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There's no existent like 'no existence' like no existent I know

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Abstract The aim of this paper is to motivate and then defend a restricted version of the truth-maker theory. In defending such a theory I hope to do away with the perceived need for 'negative existents' such as totality facts and the like.

Keywords Truth-maker · Truth · Maximalism

1 Introduction

I take the truth-maker principle to be the following

> TM: Necessarily, if <P> is true, then there is some entity in virtue of which it is true.[1] (cf. Rodriguez-Preyera 2005, p. 18)

Although restricted forms of the principle are popular (Rodriguez-Preyera 2005; Simons 2005; Mumford 2005; Mellor 2003; Heil 2003, pp. 68–72), the view that this principle apply unrestrictedly, truth-maker maximalism, is not. But there is a worry in the vicinity for restricted versions of the principle. All motivation for the truth-maker principle stems from a source that cannot be used to motivate a restricted form of the truth-maker principle without a seemingly *ad hoc* restriction. Thus, the question of whether or not a restricted version of the principle is cogent is largely uninteresting since the resulting theory will be spuriously *ad hoc*.

In this paper I propose to motivate and then defend a particular restriction on the truth-maker principle. In Sect. 2, I consider how maximalism is motivated and note a dialectical tension. In Sect. 3 I show how we might motivate a restricted version

[1] I follow convention in allowing that '<P> 'stands for 'the proposition that P'.

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of the theory given the aforementioned tension. In Sects. 4 and 5 I show how the proposed revision to truth-maker theory can be developed and implemented in order to solve concerns about totalities and negative existentials. I include an account of the concept of an 'atomic' proposition—the type of proposition that *does* need a truth-maker. In Sect. 5.1–5.3 I suggest that the resulting view is preferable to maximalism and consider some problems for the restricted version of truth-maker theory.[2] In Sect. 6 I consider the suggestion that the resulting theory misses the point of being a truth-maker theorist: I find the charge lacking.

2 On maximalism

By what means, then, are we to motivate Maximalism?

> I do not have any direct argument. My hope is that philosophers of realist inclinations will be immediately attracted to the idea that a truth, any truth, should depend for its truth on something 'outside' it, in virtue of which it is true. (Armstrong 2004, p. 7).

Thus, Armstrong seems to be of the view that what motivates a move to truth-maker maximalism is nothing more than the attraction that the realist ought to feel to the idea that *all* true talk has ground. That certainly is not an intuition that will motivate a restricted view of truth-making. Cameron (2008a, pp. 107–108) takes a slightly different view:

> What possible reason could one have for thinking of some propositions that they need to be grounded in what there is that doesn't apply to all propositions? Why should it be okay for negative truths to go ungrounded and not okay for positive truths to go ungrounded? And if negative truths don't have truthmakers then make no mistake: they *are* ungrounded. It is no good to say that they are grounded in the *lack* of a truthmaker for the positive truth that is their negation. Unless we reify this absence of a truthmaker this is nothing but metaphysical smoke and mirrors. It's totally disingenuous to say that ¬p is true in virtue of the absence of a truthmaker for p unless there is *some thing* that is this absence. And if there *is* such a thing as the absence then it is a truthmaker for ¬p, so maximalism is vindicated.

So, according to Cameron, if we accept truth-maker *at all*, then we have a presumption in favour of maximalism.[3] The motivation for truth-maker is unrestricted: it applies to all cases if it applies to any.[4]

My objection to maximalism follows that same line as that taken by Melia (2005, p. 69):

[2] Notably, maximalism and necessitarianism about truth-making often go hand in hand. I will not discuss the latter, here. My concern is to determine, not what the nature of truth-making *is*, but in which instances truth-makers are to be sought.

[3] See, also, Melia (2005, p. 69).

[4] Dodd (2007) turns this into an argument against truth-maker. Since I defend a restriction to truth-maker, I shall not consider Dodd's argument here since it turns on the claim that all truths need truth-makers.

