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## TRUTH AND FUNDAMENTALITY: ON MERRICKS'S TRUTH AND ONTOLOGY

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*Truth and Ontology* is a lively book, brimming with arguments, and drawing the reader towards the radical conclusion that what is true does not depend on what there is. If there is a central line of argument, it is that the best account of truthmaking requires truths to be *about* their truthmakers, but negative existentials, modals, and claims about the past and future are not about *what is*, but rather about *what is not*, *what might be*, and *what was and will be*.

In §1 I will discuss this central line of argument, and invite Merricks to clarify his notion of aboutness. In §2 I will try to (re-)motivate truthmaking, and sketch a positive account that takes dependence seriously. Whether this account succeeds or fails, Merricks deserves credit for pushing us all to reconsider truthmaking and its motivations.

### 1. Truth and Ontology: Merricks's Aboutness Gambit

#### 1.1 Necessitation and Aboutness

I take Merricks's central line of argument to run as follows. First, Merricks argues that the best account of truthmaking involves both *necessitation* and *aboutness*, as per:

**TNec:**  $(\forall p)(\forall w)(\text{if } p \text{ is true at } w \text{ then } (\exists x)(x \text{ exists at } w \text{ \& } x \text{ is not suspicious \& } (\forall w')(\text{if } x \text{ exists at } w' \text{ then } p \text{ is true at } w') \text{ \& } p \text{ is about } x))$ <sup>1</sup>

Necessitation is imposed in the third conjunct under the existential quantifier, where  $x$  is required to be such that at all worlds where  $x$  exists  $p$  is true. Aboutness is imposed in the fourth conjunct under the existential quantifier, where  $x$  is required to be what  $p$  is about. Thus: “every truth is necessitated by, and is about, the positive existence of this or that . . .” (p. 96).

1. TNec is my own quasi-formalization of the statement Merricks comes to in Ch. 2 (summarized p. 39). I use ‘ $p$ ’ as a dedicated propositional variable, and ‘ $w$ ’ and ‘ $w'$ ’ as dedicated world variables. The truthmakers may for present purposes be taken as states-of-affairs. For a state-of-affairs to be suspicious is for it to have a suspicious property as a constituent (pp. 35–8). This part will not matter in the main text.

Merricks also considers supervenience-based accounts (TSB: Ch. 4). Though by the time he is done with TSB it has morphed near enough to TNec that “the difference—if any—between [TNec] and TSB makes no difference” (p. 96). Accordingly I will focus on TNec.

Merricks then argues that TNec fails, primarily because negative existentials, modals, and claims about the past and future are not about *what is*, but rather about *what is not*, *what might be*, and *what was and will be*. Merricks thus concludes that truth does not depend on what there is, and also sees in this refutation of the correspondence theory of truth (also imputed an aboutness condition: p. 173), and ultimately a rationale for *truth primitivism*.

This is a risky line of argument, in at least three respects. First, Merricks only considers truthmaking in terms of modal notions (necessitation and supervenience). Brief reflection should convince that no merely modal notion can capture the guiding intuition that truth *depends* on being (§2.2). Though in Merricks's defence, modal accounts are all the literature now offers.

Second, Merricks offers the aboutness requirement as a poisoned pawn. It is *not* built into many extant accounts of truthmaking (for instance, Armstrong invokes no such notion).<sup>2</sup> Rather Merricks must first convince the truthmaker theorist to invoke aboutness, so that he can then refute her with it. Such a line of argument invites the foresighted truthmaker theorist to decline the aboutness gambit, and thereby circumvent Merricks's main attack (§2.3).

Third, Merricks offers no account of aboutness or even any rules of thumb, but merely voices some intuitions. It is not clear to me that his intuitions are correct, whether there is a single notion of aboutness at work, and if aboutness even applies to propositions. Indeed I will argue in §1.4 that aboutness intuitions target sentences, not propositions.

## 1.2 Motivating Aboutness

So why should the truthmaker theorist invoke aboutness? Start from the following necessitation-based account, which is TNec minus aboutness:

**TNec-:**  $(\forall p)(\forall w)(\text{if } p \text{ is true at } w \text{ then } (\exists x)(x \text{ exists at } w \text{ \& } x \text{ is not suspicious \& } (\forall w')(\text{if } x \text{ exists at } w' \text{ then } p \text{ is true at } w'))))$

Merricks offers two motivations for adding aboutness. The first motivation comes from the problem of necessary truths (Ch. 2.II). Consider a necessary truth such as  $\langle 2+2=4 \rangle$ . Since  $\langle 2+2=4 \rangle$  is true in every world, a fortiori it is true at every world in which my left ear exists. In general, every entity (vacuously) necessitates every necessary truth. Thus with necessary truths TNec- fails to distinguish real truthmakers from mere necessitaters.

