REASEARCH ARTICLE

# Negative truths and truthmaker principles

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**Abstract**   This paper argues that a consideration of the problem of providing truth-makers for negative truths undermines truthmaker theory. Truthmaker theorists are presented with an uncomfortable dilemma. Either they must take up the challenge of providing truthmakers for negative truths, or else they must explain why negative truths are exceptions to the principle that every truth must have a truthmaker. The first horn is unattractive since the prospects of providing truthmakers for negative truths do not look good: neither absences, nor totality states of affairs, nor Graham Priest and J.C. Beall's 'polarities' (Beall, 2000; Priest, 2000) are up to the job. The second horn, meanwhile, is problematic because restricting the truthmaker principle to atomic truths, or weakening it to the thesis that truth supervenes on being, undercuts truthmaker theory's original motivation. The paper ends by arguing that truthmaker theory is, in any case, an under-motivated doctrine because the *groundedness* of truth can be explained without appeal to the truthmaker principle. This leaves us free to give the commonsensical and deflationary explanation of negative truths that common-sense suggests.

## I

To be a truthmaker theorist is to commit oneself to a principle stating that the members of a certain class of true propositions have truthmakers. This, however, merely prompts the following questions:

(1)    What is it for something to make a proposition true?

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(2)    Does the above truthmaker principle apply to all truths, or should it be restricted in some way?

(3)    What are the entities that act as truthmakers?

In providing answers to these questions, the truthmaker theorist runs up against the age-old problem of supplying truthmakers for negative truths. In my view, the intractable nature of this problem seriously undermines the motivation for truthmaker theory.

Focussing first of all on the very idea of truthmaking, the answer to question (1) would seem to go as follows. A true proposition's truthmaker is an entity that acts as the truth's *ontological ground* (Armstrong, 1997: p. 115), the notion of an ontological ground being a technical one that is best explained thus: $\alpha$ is the ontological ground of the true proposition that $p$ just in case $\alpha$ is a worldly entity that *necessitates* $\langle p \rangle$'s truth (Armstrong, 2004: pp. 5–7).[1] Truthmaking, on this view, is a cross-categorial necessitation relation, one of its relata being an entity in the world, the other a true proposition (Armstrong, 2004: p. 5).

But what is the nature of this necessitation? One thing is for sure: it is not intended to be causal. The sense in which an entity makes a proposition true is supposed to be different from that in which an artefact's maker brings it about that the artefact in question exists (Bigelow, 1988: p. 125). Truthmakers necessitate truths in a stronger, metaphysical sense. As D.M. Armstrong puts it, '[i]n the useful if theoretically misleading terminology of possible worlds, if a certain truthmaker makes a certain truth true, then there is no alternative world where that truthmaker exists but the truth is a false proposition' (1997: p. 115). From now on I shall understand 'necessitates' in just this way: a truthmaker $\alpha$ necessitates the truth of $\langle p \rangle$ just in case it is impossible for $\alpha$ to exist without $\langle p \rangle$'s being true.[2]

What about question (2)? The intuition behind truthmaker theory starts off, at least, as general in character: truths are made true by something. If, with Armstrong (1989: p. 89, 2004: p. 5), we presume that the requirement of an ontological ground applies across the board, we will not wish to circumscribe the truthmaker principle in any shape or form. And if we conjoin such a belief in what has become known as *truthmaker maximalism* with our above explication of truthmaking, we end up committed up to the following unrestricted truthmaker principle,

(TM)    Necessarily, if $\langle p \rangle$ is true, then there exists at least one entity $\alpha$ such that $\alpha$ necessitates $\langle p \rangle$'s truth,

in which '$\langle p \rangle$' is considered to stand for any truth whatsoever.

Now for question (3). Truthmaker theorists are free to regard familiar objects as the truthmakers for existential truths and essential predications. For example, it is Eleanor alone that necessitates the truth of $\langle$Eleanor exists$\rangle$, $\langle$Eleanor = Eleanor$\rangle$, and $\langle$Eleanor is a member of the species *homo sapiens*$\rangle$. However, in order to provide truthmakers for non-existential inessential predications, truthmaker theorists need to posit more exotic entities. Suppose that $\langle a$ is $F \rangle$ is one such truth. To paraphrase Davidson (1969: p. 49), a truthmaker for this proposition must include not only the object the proposition is about (*viz. a*) but whatever it is the proposition says about it (*viz.* that it is $F$). This being so, the truthmaker theorist would seem to have two

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[1]    Throughout this paper I follow Paul Horwich (1990) in using '$\langle p \rangle$' to stand for 'the proposition that $p$'.

[2]    This approach is taken by Gonzalo Rodriguez-Pereyra (2005: p. 18) as well as by Armstrong.

types of candidate at her disposal.[3] Either she can follow Armstrong in regarding the truth's truthmaker as *a's being F*: a state of affairs or fact 'in which *a* and *F* are brought together' (Armstrong, 1997: p. 116). Or else, she may follow Mulligan, Simons, and Smith (1984) in taking the proposition's truthmaker to be *a's Fness*: an untransferable trope.[4]

At this point, however, a considerable problem hoves into view. For if, as truthmaker maximalism demands, every truth is made true by something, then even negative truths are true because something exists to make them true. And on the face of it, this is baffling. Consider, for example, ⟨There are no arctic penguins⟩. The natural way of explaining the truth of this proposition is this: it is true, not because there exists something that guarantees its truth, but because certain things do *not* exist, *viz*. arctic penguins. Likewise, the negative predication ⟨This liquid is odourless⟩ would seem to be true, not because there *is* something that serves as its ontological ground but because the liquid *lacks* something, *viz*. a smell of any kind.[5] The demand for truthmakers for such propositions seems theoretically driven rather than intuitive.