> It is simply wrongheaded to think that there should be a truthmaker which corresponds to negative existential sentences. Intuitively, what makes a sentence such as 'There are no Fs' is a *lack* of *F*s. Armstrong tries to account for such truths by postulating states of affairs of totality. Besides the bizarre necessary connections that such states of affairs entail (how can something's mere existence necessarily prevent an object d from being *F*), and besides the implausible nature of the totality relation itself, it is just confused to think that we must account for a *lack* by postulating the *existence* of something else.[5]

Thus, the quest to find truth-makers for negative existential sentences seems a misguided one.

Whether we accept this argument or not,[6] it seems that we ought to acknowledge a *prima facie* tension for the maximalist. Part of the motivation for maximalism (at least, according to Cameron) is that once we accept truth-maker theories we have already tacitly endorsed a particular line of thought that, itself, leads to our requiring truth-makers for propositions about what there is not. In contrast to this, the view taken by Melia, and endorsed here, is that intuitively we're wrong to even look for truth-makers for truths about what there is not. Whether the maximalist acknowledges this as a reason to give up on maximalism or not, they ought to recognise this as a tension in our beliefs.

Thus it seems that we might reasonably say that when it comes to talk about what is not the case our *intuition* is that we do not think that there ought to *be* some *thing* that is the intended referent of talk about what there is not, even though we think that there ought to be some *thing* about which we talk when we make claims about how the world is.

3 Restricting the truth-maker principle

So why not simply appeal to intuition as motivation for a restricted version of truth-maker? Our *intuition* is that certain truths require truth-makers, but that others do not. It is not as if appeal to intuition is ruled out by those involved in the debate.

> [T]he root of the idea of truthmakers is the very plausible and compelling idea that the truth of a proposition is a function of, or is determined by, reality (Rodriguez-Preyera 2005, p. 20).
>
> 'Truth must, one expects, depend some way on reality' (Mumford 2005, p. 263)
>
> 'we are looking for reasons from the side of the world as to why a certain proposition is true' (Simons 2005, p. 254)

So far as I can tell this is at least partly an appeal to pre-theoretical intuition, albeit an appeal that is dressed up in philosophical verbiage. Certainly, Rodriguez-Pereyra,

[5] See, also, Lewis (1992, p. 216), and Merricks (2007, p. 64).

[6] And I am going to assume that my opponent, the maximalist, is *not* swayed by it.

Simons and Mumford are not, in the passages quoted, advancing *argument* in favour of the view that some truths need truth-makers.[7]

The result seems right. Tell a class of undergraduate students that truths about what *is* the case need something to make them true and you will have a happy class on your hands; tell them that truths about what is not the case need something to be the case and they will look at you in confusion. To borrow: 'there is a strong attraction to the intuition that everything that exists is 'positive'.' (Mumford 2005, p. 265). So, to the extent that it accords nicely with our intuitions on truth and that all sides appeal to the power of intuition when motivating their views, a restriction of truth-making to only those propositions that are about how reality *is* seems motivated.

But let us be clear. The claim so far is not that maximalism is false. Instead, I take it that maximalism *could* be coherently defended and motivated. All that I have shown so far is that a restricted form of truth-maker theory can be motivated by an appeal to pre-theoretical intuition and I have suggested that intuition is admitted as significant by all parties. It is an open question as to whether or not maximalism might then *also* be motivated, and the intuition explained away, just as it is an open question as to whether the resulting restricted version is at all coherent.

4 Restricted theory: atomicity

Which propositions need truth-makers? Answer: the ones that are about how the world *is*—call these the atomic propositions. An 'atomic proposition', at first approximation, is a proposition containing no logical constants and no expression equivalent to a logical constant.[8] As it stands, this needs explanation and revision.

Here is the explanation: I take it that various terms, such as 'absence', are equivalent to logical constants at least to the extent that the expression <there exists an absence of unicorns> is logically equivalent to the expression <there are no unicorns>. Since the latter includes a logical constant (negation), and the former is logically equivalent to it, so <there exists an absence of unicorns> is not an atomic proposition.