The second motivation comes from the problem of trivial truthmakers (Ch. 2.III). Consider the true proposition  $p = \langle \text{snow is white} \rangle$ , and the state-of-affairs of  $p$ 's being true. By TNec-, the state-of-affairs of  $p$ 's being true (assuming it exists and is non-suspicious) necessitates the truth of  $p$ , because in every world in which this state-of-affairs obtains  $p$  is perforce true. This seems trivializing. Truthmaking was supposed to be used to 'catch cheaters'

2. D. M. Armstrong, *Truth and Truthmakers* (Cambridge University Press, 2004).

who posit truths without truthmakers.<sup>3</sup> The use is lost if every truth gets a fact-of-truth as a truthmaker.

I think that what is behind both problems is a failure of dependence. The truth of  $\langle 2+2=4 \rangle$  does not depend on my left ear. Likewise the truth of  $\langle \text{snow is white} \rangle$  does not depend on the state-of-affairs of  $\langle \text{snow is white} \rangle$ 's being true. The fact that there is necessitation present merely shows that necessitation is not dependence, and the solution is to ditch necessitation for real dependence (§2.3).

Instead, Merricks has the truthmaker theorist retain necessitation but append aboutness. Admittedly, this seems to help.  $\langle 2+2=4 \rangle$  is presumably about numbers and not about my left ear. Likewise  $\langle \text{snow is white} \rangle$  is presumably about snow and not about its own truth. Indeed—though aboutness is not built into most extant accounts of truthmaking—Merricks has some precedents to cite. He draws on Lewis's remark that what is right about truthmaking is that "truths must have *things* as their subject matter", and Smith's claim that "A truthmaker for a given judgement must be [that] which the judgement is *about*, must satisfy some relevance constraint".<sup>4</sup> Such is the case and precedent for adding aboutness.

I do not think that Merricks and I are in any disagreement yet. I agree with Merricks that TNec- is inadequate, and am happy to allow that aboutness may help. I also agree with Merricks that TNec remains hopeless. Where Merricks and I will part company is in the moral we will draw—Merricks will give up the substantive dependence of truth on being, while I will retain it and merely conclude that necessitation was the wrong starting point for understanding dependence. In short, Merricks would ditch truthmaking altogether, while I would re-understand it.

### 1.3 Aboutness as a Poisoned Pawn

If the truthmaker theorist accepts the aboutness gambit, Merricks claims a forced checkmate. To see the continuation, consider a true negative existential such as  $\langle \text{there are no hobbits} \rangle$ . What is this about? Merricks offers no further account of aboutness, but draws a distinction (pp. 32–3) between (i) a sense of aboutness—call it *the topic sense*—on which  $\langle \text{there are no hobbits} \rangle$  is about *hobbits*, and (ii) a sense of aboutness—call it *the entity sense*—on which  $\langle \text{there are no hobbits} \rangle$  is not about hobbits since there are none. The entity sense is the relevant sense for truthmaking, since it concerns what there is.

So what is the negative existential  $\langle \text{there are no hobbits} \rangle$  about, in the entity sense? Nothing at all, says Merricks. It is not about any existent. Rather it comments on the *absence* of any existent of the hobbit sort—it asserts "that a thing *fails to exist*" (p. 64). That absence is not to be reified as a further entity.

3. According to Sider, "the point of the truth-maker principle and the principle that truth supervenes on being is to rule out dubious ontologies" (Theodore Sider, *Four-Dimensionalism: An Ontology of Persistence and Time* (Oxford University Press, 2001), p. 40; cf. Armstrong 2004, pp. 1–3).

4. David Lewis, 'Armstrong on Combinatorial Possibility', *Australasian Journal of Philosophy*, vol. 70 (1992), pp. 211–24 (at p. 218f); Barry Smith, 'Truthmaker Realism', *Australasian Journal of Philosophy*, vol. 77 (1999), pp. 274–91 (at p. 279).

Likewise what is the modal <there might be hobbits> about, in the entity sense? Nothing that is actual, says Merricks. It is not about any existent, but rather affirms the *prospect* of an existent of the hobbit sort. Given actualism, that possible entity is not to be reified as a further entity. Thus Merricks says (of a counterfactual) that it is “not appropriately about the way anything *is* . . .” but rather “about how something *would be*, had other things differed from how they actually are” (p. 166).

Likewise what are the past claim <there were dinosaurs> and the future claim <there will be cyborgs> about, in the entity sense? Nothing that is present, says Merricks. <There were dinosaurs> is not about any present existent, but rather about the *pastness* of an existent of the dinosaur kind. Likewise <there will be cyborgs> is about the *futurity* of an existent of the cyborgian kind. Given presentism (Ch. 6.IV), these past and future entities are not to be reified as further entities.