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[3] That is, if we put to one side David Lewis's recent suggestion (2003) that *qua*-versions of things may serve as truthmakers. It is a familiar point that if Lewis's realism about possible worlds, and its concomitant counterpart theory (1986: pp. 259–263), are accepted, then an object's possession of modal properties is relativised to whatever counterpart relation is appropriate to the conversational context. So, for example, an object *a* may be essentially *F* under counterpart relation *R* but accidentally *F* under the distinct counterpart relation *R′*: whilst all of the counterparts of *a* selected under *R* are *F*, there is at least one counterpart of *a* selected under *R′* that is not *F*.

Lewis's thought in his 2003 is that the attribution of the property *necessitating the truth of* ⟨*p*⟩ is similarly relative to some, but not other, counterpart relations (2003: p. 30). Specifically, he suggests that all we need do to find a truthmaker for the inessential predication ⟨*a* is *F*⟩ is introduce a counterpart relation *R\** that selects only *F* counterparts of *a*. To this end, Lewis uses '*a qua F*' to introduce *R\**: every possible world in which *a qua F* exists is a world in which *a* is *F*, and so there exists no possible world in which *a qua F* exists and yet *a* is not *F*. Hence, it turns out that *a qua F*—which is nothing other than *a* itself (since attributions of different modal properties to what is really one and the same thing are relative to different counterpart relations)—is the truthmaker for ⟨*a* is *F*⟩. Furthermore, the approach can obviously be applied to the kinds of negative truth to which the present paper is devoted: ⟨There are no *F*s⟩ is made true by *the entire world qua lacking Fs* (Lewis & Rosen, 2003: p. 40); whilst the inessential predication ⟨*a* is not *F*⟩ is made true, on this view, by *a qua lacking F*, or else by *the entire world qua just as it is*, the latter being a truthmaker for every truth (Lewis & Rosen, 2003: p. 40).

There are two reasons, however, why I find this approach unsatisfying. First, it comes with the considerable baggage of counterpart theory: a theory that has difficulty in capturing the nature of our modal thinking. In short, the worry is this (Kripke, 1980: p. 45): if, in saying 'I might never have had children' I am not talking about what might have happened to *me*, but to some *counterpart* of mine (*i.e.* another person), it is mysterious why I should feel a sense of personal relief or gratitude that things did not turn out that way. I have such feelings, surely, because *I*, and not a mere counterpart, may have been childless. Such personal emotions are unintelligible, if the person I am imagining childless is not me.

Second, and as MacBride (2005: pp. 132–134) has (to my mind) demonstrated, *a qua F* would seem to be little more than a projection from the truth of ⟨*a* is *F*⟩: *a*, after all, merits the name '*a qua F*' just when *a* exists and is *F*. This, however, would seem to render *a qua F* incapable of being responsible for the truth of ⟨*a* is *F*⟩: of being the ontological ground for the truth of the proposition, in other words. An entity cannot be the thing that necessitates a truth, if it is nothing more than a projection from that truth. (This is not to say that Lewis's aim in introducing *qua*-versions of things has been undermined. MacBride (2005: pp. 134–139) convincingly argues that Lewis's purpose, in suggesting that the truthmaking role can be as effectively played by *qua*-versions of things as by states of affairs, is that of precisely revealing how explanatorily thin such a role really is.)

[4] It would have to be untransferable (that is, be incapable of being had by any other entity), or else the trope could exist, and yet *a* not be *F*.

[5] I borrow this example from Mulligan, Simons, and Smith (1984: p. 314).

The problem becomes starker still once we consider which state of affairs or tropes could necessitate such negative truths. The fact that our two propositions state, respectively, that there are no things of a certain kind and that something lacks a certain property causes problems for both the fact-formulated and trope-formulated versions of truthmaker maximalism. A state of affairs, after all, is something's having a property, not an object's lacking one (or, worse, the absence of things of a certain kind); and, equally, neither the non-existence of a kind of thing nor the particularised *failure* of an object to have a property are themselves particularised qualities. Here we have the intuitive force behind the thought that everything that exists is positive (Molnar, 2000: p. 72).

How should a truthmaker theorist respond? This question, I shall argue, forces truthmaker theorists onto the horns of a nasty dilemma. On the one hand, she may take up the challenge to provide truthmakers for negative truths; in which case, the prospects of success do not look good. On the other hand, she may seek to weaken the truthmaker principle in one of two ways; a strategy which—we shall see—undercuts the motivation for truthmaker theory in the first place. All of this, I shall suggest, is further grist to the mill of those who view the very idea of truthmaking with a sceptical eye.[6]

## II

Let us start by examining the first horn of the dilemma. In this section, following Molnar (2000), I shall summarily round up the usual suspects, explaining why none of the standard accounts of negative truthmakers are satisfactory. In Sect. III I shall consider a recent attempt to rehabilitate negative truthmakers—the *polarity theory* proposed by Priest (2000) and seconded by Beall (2000)—but will argue that this too fails because it falls short of supplying what is required, namely, a metaphysical account of what such things *are*.

To begin with, though, a truthmaker theorist could be forgiven for failing to see the nature of the problem. It might be suggested, for example, that the truthmaker for ⟨p⟩ is, in every case, the fact that p, and that, accordingly, there is nothing problematic about believing the truthmaker for ⟨This liquid is odourless⟩ to be the fact that this liquid is odourless. (Trope-theorists, of course, could make a similar move by claiming the truth's truthmaker to be *this liquid's odourlessness*.) Such a move, however, has all the advantages of theft against honest toil. A truthmaker, remember, is supposed to provide an *ontological* ground for the truth of a proposition in the sense explicated in Sect. I: it is meant to be a *bona fide* worldly entity whose existence guarantees a proposition's truth. This being so, it is no use simply *assuming* that an object's lacking a property can be such a truthmaking fact. For if an object lacks a property, there is no sense in which object and property are brought together to form a state of affairs. (And the same goes for the trope-theoretic version of this form of response: for a trope-theorist, the liquid's not having an odour is not a trope but the absence of one.)[7]

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[6] Philosophers who have questioned the philosophical basis of truthmaker theory include Daly (2005), Dodd (2002), Hornsby (2005), Lewis (2001) and Melia (2005).