Now we turn to the revisions. Consider: <it's not the case that there's an absence of trees>. Since <there are trees> is equivalent to this proposition and <it's not the case that there's an absence of trees> is a proposition including a logical constant, <there are trees> will turn out not to be atomic and so will not need a truth-maker. That looks like the wrong result.

(We could settle for the view that if a proposition is 'about' what *is* the case, then it needs a truth-maker, otherwise not—(e.g. Mumford 2005, p. 269). Although I am sympathetic to this thought, it would be preferable to have an account of how to tell when a proposition requires a truth-maker. If we had no systematic way of

[7] Notice, too, that Armstrong appeals to the intuitions of philosophers of a realist inclination (2004, p. 5).

[8] Cf. Mulligan et al. (1984, p. 289).

regimenting propositions into classes of those that do need truth-makers and those that do not, then there would remain the suspicion that the distinction is *ad hoc*.)

A revision is needed:

Atomic': a proposition is atomic if and only if it contains no logical constants and no expression equivalent to a proposition that is either: (a), equivalent to a logical constant or; (b), equivalent to a logical constant operating on an expression that is *itself* equivalent to a logical constant.

Since <it's not the case that there's an absence of trees> is an instance of a logical constant operating on an expression that *is* equivalent to a logical constant—a negation operating on the proposition, <there's an absence of trees> —so the equivalence of <it's not the case that there's an absence of trees> with <there are trees> does not threaten the latter's atomicity.

Another counter-example: the proposition <there is an absence of absences of trees> contains no logical constants. So although *it* is clearly not atomic, the fact that it is equivalent to <there are trees> means that <there are trees> ought not to be atomic either given the above analysis.

Another revision:

Atomic'': a proposition is atomic if and only if it contains no logical constants and no expression equivalent to some further proposition that contains either: (a) one and only one instance of a logical constant or; (b), one and only one expression that is equivalent to a single instance of a logical constant

Since <there is an absence of any absences of trees> contains two expressions that are equivalent to a single instance of a logical constant ('absence') so <there is an absence of absences of trees> is not the sort of proposition equivalence with which constitutes the non-atomicity of a proposition such as <there are trees>.

A final counter-example: the proposition <there are trees or there are trees> might be viewed as equivalent to <there are trees>. Since <there are trees or there are trees> contains one and only one instance of a logical constant, so its equivalence with <there are trees> threatens to render <there are trees> non atomic.

Finally, then:

Atomic''': a proposition is atomic if and only if it contains no logical constants and no expression equivalent to some further proposition that contains either: (a) both one and only one instance of an expression (and any expression equivalent to that expression)[9] and one and only one instance of a logical constant or; (b), both one and only one instance of an expression (and any expression equivalent to that expression) and one and only one instance of an expression equivalent to a logical constant

[9] The content of the bracket is to rule propositions such as <there are trees and there are tall perennial woody plants having a main trunk and branches forming a distinct elevated crown> as non-threatening to the atomicity of <there are trees>.

Since <there are trees or there are trees> includes more than one instance of <there are trees>, so equivalence of <there are trees> with <there are trees or there are trees> does not threaten the atomicity of <there are trees>.[10]

5 Restricted theory: in practice and in simple cases only

I claim that sentences expressing the negation of atomic propositions do not need truth-makers.[11] This invites the question: how do they get to be true? The solution I propose is commonplace: a negative existential is true if and only if its negation lacks a truth-maker. Thus, <there are no unicorns> is true, if and only if <there are unicorns> does not have a truth-maker.[12,13] Thus, atomic propositions need truth-makers, the negations of atomic propositions do not.

Two objections that have been raised for this sort of line are due to Cheyne and Pidgen (2006). They consider a restriction, similar to the one proposed:

(M. iv') *Positive* true claims about the world are made true by something that exists

They object, first, that a move to a restricted principle seems *ad hoc* (2006, p. 263), second, that such a restriction will have the consequence that most truths will lack truth-makers or that their truth-makers could exist without their being a corresponding truth (ibid).