Hence Merricks concludes that true negative existentials, modals, and past and future claims are not about (entity sense) what actually presently exists, and so—given actualism and presentism—not about (entity sense) anything at all. Thus TNec—which quantifies over all propositions—is false.<sup>5</sup>

Now Merricks does not deny that truth depends on being (p. xiii). He accepts all instances of the following schema:

TDB: < $p$ > is true because  $p$

To illustrate:

<There are no hobbits> is true because there are no hobbits  
 <There might be hobbits> is true because there might be hobbits  
 <There were dinosaurs> is true because there were dinosaurs  
 <There is a rhinoceros> is true because there is a rhinoceros

It is just that only in the last case illustrated is the being in question an actual, present existent.<sup>6</sup> Thus TDB is not a *substantive* schema, in that it does not involve existential quantification over truthmakers. A substantive truthmaking schema will presumably have the form:

TDB<sub>substantive</sub>: < $p$ > is true because  $(\exists x)$  \_\_\_\_\_

where the blank is filled in different ways by different approaches (including necessitation, supervenience, and dependence relations), with the existential quantifier binding the truthmakers.

5. One might reply by restricting TNec to positive, actual, present propositions. But the guiding intuition behind truthmaking is that truth depends on being. This intuition brooks no restrictions. See Merricks pp. 23–8 for further arguments against restriction.
6. Thus Merricks claims that “the truth in Truthmaker” is that “truths like *Merricks exists*, truths that really are entirely about what exists, must have truthmakers” (p. 168). The error in Truthmaker, by Merricks’s lights, is hasty generalization from cases of this sort.

#### 1.4 About Aboutness

I have so far merely reported Merricks's aboutness judgements (§1.3). But I am not convinced that these are the right judgements. It would have helped me had Merricks offered an at least partial elucidation of this notion, or at least some decent rules of thumb.

I have two main worries as to Merricks's aboutness judgements. First, he seems to presuppose *unique aboutness*, which is the thesis that a proposition can only be about one thing (or sort of thing). By my lights <there are no hobbits> is about many things. It is about the absence of hobbits. It is also about the world. It says that the world is hobbitless.<sup>7</sup> So by my lights <there are no hobbits> is about *what is not*, and equally about *what is*. Why can't it be both?

Likewise <there might be hobbits> strikes me as being about many things, including both a non-actual possibility, and the actual world. It says that the world is such that *it might* have been in-hobbitated. Likewise, <there were dinosaurs> is about the past and the present. It says that the present is such that *it has* a dinosaur infested past.

In general, it seems to me that all truths are about the world, *inter alia*. In this vein, recall Bosanquet's theory of judgement: "The ultimate subject of the perceptive judgement is the real world as a whole".<sup>8</sup> Consider a given subject-predicate judgement of the surface form '*s is P*'. On Bosanquet's theory the deep form of this judgement is 'Reality is such that *s is P*'. I disagree with Bosanquet's radical claim that Reality is the only possible thing a judgement can be about, but I would accept the more reasonable claim that Reality is always at least one of the things a given judgement is about.

If the world is always at least one of the things a given judgement is about, then every judgement is about *what there is*. It may also be about *what there isn't* (etc.) But I should like to know why it can't be both.

Now Merricks sometimes reports direct negative judgements, of the form *this is not about that*. Thus for instance he intuits that <there are no hobbits> "is not about my having a property . . . Nor is it about anything else having a property—not even the universe" (p. 47). I don't share this final intuition, and wonder if Merricks may have here reverted to thinking of aboutness in the topic sense (§1.3). If not, it would be nice to know how to tell.

My second main worry as to Merricks's judgements (and mine in the preceding) is that it is not at all clear that they concern propositions rather than sentences. Indeed, *prima facie* one might expect aboutness judgements to concern sentences, since these have such things as topics and grammatical subjects. Propositions—especially if conceived of as mere sets of worlds—seem the wrong sorts of things to bear aboutness.

Here is an argument that aboutness intuitions target sentences rather than propositions. First consider the sentence 'It is John who kissed Mary'. This

7. Recall that the Smith quote (§1.2) that Merricks takes as precedent speaks of aboutness as a "relevance constraint". Surely how the world is *is* relevant to the truth of <there are no hobbits>!

8. Bernard Bosanquet, *Logic, or the Morphology of Knowledge* (2<sup>nd</sup> edition, Clarendon Press, 1911), p. 78.

seems to be about John. But now consider ‘It is Mary who was kissed by John’. This seems to be about Mary. Or at the very least, the first example seems primarily about John, and the second mainly about Mary. There is some difference in aboutness. But quite plausibly both sentences express exactly the same proposition. Hence aboutness cannot purely be a matter of the proposition, or there could be no aboutness difference between the two examples. Rather I would suggest that aboutness intuitions are tied to sentential vehicles.

Or consider the sentences ‘There are no hobbits’ and ‘The world is hobbit free’. Quite plausibly both express the same proposition—at least, both are true at the same set of worlds, namely the hobbitless ones. But the latter sentence is *evidently* about the world, while Merricks intuitively feels that the former is not. So Merricks’s own intuitions seem tied to sentential vehicles.

Of course Merricks might reply that the sentential vehicle differences only concern aboutness in the topic sense, not the entity sense (§1.3). Again, it would be nice to know how to tell.