[7] In reply, a friend of negative states of affairs might suggest that we view *a*'s having the property *lacking odour* as the truthmaker for ⟨a is odourless⟩. This, it could be claimed, is a genuine state of

Of course, we have noted already that objects themselves can act as the truthmakers for some truths. But it would be strikingly implausible to suggest—as Mulligan, Simons, and Smith tentatively do (1984: p. 315)—that this liquid itself could be the truthmaker of ⟨This liquid is odourless⟩. For the liquid itself to be the proposition's truthmaker, there would have to be no possible world in which the liquid existed and was not odourless. But now let us suppose that odourlessness is an accidental feature of the liquid: let us suppose, in other words, that ⟨This liquid is odourless⟩ is what Molnar terms a 'purely accidental negative' (2000: 75). It is clear that the liquid itself cannot be truthmaker for this truth: there is a possible world in which the liquid has an odour.

Neither will it do to suggest that there might be a positive state of affairs or trope that *excludes* the liquid's having an odour. True enough, it may seem plausible to suggest that ⟨This snow is not warm⟩ is made true by *this snow's being cold*: a positive state of affairs whose existence is incompatible with snow's being warm. And the same strategy will work for any such truth that denies that something has a determinate of a determinable: *coal's being black* may be the truthmaker for ⟨Coal is not white⟩; *the car's travelling at 68 miles per hour* may be the truthmaker for ⟨The car is not travelling at 30 miles per hour⟩; *Eleanor's being ten years old* may be the truthmaker for ⟨Eleanor is not seven years old⟩; and so on. Determinates are, indeed, where the exclusion strategy triumphs (Armstrong, 2004: p. 62). But when it comes to accidental negatives that deny things to have determinables—of which ⟨This liquid is odourless⟩ is just one—the strategy simply will not work. Once it is granted that being odourless is merely an accidental feature of our liquid, there is no good reason to suppose that there is a state of affairs or trope that excludes the liquid's having an odour (Mulligan, Simons, & Smith 1984: p. 314; Molnar, 2000: p. 75). Accidental negatives such as this do not have excluders.[8]

Having ruled out what seemed to be the truthmaker maximalist's most natural forms of reply to the problem of negative truthmakers, it is now clear that she must think a little more expansively. Granted that ⟨This liquid is odourless⟩ needs a truthmaker, there would seem to be two serious proposals left as to the nature of this entity. First, we may do something that we have been studiously avoiding doing thus far: namely, treat *absences* or *lacks* with ontological seriousness. On this view, the truthmaker for ⟨This liquid is odourless⟩ is the absence of a truthmaker for ⟨This liquid has an odour⟩ (and the truthmaker for ⟨There is no tea on the table⟩ is the lack of a truthmaker for ⟨There is tea on the table⟩).[9] Alternatively, we may follow Armstrong (1997: pp. 134–135; 2004: Chapters 5 and 6) in regarding purely accidental negatives as being made true by *totality states of affairs*. According to Armstrong, ⟨This liquid is odourless⟩ may be made true by the state of affairs of, say, greenness,

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(*Footnote 7 Continued*)

affairs in which an object and property (*i.e. lacking odour*) are brought together. But such a move is too contrived to be taken seriously. *Lacking odour* is not itself a property that something can instantiate; for something to lack an odour is for it precisely *not* to have a (positive) olfactory property (The project of reifying absences is discussed further below.).

[8]  Armstrong (2004: p. 63) notes a possible way out for the exclusion theorist: if the laws of nature were taken to be necessary, then an exclusion theorist could claim the truth of ⟨This liquid is odourless⟩ to be necessitated by whatever it is that causes the liquid to lack an odour. But for someone who regards the laws of nature as contingent, such an escape will be—if you will pardon the pun—too much to swallow.

[9]  On this view, the truthmaker is what Strawson has called 'an ubiquitous non-presence' (1950: p. 211).

bitterness, . . . etc. being *the only properties had by* the liquid in question, whilst ⟨There are no arctic penguins⟩, for example, may be made true by the fact that the animals, in fact, found in the Arctic, are the *only* arctic animals. Let us examine these suggestions in turn.

To begin with, ontological commitment to absences would seem to be tantamount to a category mistake. Presumably, a truthmaker for ⟨This liquid has an odour⟩ would be a state of affairs in which the liquid instantiated a certain olfactory property (or an untransferable olfactory trope). So, according to the view we are presently considering, the truthmaker for ⟨This liquid is odourless⟩ would be the absence of any such state of affairs or trope. But the immediate response to this is that absences are not themselves *things*, and so cannot be truthmakers. (TM) has it that truthmakers are *entities*, and the lack of an entity is not itself an entity.

But maybe this is too quick. Roughly speaking, could not a truthmaker theorist regard the lack of any truthmaker for ⟨*a* is *F*⟩ — and so the truthmaker for ⟨*a* is not *F* ⟩ — as a *non-actual* state of affairs: an entity just like an actual state of affairs except that it does not actually obtain? On such a view, the absence which acted as the truthmaker for ⟨*a* is not *F*⟩ would be an entity whose constituents numbered *a* and *F*, but in which *a* did not instantiate *F*. (It would be this lack of unity that distinguished an absence from its corresponding positive state of affairs.) However, such an approach faces an overwhelming problem. For if *a* and *F* form a complex in which they are not unified by means of the instantiation relation, then it is unclear how this complex can act as a truthmaker at all. Given that *a* does not instantiate *F*, there is nothing to distinguish this 'non-actual state of affairs' from the mere aggregate or collection of *a* and *F*. The only way in which object and property could be unified is by means of the instantiation relation, and this precisely does not obtain. Consequently, it looks like the supposed truthmaker for ⟨*a* is not *F*⟩ — the *non*-unified complex of the object and the property — exists just in case both *a* and *F* exist. And this means that the existence of the complex does not guarantee that *a* is not *F*.