Consider:

(TN) There are tables in the room, but no hippopotami

According to (M. iv'), (TN) does not need a truth-maker since it is part negative, but then (TN) gets to be true even if there are no tables in the room. On the other hand, if you think that because the proposition is also part positive it does need a truth-maker, then you are in difficulty: the tables in the room cannot do the work of making the second clause true—tables just are not truth-makers for propositions

[10] In Sect. 7 of his 'Why the Negations of False Atomic Propositions are True', Peter Simons (2008) gives an account with a similar feel. The idea that Simons develops therein is that the atomic propositions are the ones that are in need of truth-makers, where a proposition is atomic if and only if it can be true in only one way and false in only one way. Although I think that this is in the right vein, there are problems. For instance, <there exists an electron> could surely be true *in more than one way*. Electron x might exist and make it true, but, equally, electron x could have failed to exist and electron y could have existed and thereby made the proposition true. Thus, there is more than one way for <there exists an electron> to be true and so it does not require a truth-maker—an odd result! I do not say that Simons' account can not be patched to deal with this, but, clearly, the account proposed here *can* deal with this case. Since the proposition <there exists an electron> is atomic, it will need a truth-maker—though see fn. 18. It is up to Simons, then, to elaborate upon what is meant by, 'can be true in only one way'.

[11] I treat 'negative existential' as synonymous with 'the negation of an atomic proposition'. Strictly speaking, then, <there are no trees and there are no cabbages> is not a negative existential. See below for discussion of what I take to be complex propositions.

[12] I take what I believe to be a reasonable assumption of bivalence—at least for claims about the present, claims about the future might be more complex. See Tooley (1997, pp. 130–146) for discussion.

[13] I set aside concerns about vagueness here. For instance, you might worry that if it is an ontologically vague matter whether <P> is true, then it's an ontologically vague matter as to whether ¬<P> is true.

about hippopotami. Given that this is so, Cheyne and Pidgen think that we need some ontology to act as truth-maker for claims about what is not.

Both objections can be dealt with. First, as we have seen, restricting the truth-maker principle to only positive truths is well motivated by a simple appeal to intuition.

Second, I do not think that (TN) wears its ontological form on its sleeve. We must borrow from Mulligan, Simons and Smith, again. What we need to say is that complex propositions do not, themselves, need truth-makers. The relationship between the complexity of logical form and whether or not a proposition is properly thought of as atomic, is gestured toward in the following:

> Roughly speaking, … if a sentence has or could have more than one truth-maker, then it is logically complex. If the sentence appears nevertheless to be simple in form, this complexity is hidden and is to be uncovered by a process of analysis. (Mulligan et al. 1984, pp. 298–299)[14,15]

The thought then is that we can credibly maintain that <P & Q> is true just in case <P> is true and <Q> is true (otherwise false); and <P v Q> is true just in case either <P> is true or <Q> is true.

This does not yet help us. The trouble is two-fold: the 'there are tables' part of TN could clearly have more than one truth-maker. This table and that table, that table and the other table, and so on. Second, suppose we can deal with that problem, the second part of TN 'but no hippopotami' does not have, nor could it have, one, or more than one, truth-maker. It cannot because, on its own, it contains a logical constant and no such proposition is atomic. Since TN does contain an expression containing a logical constant—negation—so, in principle, it does not need a truth-maker. In that case, it can be true even in the absence of chairs. That is a bad result.

In order to preserve the idea that only atomic propositions require truth-makers, I propose the following account of simplicity.

> Simplicity: A proposition is simple if and only if it contains no logical connective and no expression equivalent to a logical connective.

The thought, then, is that only *simple* atomic propositions needs truth-makers.

Simplicity then rules that TN does not require a truth-maker, because TN includes an expression equivalent to a logical constant ('and'—this is revealed by a logical analysis of TN).

But how does this help? After all, the point was that *part* of TN needs a truth-maker and part does not. If TN isn't simple, then we have preserved the idea that it does not need a truth-maker. That is not what we wanted.