Or Merricks might reply—to all these concerns—that elucidating aboutness is not *his* problem, but is rather the problem of the truthmaker theorist.<sup>9</sup> I think Merricks does have some of the burden here. Recall that Merricks needs to convince the truthmaker theorist to accept aboutness (§1.2), and convince the reader that aboutness is the doom of truthmaking (§1.3). Those suspicious of aboutness may well balk at both moves. But never mind the burden question—it would be good to clarify the notion of aboutness, regardless.

Bringing this together, it is Merricks who adds the clause ‘*p* is about *x*’ to TNec, and I am not sure I understand what he adds. And when Merricks voices intuitions on aboutness (or when I do), I am left wondering whether such intuitions concern topics or entities, and whether they target propositions or sentences. I am not saying that Merricks is wrong that aboutness is the doom of the TNec theorist. I am only saying that he did not say enough to persuade this reader either way. So I hereby invite Merricks to say more about aboutness.

## 2. Truth and Fundamentality: Truthmaking (Re-)Understood

### 2.1 *Truth Depends on Being*

The guiding intuition behind truthmaking is the intuition that *truth depends on being*. Such an intuition traces back at least to Aristotle:

[I]f there is a man, the statement whereby we say that there is a man is true, and reciprocally—since if the statement whereby we say that there is a man is true, there is a man. And whereas the true statement is in no way the cause of the actual thing’s existence, the actual thing does seem in some way the

9. Indeed Merricks himself voices suspicions on aboutness, expressing “sympathy” for the worry that “we cannot really make sense of [TNec’s] *aboutness* relation” (p. 34). He then speaks of giving the TNec theorist “the benefit of the doubt” (p. 34). Some benefit! By Merricks’s own lights this is the ‘benefit’ of a discount noose.

cause of the statement's being true: it is because the actual thing exists or does not exist that the statement is called true or false. (*Cat.*14a14–22)

This intuition echoes in Leibniz's claim that "it is evident that every true predication has some basis in the nature of things, . . .", and resurfaces in Armstrong's question: "Must there not be something about the world that makes it to be the case, that serves as an ontological ground, for this truth?"<sup>10</sup> To speak in parables: God, having made the world, would not still need to divide the true propositions from the false. The world already settles the division.

This is an intuition about *dependence* (or grounding, or ontological priority).<sup>11</sup> I would motivate it in two parts. The first part of the intuition is that the truth of propositions cannot be a fundamental feature of reality. Perhaps what is fundamental is an arrangement of particles, or the wave-function of the universe, or some other disportment of substances. But semantic facts, such as the fact that a given proposition bears a certain truth-value, are just the wrong sort of thing to be fundamental.<sup>12</sup> The second part of the intuition is that what is not fundamental must be derivative from what is fundamental. If a given proposition happens to be true, this must (like any non-fundamental feature of reality) derive from what is fundamental.

The guiding intuition behind truthmaking may then be expanded as:

*Truth-grounded:* The truth-values of propositions are not fundamental features of reality, and as such must be grounded in what is fundamental.

This may be understood as an instance of:

*Semantics-grounded:* Semantic facts are not fundamental features of reality, and as such must be grounded in what is fundamental.

By way of parallel, suppose one also thinks that mental and moral features of reality are real but not fundamental. Then I submit one would equally be committed to:

10. G. W. F. Leibniz, 'Discourse on Metaphysics', *The Rationalists* (tr. George Montgomery, Anchor Books, 1960), pp. 409–53 (at p. 416); Armstrong, *A World of States of Affairs* (Cambridge University Press, 1997), p. 115.

11. Indeed, the Aristotle passage quoted above occurs in the context, not of a discussion of truth, but of a discussion of the many senses of 'priority'.

12. Compare Fodor on intentionality:

I suppose that sooner or later the physicists will complete the catalogue they've been compiling of the ultimate and irreducible properties of things. When they do, the likes of spin, charm, and charge will perhaps appear upon their list. But aboutness surely won't; intentionality simply doesn't go that deep. It's hard to see, in the face of this consideration, how one can be a Realist about intentionality without also being, to some extent or other, a Reductionist. If the semantic and the intentional are real properties of things, it must be in virtue of their identity with (or maybe of their supervenience on?) properties that are themselves neither intentional nor semantic. If aboutness is real, it must be really something else (Jerry Fodor, *Psychosemantics* (MIT Press, 1987), p. 97).



*Mind-grounded:* The mental is not a fundamental feature of reality, and as such must be grounded in what is fundamental.

*Morality-grounded:* The moral is not a fundamental feature of reality, and as such must be grounded in what is fundamental.

Thus the guiding intuition behind truthmaking is of a piece with a range of plausible dependency theses concerning seemingly derivative features of reality.

Note that all of these dependency theses are *ontological* and not *conceptual* theses. It is crucial to distinguish ontological grounding—concerning dependences among things in the world—from conceptual analysability—concerning definitions among ideas in the mind. For instance, *Morality-grounded* is perfectly consistent with the (very plausible) claim that our concept of wrongness is not analysable in non-moral terms. Likewise *Truth-grounded* is perfectly consistent with the (very plausible) claim that our concept of truth is non-analysable.