At this point, the prospects for a defensible theory of absences do not look good. Perhaps the apologist for such things might argue that they are *sui generis* entities, totally unlike positive states of affairs, but such a move blatantly gives up the project of providing what is needed: an account of their ontological nature that would assuage the doubts of those sceptical about the very idea of a negative truthmaker. Consequently, it would make sense for a truthmaker theorist to examine Armstrong's alternative proposal: namely, that negative truths are made true by totality states of affairs. According to Armstrong (2004: pp. 75–76), a negative existential, such as ⟨There are no arctic penguins⟩, is made true by something of the form

$$T(A, \text{being an arctic animal}),$$

in which *A* is the mereological sum of the arctic animals and *T* is the relation of totality, where a certain mereological object totals a property just in case no other thing possesses it. Likewise, Armstrong claims that a negative predication, such as, ⟨This liquid is odourless⟩ is made true by

$$T(B, \text{being a property of this liquid}),$$

in which *T*, as before, is the totality relation, which this time obtains between the *B* — the mereological sum of the states of affairs constituting the liquid's possession of its properties — and the property of being a property of this liquid (Armstrong, 2004:

p. 58). Given that this mereological sum of states of affairs totals the property of being a property of this liquid, and given that none of these states of affairs is the liquid's having a smell of some kind, the totality fact necessitates that the liquid is odourless. Once we have introduced the higher-order state of affairs of $B$'s being *all* of the states of affairs involving this liquid, we have the truthmaker for the negative truth.

However, any appearance of genuine explanation here is illusory. For, as Molnar has remarked (2000: pp. 81–82), totality states of affairs are just disguised negative states of affairs. As Armstrong himself admits (2004: p. 73), the totalling relation itself involves negation: in the above example, for $B$ to total the property of being a property of this liquid is for *nothing else* to have this property. Consequently, the obtaining of a totalling relation is *itself* a negative fact, and hence cannot yield a non-question-begging account of the nature of such facts. Ultimately, then, it turns out that we do not have a distinct positive proposal here. Armstrong's account does not provide a solution to the problem of the ontological nature of negative states of affairs so much as presuppose one; and we have seen already that the available accounts of such entities give scant satisfaction to the truthmaker theorist. We still lack a convincing theory of what negative truthmakers are.

## III

If the theories of negative truthmakers discussed in the previous section exhaust the available alternatives, the truthmaker maximalist cannot satisfactorily explain how negative propositions can be true. (TM) demands that there be negative truthmakers, but our attempt to explain what they are has foundered. But perhaps Molnar and I have not examined the full menu. In J.C. Beall's view, the discussion in the previous section 'overlooks a very simple but viable approach to truthmakers—the *polarity* approach' (Beall, 2000: p. 264). And, according to both Beall and Graham Priest (2000: pp. 317–318), this approach yields negative truthmakers that are neither mysterious nor *ad hoc*.

Believing that we should embrace

(4)   The world is everything that exists,
(5)   Some negative claims about the world are true,
      and
(6)   Every true claim about the world needs a truthmaker,

Beall thinks that there simply *have* to be negative truthmakers (Beall, 2000: p. 264). So what are they? Following Priest's account (Priest, 2000: pp. 315–316), Beall takes them to be facts: entities represented by ordered $n$-tuples of properties (or relations), objects, and—crucially—*polarities*. Specifically, if $r_n$ is a relation, $d_1, \ldots, d_n$ are objects, and 0 and 1 are polarities, then

$$\langle\langle r_n, d_1, \ldots, d_n, 1\rangle\rangle$$

stands for the positive fact that $d_1, \ldots, d_n$ are $r_n$-related, whilst

$$\langle\langle r_n, d_1, \ldots, d_n, 0\rangle\rangle$$

stands for the negative fact that $d_1, \ldots, d_n$ are not $r_n$-related (Beall, 2000: p. 265).[10] Things, so it seems, could not be simpler.

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[10]  I use double angled brackets to signify ordered $n$-tuples.

For a logician, maybe. But if this set-theoretical approach is to put an end to scepticism concerning negative truthmakers, we need to be told two things: what the polarities represented by '1' and '0' are supposed to be; and whether we should take facts to be *identical with*, or merely *modelled by*, the relevant $n$-tuples. When it comes to the first issue, Priest freely admits that the use of '1' and '0' is 'purely conventional ... [t]hey simply code the fact that there are two ways in which $r_n$, say, may relate to $d_1, \ldots, d_n$, namely, positively or negatively' (2000: pp. 317–318). Consequently, a metaphysician puzzled by how there could be negative facts will only be satisfied by a clear characterisation of these polarities: an explanation of *what it is* for $r_n$ to relate to $d_1, \ldots, d_n$ 'positively' and 'negatively'. Somewhat surprisingly, given their self-conscious intervention in this metaphysical debate, neither Priest nor Beall have anything substantial to say about this.