In the face of this, what we can say is that the simple propositions that constitute the complex proposition will be either true or false: then, that those simple propositions that are atomic do need truth-makers. Further, the truth of the complex

[14] See Mulligan et al. (1984) for discussion of how to resolve some of the potential difficulties with this view concerning identity and existence. Neither problem is insurmountable.

[15] Mumford (2005, pp. 266–268) offers a similar discussion. But what Mumford *does not* do is give us a regimented means by which we may tell whether or not a proposition is to count as 'atomic': see above for such an account.

proposition will then supervene upon the truth of its constituent parts so some complex propositions will require truth-makers in order to be true, even if they *themselves* do not need truth-makers.

So let us use this to give an analysis of TN. Consider a quantified restatement of (TN) where *T* stands for the predicate '…is a tree', and *H* for the predicate '… is a hippopotamus'.

$$(\text{QTN})((\exists \text{xTx} \& \exists \text{zTz}) \& \neg(\text{x} = \text{z})) \& \neg \exists \text{yHy}$$

(QTN) is not a simple proposition: it contains a variety of logical connectives. Thus, (QTN) does not *itself* need a truth-maker. However, (QTN) is constituted by a variety of smaller propositions, some of which are simple, some needing truth-makers, others not.

For instance, ∃xTx will need a truth-maker in order to be true, as will ∃zTz: both are atomic propositions. ¬∃yHy will be true only if ∃yHy lacks a truth-maker; similarly ¬(x = y) will be true only if (x = y) lacks a truth-maker. The complex expression (QTN)/(TN) is going to be true, then, only in situations where ∃xTx and ∃zTz have truth-makers and (*x* = y) lacks a truth-maker and the negation of the ¬∃yHy lacks a truth-maker. That looks to be the right result.

This requires an emendation to the claim made above that atomic propositions need truth-makers, where non-atomic propositions do not. Here is the final view of restricted truth-maker, RT:

> RT: simple atomic propositions need truth-makers; simple non-atomic propositions do not need truth-makers, they require their negation to lack at truth-maker in order to be true; the truth of complex propositions supervenes upon the truth of their constituent simple propositions.

Importantly, this treatment of negative existentials points to an easy treatment of totality claims as well. For instance, claims like <there is only one coin in my pocket> seems to require not *only* that I have one coin in my pocket, but that I have no more than one coin in my pocket.[16] Thus, the worry for the maximalist is that totality claims are not just claims about what there is, they are claims about what is not. In the coin case, the sentence <there is only one coin in my pocket> is a claim that there is at least one coin in my pocket *and* that there is no more than one coin in my pocket.[17]

But, of course, the sentence expressing the totality proposition is the conjunction of a positive and negative existential. That is: <there is a coin in my pocket>, and, <it's not the case that there is more than one coin in my pocket>.[18] Since the latter proposition includes a logical constant—e.g. negation—so the latter portion of the

[16] The existentially quantified form of the proposition is particularly revealing.

[17] See, *inter alia*, Mumford (2005, p. 268).

[18] It may well turn out that, upon inspection, 'there is a coin in my pocket' requires further analysis. For instance, coins might turn out to be composed ultimately by electrons that have particular fundamental properties. In that case <there is a coin> would be a complex proposition; there is an electron x, and an electron y,…. and αx, and αy,…. and x & y &…. compose. To this end, then, only *fundamental* truths require truth-makers, though the truths of natural language will supervene on the truth of the fundamental truths.

claim, once properly disambiguated, can be seen to be non-atomic and so does not require a truth-maker. Instead, it merely requires that its negation <there is more than one coin in my pocket> lacks a truth-maker. Since there *is* no truth-maker for such a proposition, so <there is only one coin in my pocket> comes out true, as does the conjunction implicit in <there is only one coin in my pocket>.

5.1 Truth and simplicity[19]

Consider a putative objection to the view just sketched. Granted, the view that I have outlined seems *prima facie* coherent and can be motivated, but it seems as if it commits us to a 'dualism' about truth. That makes maximalism preferable. Having a truth-maker just *is* what it is for a proposition to be true.