I think Merricks would accept *Truth-grounded*. After all, his own schema TDB (§1.3)— $\langle p \rangle$  is true *because* of  $p$ —grounds truths in facts. If the truth of a proposition were somehow a fundamental feature of reality, then  $\langle p \rangle$  would not be true because of anything, and *a fortiori* could not be true because of  $p$ . Merricks also holds that truth “has no analysis” (p. 183), but these are consistent claims.<sup>13</sup> Indeed I am sympathetic with Davidson’s claim (Merricks p. 184) that “the concept of truth” is among “the most elementary concepts we have” and thus “an indefinable concept.” The question is not whether to accept *Truth-grounded*, but how to capture it.

## 2.2 *Against Necessitation*

The guiding intuition that truth depends on being *cannot* be captured via necessitation. Necessitation is a modal relation between what holds at a set of worlds  $S$  and what holds at a superset  $S+$ . This is a reflexive and non-symmetric relation, whereas dependence is irreflexive and asymmetric.

Further, necessitation fails to entail priority. Indeed, there are cases where posterior necessitates prior. Thus imagine that a watchful God exists at every world, with beliefs mirroring the truths:  $(\forall p)(\forall w)(p \text{ is true at } w \text{ iff God believes } p \text{ at } w)$ . Consider any true proposition  $p$ . There will be a necessitating existent for  $p$ ’s being true, namely God’s belief that  $p$  is true. But that gets the order of explanation backwards—the watchful God scenario is not one in which propositions are true because God believes them, but rather one in which God believes propositions because they are true.

Finally, necessitation (like any modal relation) is intensional, and thus cannot distinguish entities that exist at exactly the same worlds. But dependence

13. Though I am afraid that Merricks may occasionally conflate conceptual analysis with ontological dependence, in passages such as: “I do not think that any monadic properties of truths deliver an analysis of *being true*. That is, *being true* is a primitive property” (p. 183).

is hyperintensional. Even among the necessary entities (which exist at all worlds, and a fortiori exist at exactly the same worlds) there are substantive questions of what depends on what.<sup>14</sup>

Thus truthmaker theorists—if they would follow their own guiding intuition—must ditch necessitation. It is a mistake to think that talk of dependence can be swapped out for talk of any pattern of modal covariation. TNec- (§1.2) was a false start. The issue of whether to add aboutness to it should never have arisen.

Moreover, Merricks's own non-substantive construal of the intuition (TDB: §1.3) proves insufficient to the guiding intuition. Let us grant that <there are no hobbits> is true because there are no hobbits. Still, in such a case, the right hand side hardly has better claim to be fundamental. The question still arises, *in virtue of what* are there no hobbits? We have not yet reached ground.

Now it may be that Merricks and I do not have a substantive disagreement here. Start from <there are no hobbits>. I say this must be grounded in the fundamental features of reality. Suppose for the sake of the definiteness that this is the wave-function of the universe. Merricks can in principle agree, and simply maintain that the grounding proceeds in two stages.

*Stage 1:* <there are no hobbits> is true because there are no hobbits;

*Stage 2:* there are no hobbits because the wave-function of the universe is such-and-so.

Given the transitivity of dependence, this entails that <there are no hobbits> is true because the wave-function of the universe is such-and-so (as I wanted). Merricks can then call Stage 1 the truth-to-derivative-being stage, and Stage 2 the derivative-being-to-fundamental-being stage. TDB will then be a successful theory for Stage 1.

I have no objection to dividing the task into these stages, as long as we reach fundamental reality in the end. I have no objection to restricting the label 'truthmaking' to the first stage. Never mind the labels, just look at the stages. By all means let us take TDB as the theory of Stage 1. *Just don't forget Stage 2.* When we want substantive commitments—and want to know how to detect cheaters—it will be Stage 2 (however labelled) that does the work.

14. For the same three reasons, supervenience is not dependence either: (i) supervenience is reflexive and non-asymmetric, (ii) supervenience can hold from posterior to prior, as it does in the watchful God case, and (iii) supervenience is intensional. Thus McLaughlin and Bennett categorically state: "Supervenience is not a relation of ontological priority; the supervenience of *A* on *B* does not guarantee that *B*-properties are ontologically prior to *A*-properties" (Brian McLaughlin and Karen Bennett, 'Supervenience', *Stanford Encyclopedia of Philosophy* (2005), §3.5). At most, supervenience should be thought of as Kim thinks of it, as "suggesting the presence of an interesting dependency relation that might explain it" (Jaegwon Kim, 'Postscripts on Supervenience', *Supervenience and Mind: Selected Philosophical Essays* (Cambridge University Press, 1993), pp. 161–74 (at p. 167)).