But need this matter? Both Priest and Beall anticipate the objection that they are mysterians with respect to negative facts (and facts quite generally). Neither, however, takes their failure to positively characterise the polarities of facts to be fatal to the theory. For both seek to defend the theory against the charge of mysteriousness by drawing an analogy between the polarities of facts and the polarities postulated in physics. Thus we have Priest:

> It is certainly the case that this polarity is built into reality. But there are lots of polarities built into physical reality (like, for example, being a left hand or a right hand, or the spin of an atomic particle). I do not see why metaphysical polarities should be any worse than these. (Priest, 2000: p. 318)

And, in the same vein, Beall:

> [T]he polarities of facts seem to be no more nor less mysterious than the polarities of physics—the likes of spin, charm, flavour, and so on. Such polarities are postulated in science to explain the data. The situation is exactly parallel with respect to metaphysics. The polarities of facts may not be the sorts of properties one *sees* in the world; however, this is no objection against the existence of such polarities. After all, one doesn't *see* the truth or falsity of statements in general; but that's no reason to think that neither truth nor falsity exists. The polarities of facts are postulated to explain the intuitions which motivate theses [(4)–(6)]. (Beall, 2000: p. 266)

At this point, though, we need to keep sight of the original worry concerning polarities. Anyone reading these extracts might suppose that our complaint is that polarities *qua polarities* are mysterious and *ad hoc*. But, of course, this is not the problem at all. Priest is quite right to point out that nature includes polarities, and Beall is equally right to say that even unobservable polarities may be justifiably posited, if these entities genuinely explain the relevant data. Our worry, however, is not that Priest and Beall introduce polarities into their account, but that they can say so little about the polarities they introduce. For all Priest and Beall have done is this: tell us that there are two ways in which $r_n$ may relate to $d_1, \ldots, d_n$, and then call these two ways 'positive' and 'negative'. What is lacking is an account of the *nature* of these polarities, and it is this—as we shall now see—that provides a decisive *disanalogy* between Priest and Beall's polarities and the polarities to be found in physical reality.

Any given pair of polarities is a pair of opposite aspects or tendencies *of some specific kind*. As Priest reminds us (2000: p. 318), we are familiar, for example, with

being a left hand or being a right hand; and theoretical physicists are *au fait* with an
atomic particle's having left-hand or right-hand spin. These polarities are not mysteri-
ous because we know what they are positive and negative aspects *of*, and hence have
some understanding of what 'positive' and 'negative' mean in each context. Left hands
and right hands are both *hands*; we know what hands are, and we can demonstrate to
a child the difference between right and left. Likewise, physicists have a (reasonably)
clear sense of what atomic particles are, and can at least say something substantial
about the properties indicated by 'left-hand spin' and 'right-hand spin'.

It is precisely these explanatory features that are missing from Priest and Beall's
account of the polarities of facts. What are these polarities positive and negative
aspects *of*? From what little Priest has told us (2000: pp. 317–318), they must be two
opposite ways in which a relation may hold together its relata. But what is this rela-
tion that has a positive and negative aspect? And what could 'positive' and 'negative'
mean here? On these questions Priest and Beall are silent. They have merely labelled
what they should have described. This is why what they say counts as neither a genu-
ine metaphysical proposal as to the nature of facts, nor a solution to the problem of
negative truthmakers.

To appreciate fully the emptiness of Priest and Beall's account, we need only return
to the polarities of physics. If the polarities posited by physics were as mysterious as
Priest and Beall's metaphysical polarities, then there would be no sense in which they
could serve in explanations. True enough, physicists postulate polarities to explain
data; but if it turned out that *all that could be said* about such polarities was that they
were ontological commitments of the theory, then there would be no sense in which
the data was genuinely *explained* by them. On the contrary, the appeal to such enti-
ties would be nothing more than *wish-fulfilment*: the gerrymandering of entities into
existence in order to prop up the theory. In such circumstances we would surely be
justified in questioning the theory that pressed such dubious ontological commitments
upon us.

Needless to say, it is precisely this sceptical attitude that we should take to the
attempt to defend the doctrine of negative truthmakers by appeal to polarities. Beall
admits that he postulates polarities of facts in order to 'explain the intuitions which
motivate theses [(4)–(6)]' (Beall, 2000: p. 266); but since he does not tell us what these
entities are, he can only be engaged in wish-fulfilment of a metaphysical kind. The fact
that thesis (6)—truthmaker maximalism—leads to such ontological straw-clutching
should make us think hard about the motivation for truthmaker theory.

At this point, however, it might be suggested that I have read too much into Priest
and Beall's theory. Up to now I have been assuming that they suppose polarities to
be *objects* that feature as genuine *constituents* of facts: an assumption that a defender
of the polarities approach might seek to deny. For an alternative way of reading Beall
and Priest's remarks about polarities has it that '1' and '0' should be read *adverbially*,
as introducing, not two *objects*, but two *ways* in which objects and properties can be
related: ways that result in a positive fact and a negative fact respectively. On this
view, the ordered *n*-tuples introduced by Priest and Beall are just used to *model* facts,
rather than to explain their ontological nature: the negative fact that $d_1, \ldots, d_n$ are
not $r_n$-related is identified *via*, *not with*, $\langle\langle r_n, d_1, \ldots, d_n, 0\rangle\rangle$. According to this new
reading, then, the placement of a '0' in $\langle\langle r_n, d_1, \ldots, d_n, 0\rangle\rangle$ makes no claim about the

corresponding fact's structure; it just makes the point that the negative fact modelled by this ordered $n$-tuple sees $d_1, \ldots, d_n$ fail to be $r_n$-related.[11]

To my mind, however, such a move cannot help, since it merely introduces the second horn of a destructive dilemma. The first horn we are familiar with already: if Beall and Priest's ordered $n$-tuples are identified with facts, then polarities, *qua* objects supposedly found in facts, are inescapably mysterious. The second horn, which sees the polarity theorist retreat to the thesis that his ordered $n$-tuples merely model facts, fails for a different, though equally conclusive, reason. The problem is not that it offers an account of the ontological nature of negative facts that makes appeal to mysterious, or kooky entities; it is that it fails to address, in any way, the metaphysical question we started with. Merely saying that facts are modelled by the kinds of set-theoretical entity introduced by Beall and Priest says nothing about what such facts (positive or negative) *are*. It merely provides us with a notation for a theory of facts, not an account of such facts' ontological nature.

