable.

There are lots of partial properties and it is very easy to introduce a predicate that expresses such a property into a language. Suppose I say “being a humanoid who is over 10 meters tall is sufficient for being a scholossal and being a humanoid under 200 centimeters tall sufficient for not being a scholossal. Furthermore, no non-humanoids are scholossals.” Suppose

²⁶ If we were to model a language that behaves this way, then we would assign to each predicate an extension and an anti-extension. However, some predicates, such as ‘is not true’ and ‘is not about itself’, will be such that the union of their extension and anti-extension fails to include the entire universe.

²⁷ Here I am following Salmon (1981 pp. 46) in distinguishing a metaphysical extension from a semantic extension. Properties have metaphysical extensions whereas predicates have semantic extensions.

Breetai comes from a species of humanoids who are between 10 and 15 meters tall. If Breetai is over 10 meters tall, then clearly he is a scholossal. If, on the other hand, Max is an ordinary human who is under 200 centimeters tall, then clearly he is not a scholossal. What, however, about someone who is 210 centimeters tall? Such a human falls outside the metaphysical extension of the property of being scholossal. In this case, we must remain silent about whether such a human is a scholossal.

The properties expressed by ‘is not about itself’ and ‘does not express a truth’ are partial properties. It is clear that some propositions fall within the metaphysical extensions of these properties and some propositions fall inside the metaphysical anti-extensions of them as well. However, there are a few propositions that are neither in the metaphysical extension nor in the metaphysical anti-extensions of these properties. (LIAR) is a sentence that lies outside both the metaphysical extension and the metaphysical anti-extension of the property expressed by ‘does not express a truth’.²⁸ Similarly, any propositions that are about all and only the humble propositions, including Confusion, lie outside of the metaphysical extension and metaphysical anti-extension of the property expressed by ‘is about itself’.

7. The Bounds of Silence

Some may have noticed that the argument presented in the last section against (PT) is similar in structure to one part of the argument used to defend the cardinality thesis in section 1. Remember that I called the plurality of all and only those individuals that are not amongst the

²⁸ Moreover, given the truth conditions for negation, (LIAR) lies outside of the metaphysical extension and anti-extension of the property expressed by ‘is true’ as well. This means that the proposition, hereby named (TRUTH), that this proposition is true is also outside the metaphysical extension and anti-extension of the property expressed by ‘is true’. Hence, we must remain silent about whether the truth teller is true. See Soames (1999) for a discussion of this consequence.

pluralities they are paired with 'The Fallen'. I also called the individual paired with The Fallen 'Eve'. I then argued for the claim that Eve is amongst The Fallen iff Eve is not amongst The Fallen. Finally, I claimed that either Eve is amongst The Fallen or Eve is not amongst The Fallen and derived a contradiction. At that point, I concluded that the supposition that some things are such that there are as many of them as there are pluralities of them is false. That is, I concluded that the cardinality thesis is correct. However, when I considered an argument of the same form in section 6, I refused to accept premise (F), the disjunctive premise that either Confusion is about itself or it is not. Why, one might legitimately ask, did I decide to remain silent about whether Confusion is about itself but I did not decide to remain silent about whether Eve is amongst The Fallen? How could the premises of the first argument be acceptable yet the premise of the second not?

The latter question is difficult to answer. I do know that some arguments of the form we are considering are sound. For example, suppose I say "let 'Mark Barber' name the barber of Syracuse who shaves all and only those who don't shave themselves. The proposition that Mark Barber shaves himself iff he does not shave himself is inconsistent with the proposition that either Mark Barber shaves himself or he does not shave himself. However, I do not remain silent over the claim that either Mark Barber shaves himself or he doesn't shave himself. Rather, I accept that premise, reject the biconditional and conclude that Mark Barber does not exist.

I also know that some arguments of this form are not sound. Obviously, (LIAR) expresses a truth iff it does not express a truth. However, I will not accept that either (LIAR) expresses a truth or it does not. Moreover, I cannot accept that premise lest contradiction ensues. The difference between the case of Mark Barber and the case of (LIAR) is that we must accept the existence of (LIAR). Here it is before us on this very page!

(LIAR): ‘(LIAR) does not express a truth.’

I can think of no clearer proof that (LIAR) exists than its very presence before my eyes. Mark Barber, on the other hand, is not presenting himself so clearly.

Eve is like Mark Barber. Eve’s existence is not foisted upon us and we are free to avoid contradiction by denying that Eve exists. This route leads us to the cardinality principle. Confusion, on the other hand, is like (LIAR). We know that Confusion exists because we know that there are some humble propositions. Moreover, I am convinced by the discussion of section 2 that there must be a proposition just about the humble propositions. The existence of Confusion forces us into silence. That is, we are forced to remain silent about whether Confusion is about itself.

There is also an independent reason for avoiding silence about the claim that either Eve is amongst The Fallen or Eve is not. Suppose the claim that either Eve is amongst The Fallen or Eve is not amongst The Fallen is unacceptable. That is, suppose that we must remain silent about that disjunction. If that is the case, then we must also remain silent about each of the disjuncts. So, the claim that Eve is amongst The Fallen is a claim that we must remain silent about. But, we know that the amongst relation is transitive. But, that means that if Eve is amongst any things that are amongst The Fallen, then Eve is amongst The Fallen as well. So, if we must remain silent about whether Eve is amongst The Fallen, then we must remain silent about whether Eve is amongst any things that are amongst The Fallen. Some things that are amongst The Fallen are individuals and individuals are simply pluralities that are one in number. So, for any things that are one in number and amongst The Fallen, we must remain silent about whether Eve is amongst those things. One interesting discovery of the logic of plurals is that

there is a relationship between the amongst relation and the identity relation. In particular, the following Identity Principle is true:

(IP) $(\forall xs)(\forall ys) (xs=ys \leftrightarrow (xs \text{ are amongst } ys \ \& \ ys \text{ are amongst } xs \ \& \ xs \text{ are one in number}))$

That is, one plurality is identical to a second plurality iff each is amongst the other and neither is more than one in number.²⁹ But, supposedly we must remain silent about whether Eve is amongst any things that are amongst The Fallen (including individuals). Moreover, Eve is definitely one in number. It follows from these two claims that for any individual amongst the fallen, we must remain silent about whether *it* is identical to Eve. This suggests that there are some identity claims that we should remain silent about and the root of that silence is in the identity relation. But, if we must remain silent about any identity claim, the root of that silence is not in the identity relation. So, our supposition must be mistaken. That is, the claim that either Eve is amongst the Fallen or Eve is not amongst the Fallen is perfectly acceptable. But, if that is right, then the proof of the cardinality principle is sound.

8. Conclusion

Although the claim that there are some things that any things whatsoever are amongst seems intuitively plausible, I believe this thesis must be rejected. Those who disagree must accept widespread metaphysical limitations, not only with respect to propositions, but also with respect to states of affairs, properties, divine thoughts, and impossible worlds (to name a few). Moreover, they must accept that there are some things that are such that there are is no proposition just about them and there is no state of affairs involving just them and there is no

²⁹ See, for example, McKay (2006, 129).

property had by just them etc. On the other hand, those who reject all things, must face certain limitations on the usefulness of plurals and perhaps accept certain surprising metaphysical theses. It seems to me that the costs of rejecting all things are less drastic than the costs of sparse metaphysics.³⁰

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