### 2.3 Truthgrounding

The positive view of truthmaking I would endorse is simple. The key move is to *use* the notion of dependence (/grounding), instead of swapping it for some modal notion. Thus:

**TGro:**  $(\forall p)(\forall w)$  (if  $p$  is true at  $w$  then  $(\exists x)$  ( $x$  is fundamental at  $w$  &  $x$  grounds the truth of  $p$  at  $w$ ).  $(\exists Xs)$  (every one of the  $Xs$  is fundamental, and the  $Xs$  are a total ground for the truth of  $p$  at  $w$ ).<sup>15</sup>

On TGro, truthmakers are fundamental entities that ground the truth of propositions. TGro is a substantive truthmaking principle (§1.3), existentially quantifying over the truth-grounders.

Grounding is an intuitively clear notion, and much can be said to clarify it further. By way of illustration, consider (i) Socrates the object, and (ii) {Socrates} the singleton. It is plausible to regard (i) as prior to (ii)—the singleton is founded on the object.<sup>16</sup> Likewise consider (i) Socrates, and (iii) the fact that Socrates exists. It is plausible to regard (i) as prior to (iii)—the fact obtains because there is the object. Likewise consider (i) Socrates, and (iv) the wisdom of Socrates. It is plausible to regard (i) as prior to (iv)—the property is a dependent modification of the object. Likewise consider (iv) the wisdom of Socrates, and (v) the neural features of Socrates. It is now standard to regard (v) as prior to (iv)—mental properties such as wisdom are instantiated on the basis of neural properties. The relation of the truth of propositions to what is fundamental fits this pattern.

By way of gloss, where  $x$  grounds  $y$ , we can equally say that  $x$  is ontologically prior to  $y$ , or say that  $y$  depends on, or derives from,  $x$ . Likewise we can say that  $y$  exists and has its nature in virtue of, on the basis of, or because of,  $x$ . Where  $x$  is fundamental, we can equally say that  $x$  is basic, independent, and primary (as opposed to derivative, dependent, and secondary). Anyone who understands any of these common locutions will understand what is meant by fundamentality and grounding.<sup>17</sup>

By way of structure, grounding is irreflexive, asymmetric, and transitive, with minimal elements. It thus induces a partial ordering over the entities—the *great tree of being*. The minimal elements of the partial ordering are the fundamental entities—the *roots of being*.

Perhaps the concept of grounding is analysable (or perhaps not). We need not settle the question to understand the ‘making’ in truthmaking, for, as Molnar says, “Truthmaker theory is a theory of the groundedness of

15. If there are a plurality of fundamental entities that can serve as partial grounds, then the existential quantification should be stated *plurally*, with reference to the *total grounds*:

$(\exists Xs)$  (every one of the  $Xs$  is fundamental, and the  $Xs$  are a total ground for the truth of  $p$  at  $w$ ).

16. Cf. Kit Fine, ‘Ontological Dependence’, *Proceedings of the Aristotelian Society*, vol. 95 (1994), pp. 269–90.

17. Consider the classic Euthyphro dilemma, which concerns “whether the pious or holy is beloved by the gods because it is holy, or holy because it is beloved of the gods” (*Euthyphro*, 10a). This concerns the order of grounding. We teach this to our undergraduates. They understand.

truth-values".<sup>18</sup> We need only stop assuming that we can seamlessly replace grounding with some modal pattern.

Of course one could complain that they do not grasp the notion of dependence, or turn up their nose at any concept not reductively definable into possible worlds.<sup>19</sup> But no friend of truthmaking should make such a complaint, given that she was guided from the start by the intuition that truth depends on being. Nor should Merricks make such a complaint, given that he is happy enough to work with an intuitive notion of aboutness (which I have argued is much less clear: §1.4), argues himself that supervenience falls short of real dependence (Ch. 4.VI), and endorses TDB with its embedded 'because' relation.

TGro mentions neither necessitation nor aboutness, nor need it. The problems that led Merricks to append an aboutness requirement to TNec- (necessary truths and trivial truthmakers: §1.2) do not arise. Start with the problem of necessary truths. The problem was that every entity necessitates every necessary truth. Thus my left ear necessitates the truth of  $\langle 2+2=4 \rangle$ . This is the wrong result *because* there are substantive dependence facts for numbers. Whatever exactly numbers depend on (perhaps numbers are fundamental Platonic substances, or perhaps they are grounded in their concrete instances, or perhaps they are projected by our minds), they are certainly not grounded in my left ear. Hence TGro solves the problem, for my left ear is not a truth-ground for  $\langle 2+2=4 \rangle$ .

Turn to the problem of trivial truthmakers. The problem was that every truth is necessitated by the fact of its truth. Thus  $\langle \text{snow is white} \rangle$ 's being true is necessitated by the fact of the truth of  $\langle \text{snow is white} \rangle$ . This is wrong *because* it gets the dependency wrong. Likewise in the example of the watchful God (§2.1), God's belief that  $\langle \text{snow is white} \rangle$  necessitates the truth of  $\langle \text{snow is white} \rangle$ . This is wrong *because* it gets the dependency backwards. The watchful God's beliefs depend on the truth, not vice versa.<sup>20</sup> Hence TGro solves the problem, for the trivialisers are not truth-grounds.

Perhaps there are other reasons to append an aboutness requirement to TGro that I have not yet seen. I can only show that none of the reasons for appending an aboutness requirement to TNec- extend to TGro.