Polarity theory thus fails to deliver the goods: namely, a defensible ontology of negative facts. So how should a truthmaker theorist proceed? One option is to follow Gonzalo Rodriguez-Pereyra in holding fast to (TM) no matter what. Biting the bullet, Rodriguez-Pereyra admits that

> one also has to find a truthmaker, for instance, for negative existential truths, like the truth that there are no penguins in the North Pole. What that truthmaker is, I don't claim to know—all I claim is that there must be one. (Rodriguez-Pereyra, 2005: p. 31)[12]

The present failure to have come up with a convincing account of the nature of negative truthmakers is thus viewed as a lacuna in an otherwise well motivated research programme. But, of course, this is only so, if we have good reason to accept (the unrestricted) (TM) in the first place; and, as we shall see in Sect. VI, this might be queried. However, before considering this question, we shall examine two attempts to reformulate the truthmaker principle in such a way as to avoid having to find truthmakers for negative truths. The success of such a reformulation would enable the truthmaker

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[11] This would seem to be the moral of Priest's suggestion that we need not think of polarities 'as objects' (Priest, 2000: p. 317). Given that polarities could not be constituents of ordered $n$-tuples without being objects, this would seem to suggest that we should view the $n$-tuples as merely modelling facts rather than being the things with which such facts are identical.

[12] A similar line would seem to be taken by Read (2000: p. 73). Having introduced what he terms 'the correspondence intuition',

$$\text{(CI) For all } p, p \text{ is true iff } \exists s \text{ s makes true } p \text{ (2000: 68)},$$

Read uses this, together with

$$\text{(T¬) } \neg p \text{ is true iff } p \text{ is not true (2000: 73),}$$

to derive his theorem concerning negative truths:

$$\text{(NT')} \exists s, s \text{ makes true } \neg p \text{ iff } \forall s, s \text{ fails to make true } p \text{ (2000: 73).}$$

Clearly, there is no fault in Read's reasoning here, but my point is that (NT') gives us no clue as to the nature of the item that is supposed to make the negative proposition true. Merely saying that $\langle \neg p \rangle$ has a truthmaker just in case $\langle p \rangle$ lacks a truthmaker fails to enlighten us as to what the former truthmaker could be. As long as we lack a convincing account of the ontological nature of such entities, the sceptic will be tempted to regard Read's derivation as a *reductio* demonstrating the falsehood of (CI).

theorist to avoid the embarrassment of positing entities about whose nature he can say next to nothing.

## IV

So much for the strategy of finding truthmakers for negative truths. Troubled by his inability to explain what such truthmakers could be like, and impressed by Wittgenstein's insistence that the logical constants do not represent (1922: 4.0312), a truthmaker theorist may decide to retreat from truthmaker maximalism, a retreat she could mark by replacing (TM) with the weaker

> (TM*)  Necessarily, if ⟨*p*⟩ is an *atomic* truth, then there exists at least one entity α such that α necessitates ⟨*p*⟩'s truth.[13]

The idea here is that it is *atomic* truths that have truthmakers, and that the truth of complex propositions is to be explained in terms of the truth of their atomic constituents. This way, it seems as if we can cling on to the basic truthmaking intuition, and yet call off the search for truthmakers for ⟨This liquid is odourless⟩, ⟨There is no tea on the table⟩, and the like.

It is easy enough to restrict (TM) in this way; much less easy to justify such a restriction. From the outset, we may have the suspicion that the replacement of (TM) with (TM*) is *ad hoc*, and first appearances are not in this case deceptive. Here is why.

The most plausible way of motivating truthmaker theory is to present it as offering the best explanation of a strong intuition of ours concerning truth. Put bluntly, the intuition in question is that *truth depends upon reality*: the truth of a proposition is not primitive; it depends upon what its subject-matter in reality is like (Rodriguez-Pereyra, 2005: pp. 20–21). Let us call this intuition *the groundedness of truth*, and let us take as its canonical expression the following schema:

> (GT)  ⟨*p*⟩ is true because *p*.

That we accept (GT) is undeniable (at least if we restrict (GT) to non-analytic truths); and it is equally undeniable that such grounding is asymmetrical. Whilst we accept (GT), we do not accept that reality is grounded in truth, that

> (GR)  *p* because ⟨*p*⟩ is true

holds. But what is the nature of the 'because' that ensures (GT)'s correctness and explains the asymmetry we have just noticed? Truthmaker theory gains much of its appeal by providing an answer to this question. For the leading idea is precisely that the correctness of (GT) is best explained by the fact that a true proposition has an ontological ground: an entity that necessitates its truth in the sense set out in Sect. I. Once this idea is in place, of course, (TM) follows swiftly. As we saw in Sect. I, the sense in which an entity α acts as the ontological ground of the truth of ⟨*p*⟩ is most naturally cashed out as its being impossible for α to exist without ⟨*p*⟩'s being true, which means that we are thereby committed to (TM) in its unrestricted form. The filling between '⟨*p*⟩' and '*p*' in (GT)—'is true because'—turns out to be 'is made true by' in disguise. And the reason why we do not accept (GR) is that there is no analogous sense in which a worldly state of affairs is made real by the truth of a

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[13] This is the approach of Mulligan, Simons, and Smith (1984: p. 289).

proposition. Propositions, if true, reflect how things are; they do not make things the way they are.