If we require that some truths get to be true via being *made* true, and others be true by some other means, then what we have is not an account of truth and what it consists in. That is not what we want: we want to know what truth *in general* consists in. As Armstrong (2005, p. 272) has it:

> would not Truthmaker Maximalism give a considerable *theoretical* economy…by making every truth require a truthmaker? Given Maximalism, one does not have to have at least two theories of the nature of truth, and is this not an economy?

So whether or not we disagree with the Maximalist, it seems clear that they have something we might want: the univocity of truth.

This argument is not compelling, though it is worth discussion. Consider the worst-case scenario for the proponent of the restricted truth-maker view; namely, that there is no single account of truth that will fit their view. In terms of theoretical economy, that is not good. I do not want to quarrel with Armstrong on this point. We do, as per the maximalist's demand, want to know what it is that truth consists in. Since, we are supposing, no such account is forthcoming from the proponent of restricted truth-maker, we have a sizeable mark *against* restricted theories of truth-making.[20]

But even allowing that this (the worst case scenario) is what restricted theories of truth-making are faced with, restricted theories of truth-making do better where it counts.

Compare the two views: proponents of maximalism must endorse more ontology: something *other* than just the 'positive' things themselves to act as truth-makers. Proponents of a restricted form of truth-maker *don't* have to posit such entities. Instead, they must make truth a more complex theoretical *concept*.

Worryingly for the maximalist it seems that any sensible ockamistic appeal is to ontological simplicity rather than conceptual simplicity. Since the proponent of the restricted view has fewer ontological commitments, and no commitments to negative facts, so their view is less complex where it counts: in the world.[21]

[19] Parts of this section lean on arguments in Tallant (forthcoming).

[20] And notice we are giving up at the first hurdle and not even *trying* to provide such an account here.

[21] For a sustained defence of this kind of view, see Melia (1995).

By way of illustration, the following argument from Melia (1995) is salutary. Suppose that in our conversations with the scientist we find that they seem to quantify over numbers. They say things like, 'the average star has 2.4 planets'. Taking this sentence at face value seems to imply the existence of a number, '2.4', which *is* the ratio in which planets stand to stars. Now, of course, where possible we might look to give an existentially quantified account of this relationship. In our first year logic class we learn that existential quantification gives us the tools to count, without reference to numbers.[22] I take it that the theoretical complication involved in writing down a long logical string is preferable to the ontological complexity of positing numbers. When faced with the claims of the scientist, then, we ought to explain them *without* reference to numbers wherever we can.

So now suppose that the claim 'the average star has 2.4 planets' looks to be true. That is, we look to have evidence for this claim, even though we have little to no evidence that there are 14 zillion stars. As it happens, there are 14 zillion stars. Does the fact that we cannot complete the logical string (not knowing how many stars there are will lead to this) mean that a theory involving a commitment to numbers is preferable? Surely, the answer is 'no'.

As Melia (1995, pp. 226–227) has it:

> although the best theory *we* have may entail the existence of numbers, we know that there is a better theory, a theory which says how many stars and orbiting planets there are intrinsically, which is even more inclusive than T+, which does *not* entail the existence of numbers. This theory consists of T plus a sentence of the form ∃x∃y…(x is a star & y is a star &… ∀w(w is a star → w = x v w = y v…) & ∃x∃y…(x is an orbiting planet & y is an orbiting planet &…∀w(w is an orbiting planet → w = x v w = y v…)'. Since we will never know which sentence of this form is true, we will never know which theory the better theory is. So *our* best theory may always be [one that does quantify over numbers]. But this does not stop us knowing that a better theory, which does not entail the existence of numbers, does indeed exist.[23]

A similar point can be made against Armstrong. *Any* theory that posits negative facts is inferior to one that requires us to merely deploy a theory that includes a disjunction, conjunction or what have you.

Further, the complexity in the case of 'truth' seems minimal.[24] All that the arguments put forward here require us to say is that truth consists in either: the necessitation of a simple atomic proposition; the absence of a truth-maker for the negation of a simple atomic proposition; or, where we have complex propositions, that, the truth of the proposition supervene on the truth of the simple atomic and simple non-atomic propositions that constitute the complex proposition.