#### 2.4 Negative Existentials and Other Hard Cases

But does TGro deliver substantive truthmakers for the negative existentials and other hard cases? If so, what are their grounds? A difficult question! I

18. George Molnar, 'Truthmakers for Negative Truths', *Australasian Journal of Philosophy*, vol. 78 (2000), pp. 72–86 (at p. 82).

19. Though by my lights the thought that necessitation and supervenience were better understood than grounding is a thought that only the Lewisian modal realist can maintain.

20. What about a scenario in which God's beliefs, instead of passively reflecting the pre-existing truths, actively create them? In such a scenario, with God imagined as the one fundamental entity whose beliefs inform nature, TGro entails that God's belief that snow is white is a truth-ground for  $\langle \text{snow is white} \rangle$ . But this is the right result—this is an imagined world in which every truth really does depend on God's belief in it.

have a controversial speculation on offer for negative existentials. To begin with, suppose—as I have defended elsewhere<sup>21</sup>—the monistic thesis that the whole world is the one and only fundamental entity. Given the monistic thesis, TGro entails:

**Truthmaker Monism:** the world is the one and only truthmaker.

Given Truthmaker Monism, the one and only truthmaker for negative existentials (and for modals, and indeed for every truth) is the world.

How does the world ground the truth of <there are no hobbits>? First consider the world itself, as a big object. That big object holds no hobbits. Of course that is not enough to ground the truth of <there are no hobbits>, because that big object could presumably be embedded within a larger unhobbit world (p. 52). But now add the monistic theses that (i) this big object is fundamental, and (ii) nothing else is fundamental, and we have ruled out the larger world (since the larger world requires more fundamental entities, or a discernible one, to make a hobbit of). Thus the world—given a monistic metaphysics—can ground the truth of <there are no hobbits>.<sup>22</sup>

But never mind whether this controversial speculation succeeds for negative existentials, and never mind modals, and past and future claims. For here is an argument that TGro cannot go wrong. The cases of (i) negative existentials, (ii) modals, and (iii) past and future claims are only problematic given the metaphysical assumptions of (i') metaphysical positivism, on which all fundamental entities are positive,<sup>23</sup> (ii') actualism, and (iii') presentism (§1.3). To illustrate, <there might be hobbits> is only problematic for truthmaking given the actualist position that there are no hobbits—if there are other worlds with hobbits, <there might be hobbits> is akin to the unproblematic case of <there is a rhinoceros> (§1.3).

But we should accept (i')–(iii') only if the negative, the possible, and the non-present are indeed grounded (respectively) in the positive, actual, and present.

21. Jonathan Schaffer, 'The Least Discerning and Most Promiscuous Truthmaker', *The Philosophical Quarterly*, forthcoming.

22. To see how the monism helps, it may be worth returning to the Russell-Armstrong argument for fundamental negative entities. As Russell writes:

[W]hen you have enumerated all the atomic facts in the world, it is a further fact about the world that those are all the atomic facts there are about the world, and that is just as much an objective fact about the world as any of them are. (Bertrand Russell, 'The Philosophy of Logical Atomism', in David Pears (ed.), *The Philosophy of Logical Atomism* (Open Court Press, 1985), pp. 35–155 (at p. 93); cf. Armstrong 1997, p. 135).

The argument is premised on the pluralistic assumption that the number of fundamental entities is open-ended. If it were metaphysically necessary that there was a single fundamental entity, then once it had been delivered, no further question of completeness could arise. We would know from the start that our list of fundamentals has but one slot to fill. Having filled it, we would know that our list was complete. See Jonathan Schaffer, 'The Least Discerning and Most Promiscuous Truthmaker' (esp. §4) for further discussion.

23. Metaphysical positivism only makes sense if there is a positive/negative distinction amongst the fundamental entities. If the fundamental entities are objects it is not even clear what a 'negative object' could be.

Thus for instance, the core thesis of actualism ought to be understood as the thesis that the actual grounds the possible.<sup>24</sup> So understood, TGro cannot go wrong. Take modals. Either actualism is true, or not. If actualism is true, then the actual does ground the possible, and so there will exist some actualist grounds for truths about possibility (though it may be very difficult to specify). If actualism is false, then there will exist possibilist grounds for truths about possibility. Either way there will exist grounds for truths about possibility, so either way TGro is safe.

### 2.5 Cheaters Exposed

The final issue I will discuss is whether TGro can be used—in cooperation with a theory of fundamentality—to catch cheaters. For if so then TGro can help accomplish what Sider speaks of as “the point of the truth-maker principle”,<sup>25</sup> and what Merricks (a presentist and thus an accused cheater: p. 126) seems most concerned to stop. To illustrate how TGro plus a theory of fundamentality can catch cheaters, suppose (to illustrate) that the Humean is right about what is fundamental. In particular, suppose that what is fundamental are spacetime points, bearing intrinsic categorical properties, and linked by distance relations. Now suppose the Rylean posits dispositional truths, without any grounding of dispositions within the Humean mosaic. Then she has cheated, for she has posited truths without grounds.