But now we have a problem for the truthmaker theorist who seeks to avoid the controversies over negative truths by retreating to (TM*). Given that the motivation behind truthmaker theory is as I have described it, it is hard to see how it can be anything other than an arbitrary decision to restrict the truthmaker principle to atomic truths. The intuition that truth must be ontologically grounded in the sense explicated by (TM) is an intuition concerning (non-analytic) *truth in general*: it is one particular way of trying to explain the intuition that what is true is determined by how things are, but not *vice versa*. Consequently, if it really is the case that this asymmetry can only be adequately explained by adopting a truthmaker principle, it would seem to be a failure of nerve to depart from this general principle in the wake of the problem of finding truthmakers for negative truths.[14]

## V

As one would expect, the move from (TM) to (TM*) is not the only way in which philosophers have sought to evade positing negative truthmakers. A further strategy has been suggested by Bigelow (1988, Chapter 19). According to Bigelow, the core intuition behind (TM) is that what exists determines what is true; and, he contends, the best way of doing justice to this intuition without thereby committing ourselves to negative truthmakers makes use of the notion of *supervenience*. Specifically, Bigelow urges that the essence of (TM) can be captured by insisting merely that 'truth is supervenient on being: that you could not have any difference in what things are true unless there were some difference in what exists' (Bigelow, 1988: p. 132). In other words, (TM) may be replaced, not by (TM*), but by

> (ST)    Necessarily, if ⟨*p*⟩ is true, then either at least one entity exists that would not exist, were ⟨*p*⟩ false, or at least one entity does not exist that would exist, were ⟨*p*⟩ false.

Clearly, if Bigelow's emendation of (TM) genuinely does capture what (TM) is getting at, it does so without invoking truthmakers for negative truths. If (ST) is correct, ⟨This liquid is odourless⟩ is true, not because there exists an entity which necessitates its truth, but because, for it to have been false, there would have to have existed at least one thing—namely, a state of affairs or trope of the liquid's having an odour—which does not actually exist. In short, if Bigelow is right, a negative proposition does not itself have a truthmaker; rather, the proposition is true because there is nothing that makes it false (Lewis, 1992: p. 216).

What are we to make of (ST)? Two questions should be distinguished. First, should we accept (ST)? Second, does (ST) really capture the intuition behind (TM)? I shall say very little on the first question, merely noting that it is controversial whether (ST)

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[14] As Armstrong puts it, '[o]ne can, of course, simply assert that a proposition such as ⟨There are no unicorns⟩ stands in no need of any truthmaker or other ontological ground. But this seems to be no more than giving up on truthmakers as soon as the going gets hard' (2004: 70). Armstrong also says, of course, that truthmaker maximalism is a 'hypothesis to be tested' by his 2004 (2004: p. 7). But I take it that he would regard any departure from maximalism as highly unsatisfactory, given that he, like Rodriguez-Pereyra, motivates truthmaker theory by appeal to the idea that a truth—any truth—should have the ontological ground a truthmaker provides (Armstrong, 1997: pp. 115–116).

is either immune from counter-examples or respectably motivated (Dodd, 2002). For my claim is that the issue of the cogency of (ST) is beside the point because (ST) fails to capture adequately the intuition motivating truthmaker theory. No self-respecting truthmaker theorist should retreat from (TM) to (ST).

There are two reasons for this. First, as with the strategy of replacing the unrestricted truthmaker principle with (TM*), to propound (ST) is not to *weaken* (TM), but to *abandon* it. The reason why truthmaker theorists put forward (TM) is that they think that *any* true (non-analytic) proposition must have an ontological ground; this, they believe, is the only plausible way of accounting for the groundedness of truth and truth's asymmetry. To posit exceptions to the claim that every truth has a truthmaker is to cut oneself adrift from the motivation for being a truthmaker theorist in the first place.

The second reason why the claim that truth supervenes on being cannot be classed as a weakened version of (TM) is, if anything, even more stark. To repeat, the truthmaker theorist defends (TM) because this unrestricted truthmaker principle promises to explain truth's asymmetry: that truth is grounded in reality, but not *vice versa*. But as Rodriguez-Pereyra has remarked, if truth supervenes on being, then it is equally true that being supervenes on truth (Rodriguez-Pereyra, 2005: p. 19). Necessarily, if an entity α exists, there is some true proposition (*viz.* ⟨α exists⟩) that would be false were α not to exist, and some false proposition (*viz.* ⟨α does not exist⟩) that would be true were α not to exist. If we wish to hold that fixing what entities exist in a world thereby fixes what propositions are true at that world, we have to admit that the converse holds too. The supervenience between truth and being is symmetric. And this just goes to show that (ST) cannot do justice to the thought that truth is grounded in reality but not *vice versa*. A philosopher motivated to defend (TM) cannot consistently replace it with (ST).[15]

## VI

Here, then, is the promised dilemma for the truthmaker theorist. If she sticks to her guns and embraces the unrestricted truthmaker principle, she is beggared for an account of the nature of negative truthmakers. If, on the other hand, she seeks to evade the problem of negative truths by restricting (TM) to atomic truths, or by replacing (TM) with the thesis that truth supervenes on being, she thereby gives up

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[15] At this point, a defender of (ST) could make the following reply. The supervenience can be stipulated to be solely one-way provided propositions are construed as items that do not exist necessarily. For example, as long as there is at least one possible world at which exist *neither* the actual existent α *nor* any propositions concerning it, it follows that α could fail to exist without either ⟨α exists⟩ being false or ⟨α does not exist⟩ being true. At such a world these propositions do not exist and hence there is nothing to possess the truth-values in question. What would such a world be like? Presumably, the conception of propositions motivating this reply has it that propositions are language-dependent entities, so the world in question would be a languageless world.

The problem here is that such a defence brings with it a considerable hostage to fortune, namely the thesis that propositions are anything other than mind and language-independent. In particular, such a position would be unavailable to someone who wanted to defend this version of truthmaker theory and who yet agreed with Frege (1918)—for the usual, to my mind convincing, reasons—that propositions are mind and language-independent and, hence, eternal and necessary existents. For example, in our imagined world it is a fact, and hence *true*, that α does not exist, whether or not there is anyone around to utter words to that effect; so if truth is a property of propositions, the proposition saying as much had better exist in this world. (For more on these matters, see Sect. VII below.)

on the metaphysical picture driving truthmaker theory. Neither (TM*) nor (ST) are, properly speaking, *weakened* truthmaker principles, for both give up on the idea that truth requires an ontological ground in the truthmaker's special sense.