[22] Borrowing from Melia (1995, p. fn. 2): 'There are three blind mice' may be rendered as '$\exists x \exists y \exists z(x$ is a blind mouse & y is a blind mouse & z is a blind mouse & $\neg(x = y)$ & $\neg(y = z)$ & $\neg(x = z)$ & $\forall w(w$ is a blind mouse $\rightarrow w = x$ v $w = y$ v $w = z))$'.

[23] The content of the squared brackets is mine.

[24] If, for instance, a definition of truth required an *infinite* disjunction in order to define it, then we would have a case against the proponent of the restricted truth-maker theory.

Really, then, our choice is between negative facts and a disjunctive definition of the concept of truth.[25] Since the disjunction *appears* to include only 3 disjuncts, so it ought to be clear that it is preferable to an inflated ontology.

So the restricted version of truth-maker lacks a *particular form* of economy, but not one that someone interested in metaphysics ought to be concerned with. Assuming that metaphysics is the study of the world so we ought to keep the world as sparse as is reasonable and that means saying 'no' to maximalism.

5.2 Mumford and negatives

A similar proposal to the one I have tried to provide here, is due to Mumford (2007). Mumford argues that there are no negative truths. Instead, there are falsehoods. Thus, it is not *true* that <there are no hippopotami>, but it is false that <there are hippopotami>.

The worry I have with this proposal concerns Mumford's (acknowledged, 2007, p. 62) denial of the T-schema for a particular class of propositions. Intuitively, f<p> entails that t<f<p≫. But, according to Mumford, true propositions require existential commitment (2007, p. 61) and falsehoods require no existential commitment. Thus, 'f<p> cannot entail t<f<p≫'(2007, pp. 61–62). The T-schema is not something we ought to give up lightly.

Happily on the current proposal we can preserve the T-schema: <f<p≫ requires no truth-maker as it contains an expression equivalent to a logical constant. The falsehood of <p> is surely logically equivalent to the negation of <p>. Crucially, then, t<f<p≫ is *also* logically equivalent to f<p> since it too contains an expression equivalent to a logical constant (falsehood being equivalent to negation) and so, given the account of atomicity given above, if f<p> needs no truth-maker, then neither does t<f<p≫. Instead, both propositions simply require that <p> lack a truth-maker in order to be true.

I can also turn an argument of Mumford's to my advantage in the dialectic with the maximalist. Mumford (2007, pp. 69–70) claims that the *maximalist* is required to give up the T-schema if we allow the possibility metaphysical nihilism—the empty world. To see this suppose that there were an empty world and that, as per maximalism, all truths need a truth-maker. The worry then is that <there is nothing>, although a true proposition, will require the existence of a 'nothing' in order to ground the proposition. But since the existence of a 'nothing' will constitute a denial of the empty world—the nothing will have to be a *thing* if truth-maker maximalism is right—then the world is not empty.

Although this is clearly a controversial case, turning as it does on the possibility of an empty world, the case favours the restricted version of truth-maker. The

[25] Other choices available to the maximalist are 'big facts' (Cheyne and Pidgen 2006) and that the world has its properties *essentially* (Cameron, 2008b). Since both views commit us to controversial ontology and the current proposal only to theoretical complexity, so the current account is to be preferred. [Indeed, Cameron (2008b) acknowledges that his argument is supposed to be *preferable* to other accounts of negative existentials, but thinks that because truth-maker implies truth-maker maximalism this is foisted upon us. Dialectically, I think that move can be blocked by the above attempt to motivate a restricted version of the truth-maker principle].

proposition <there is nothing> is equivalent to the proposition <it's not the case that there exists a thing>. Since <it's not the case that there exists a thing> includes a logical constant—negation—so <there is nothing > does not need a truth-maker as it is not an atomic proposition. Thus, the right conclusion to reach is that the current proposal is the *only* extant version of the truth-maker principle that can preserve the T-schema in all instances. Even if that is only a minimal point in its favour it is still a point.