Notice that TGro only catches cheaters in cooperation with a theory of fundamentality. TGro cannot do it alone. TGro only says that all truths must be grounded in what is fundamental, but it does not itself say what is fundamental (it takes no stand on Humeanism, for instance). So if there were, for instance, fundamental dispositional facts, then the Rylean would emerge innocent. What is ruled out are not dubious ontologies *per se*, but dubious *packages* of views about what is true plus views about what is fundamental.<sup>26</sup>

But this does not make TGro or the task of cheater detection empty or question-begging. Merricks, speaking of suspicious properties, says:

A fully articulated Truthmaker contains a full account of which properties are suspicious. A full account of which properties are suspicious is itself a full-blown metaphysics. Thus a fully articulated Truthmaker is not a neutral litmus test that competing theories must pass to be taken seriously. Instead, it is one of the competitors. (p. 37)

24. Thus Kant maintains: “All possibility is given in something actual, either as a determination existing within it or as a consequence arising from it” (Immanuel Kant, ‘The Only Possible Argument in Support of a Demonstration of the Existence of God’, in Ralf Meerbote and David Walford (eds.), *The Cambridge Edition of the Works of Immanuel Kant: Theoretical Philosophy 1755–1770* (Cambridge University Press 2002), pp. 107–202 (at p. 124)).

25. *Four-Dimensionalism*, p. 40.

26. Ross Cameron, ‘Truthmakers, Realism, and Ontology’, in Robin LePoidevin (ed.), *Being: Contemporary Developments in Metaphysics* (Cambridge University Press, forthcoming).

On my view there is a division of labour. TGro is fully articulated as is. We also need a theory of fundamentality. Fortunately we have an independent grip on the notion—indeed, it was our prior grip on fundamentality and grounding that led to TGro (§2.2). So for instance if the Lucretian presentist (Ch. 6.III) tells us that among the fundamental properties are properties of the world including *being such that the Trojans were conquered*, then she has not run afoul of TGro. Rather she has endorsed what anyone can see to be an implausible view of the fundamental.<sup>27</sup>

To see how TGro plus a grip on fundamentality can help us catch cheaters, imagine a moralist who upholds the truth of the following dictum: <mango eating is wrong>. We ask her why this is true. She might reply that it is a fundamental feature of reality that mango eating bears the property of wrongness. That is an answer, but an extremely implausible one. This type of answer would reveal her as no cheater, but merely someone with an implausible view of fundamental reality.

Alternatively, she might reply that it is a derivative feature of reality that mango eating bears the property of wrongness. We ask her what is the ground of this derivative feature. She might reply that mango eating particle arrangements always lead to pain feeling arrangements, or something like that. This is an answer, but an implausible one as well. This type of answer would reveal her as no cheater, but merely someone with an implausible view of what derives from what.

But suppose instead that our moralist denies that it is either a fundamental or a derivative feature of reality that mango eating bears the property of wrongness. But she continues to uphold the truth of her dictum. Now she is cheating. She might say (echoing Merricks's TDB) that <mango eating is wrong> is true because mango eating is wrong. But clearly this cannot help. For she still has no ground for maintaining the claim on the right hand side, that mango eating is wrong.

Or imagine a spiritualist who upholds the truth of <there is a ghost in the garage>. We ask him if ghosts are fundamental entities, and he says no—he only believes in particles as fundamental. We ask him if ghosts are made of particles, and he again says no. But he insists that <there is a ghost in the garage> is true all the same. He is cheating. He might add that this proposition is true because there is a ghost in the garage, but that is no help, for he has no ground for maintaining that there is a ghost in the garage.

To my mind the presentist is another such dubious character. She upholds the truth of <there were dinosaurs>. She might consider it to be a fundamental feature of reality that there were dinosaurs. But that would be to go Lucretian, and so to have an implausible view of what is fundamental. Or she might consider the truth of <there were dinosaurs> to be grounded in the present facts. But then she would have to identify substantive present grounds, and will run into trouble in indeterministic worlds with different pasts but duplicate presents. If she says neither, and merely says <there were

27. Merricks himself dismisses the Lucretian properties as “suspicious” (p. 135).

dinosaurs> is true because there were dinosaurs—as Merricks does—then she is cheating. For she has no ground for maintaining the rightmost claim, that there were dinosaurs.

Or at least, if the Merricksian presentist is better off than the fruity moralist and spooky spiritualist, I should like to hear why. This is intended as an invitation to Merricks to say what separates his presentism from such bad company.

By way of conclusion, I would invite Merricks to consider TGro (and possible descendents) before dismissing truthmaking. For it is TGro that fits the guiding intuition that truth depends on being. Whether TGro ultimately succeeds or fails, full credit to Merricks for waking us truthmaker theorists from our dogmatic slumbers.<sup>28</sup>

28. Thanks to Ross Cameron, Ben Caplan, and Trenton Merricks for helpful discussions.