5.3 Smoke, mirrors and ground

Let me now return to Cameron's objection to restricting truth-maker. The concern was that if you think that truth needs ground, then you think that truth needs ground. You *don't* think that *some* truths need ground, but its ok for other truths to go ungrounded. That requires metaphysical smoke and mirrors. And that is bad: we are serious ontologists not cheap, two-bit, illusionists.

The important consideration then, is quite what 'ground' amounts to. For instance, if we thought that the ground of a proposition was its truth-maker then Cameron would be right. I am not providing ground for certain true propositions. The proposed move would be smoke, mirrors and bad ontology.

But *is* that what ground amounts to? When we say that a proposition needs grounding by the world, what are we saying? One possibility, a very plausible one at that, is that a proposition is grounded in the world if and only if it accurately describes the way that the mind-independent world is. If it does that, it is 'grounded' in reality. Certainly, this does not make grounding a relation between object and proposition. But there is no obviously compelling reason to expect that to be the case. On the current proposal, just like the maximalist view, if we change the contents of the world we get different truths. What more could we ask for from the idea of ground *without* begging the question against a restricted form of the theory?

But is this response really satisfactory? Cameron's question, quoted above, is this: Why should it be okay for negative truths to go ungrounded and not okay for positive truths to go ungrounded?

The obvious answer, I think, is this: negative propositions describe an absence of 'ground'. More accurately, they describe there not being any thing that makes them true. So, in order to be true, there can be no *thing* that makes them true. Positive propositions, on the other hand, describe there being some *thing* that makes them true. So, in order to be true, there must be a *thing* that makes them true. The above account of restricted truth-maker is intended to supply criteria for deciding when such truth-makers are required.

6 Eviscerated truth-maker is pointless

One final shot across the bows of the restricted truth-maker principle. One of the supposed advantages of the truth-maker thesis construed as maximalism is that we can use it as a guide to how we do metaphysics. (Extremely) crudely: find the true

propositions, work out what has to be the case for those propositions to be true.[26] That's how you (could) do metaphysics. But if what I am proposing is right, then we can not do that: there will be propositions that do not *need* truth-makers. So, the worry is, there is no point to a theory of truth-making if we endorse a restricted version of the principle.

My response is three-fold. First, I am nervous about pursuing metaphysics in this way (or using a more sophisticated version of this method). Not least because building such a (potentially) metaphysically substantive notion of what's required of a theory of truth into our philosophy *from the start* seems to assume a good deal. Indeed, one might worry that the truth-maker theorist looks to make a prescriptive claim about truth *in all domains*, without first establishing whether the domains in question are such that the request for truth-makers is appropriate. To sketch the thought: it seems more sensible to try and determine how the predicate 'is true' functions in different domains and *then* look to see whether maximalism is right as a result of one's inquiry, rather than insist that maximalism is the right account of truth and haul in the requisite ontology as and when required. I do not want to suggest, here, that this is a good reason to *deny* truth-maker. But it does seem right that the postulation of ontology ought to be our last, rather than our first, resort.

Second, if you did want something akin to the restricted truth-maker principle to do metaphysical work, then that should be ok—provided we use it sensibly. After all, the restricted version of the theory requires that any atomic proposition that describes how things *are*, requires a truth-maker. So any claim that tells us about how things *are* will need a truth-maker of some sort. That seems a sensible result.

Third, truth-maker started out life as a formal specification of the 'making true' relation that certain propositions stand in to the objects in the world.[27] Nothing that I have done here does anything to threaten that and so does nothing to threaten the *original* aim of theories of truth-making. That means, ignoring my second response, there remains a *considerable* role for truth-making even if it does not provide us with the metaphysical gold-standard that we might otherwise be tempted to think.

7 Conclusion

A restricted and common sense view of truth-making is both motivated and defensible. Provided that we prefer ontological economy to (pure) theoretical economy, so it is also the better of the two views.

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[26] Although he acknowledges that this is far from a 'royal road' this is the spirit in which Armstrong (2004, p. 4) views truth-maker maximalism.

[27] See Mulligan et al. (1984).

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