Clearly, a truthmaker theorist must avoid the dilemma's second horn. If her theory is to stand a chance of being properly motivated, she cannot abandon (TM). But is the first horn of this dilemma as disabling? After all, we noted in Sect. III that there is a species of truthmaker theorist who bites the bullet when it comes to negative truths, accepting that such truths need truthmakers, but admitting defeat (for the time being) when it comes to the question of their nature. On such a view, the fact that truthmaker theory has failed to come up with truthmakers for negative truths does not undermine truthmaker theory itself. An analogy might help this to stick. It is a familiar point that, so long as the truth-theoretic approach to meaning is well motivated, Davidson's failure—in 1967—to have come up with truth-theoretic logical form proposals for non-indicatives, sentences in indirect speech, counterfactuals, sentences containing adverbs, and the rest did not at that time undermine the overarching Davidsonian project.[16] These conundrums were technical problems that awaited solution; the truth-theoretic approach to meaning was not automatically undermined merely because these problems had not yet been solved. Perhaps, then, the failure of truthmaker theorists to have come up with a convincing conception of negative truthmakers falls into this category too. Maybe the defensibility of truthmaker theory does not depend upon this issue having been put to bed.

However, such a conception of a philosophical problem is only defensible if the relevant overarching theory really is properly motivated. Some have questioned the reasons for adopting the truth-theoretic approach to meaning, of course;[17] but, if anything, the status of the motivation for (TM) is even more controversial. To recall, the thought underlying (TM) is this: a recognition that truth is grounded in reality commits us to thinking that every true (non-analytic) proposition must have an *ontological* ground: an entity whose existence necessitates its truth. But it is unclear to me why a commitment to (GT) need appeal to truthmakers at all. $\langle a$ is $F \rangle$ is true because $a$ instantiates $F$. For this proposition to be true, its sub-propositional constituents must refer to an object and a property respectively, and the object must instantiate the property. Given that this is so, the truth of $\langle a$ is $F \rangle$ commits us ontologically only to $a$ and to $F$. A truthmaker would not seem to be required.

Having said this, the supporter of (TM) may still feel short-changed. Truths must be grounded in reality and grounding, she will insist, is a relation. Given that this is so, this grounding relation must hold between a true proposition and an entity in the world, and what else could this worldly entity be but the proposition's truthmaker? According to the present line of reply, once it is accepted that grounding is a relation, there has to be an entity to *do the grounding*, which is precisely to insist that a true (non-analytic) proposition must be made true by something.

Matters are not this simple, however. For one thing, it has not been explained why we should think of grounding as a relation of any kind. To commit oneself to the groundedness of truth, remember, is to endorse

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[16] For this defence of the truth-theoretic project, see Davidson (1967: pp. 35–36).

[17] See, for example, Schiffer (1987).

<div style="text-align:center">(GT)    ⟨p⟩ is true because p.</div>

But the first thing that we should notice about (GT) is that the filling between '⟨p⟩ is true' and 'p'—'because'—is an *operator*, not a relational-expression. This being so, we are under no obligation to suppose that what it expresses is a grounding-*relation*, and we are equally under no obligation to regard what follows the 'because'—a sentence—as referring to a truthmaker.[18] Sentences themselves do not refer, although some of their parts do.

And yet a truthmaker theorist may not be convinced, particularly if she rejects the presumption that we should do metaphysics via the philosophy of language. Why, she might ask, should the fact that 'because' is most naturally construed as an operator convince us that grounding is not a relation? Is it not a prejudice to suppose that the answers to metaphysical questions can simply be read off from the logical form of sentences? After all, 'true' has the look of a one-place predicate, but we do not allow this fact to rule out immediately the possibility that truth is really a relation.

There is some force to this line of reply. Ultimately, though, it fails to convince. Even if we were to admit that grounding is a relation, it would not follow that it is the kind of relation so beloved of truthmaker theorists. For it might be a *multiple relation*, analogous to Russell's multiple relation theory of judgement (1910, 1912). Russell, committed to the thesis that the constituents of propositions can only be worldly items—objects, properties, and the like—was baffled by the related problems of how the constituents of a proposition could be unified at all, and how they could be unified without the proposition itself being true. If the constituents of a proposition are object-like—including the item introduced by the verb—it is unclear how they can form a unified entity rather than a list; and if the elements of a proposition are objects, properties and such like, it is equally unclear how the proposition can be unified except by the item introduced by the verb really relating the objects, thus rendering the proposition true. As a response to these problems and, in particular, to avoid having to posit 'false objectives'—unified complexes of objects and properties that do not obtain—Russell propounded his multiple relation theory. According to Russell,

> Every judgement is a relation of a mind to *several* objects [my italics], one of which is a relation; the judgement is *true* when the relation which is one of the objects relates the other objects, otherwise it is false. (1910: p. 156)

Hence, Russell side-steps the twin problems of the unity of proposition and false propositions by denying that judgement is a binary relation between a thinking subject

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[18] A convinced truthmaker theorist might claim that (GT) commits us to an ontology of truthmakers because its ontological commitments are derived from those of

<div style="text-align:center">(GT*)    The truth of ⟨p⟩ is determined by Nom (p),</div>

where 'Nom (p)' is a nominalization of 'p'. (An instance of (GT*) is 'The truth of ⟨Snow is white⟩ is determined by snow's being white'.) Presumably, the argument would go something like this: in (GT*) what follows 'is determined by' is a referring-expression that can only refer to a truthmaker; (GT*) is more basic than (GT); hence, (GT) commits us to an ontology of truthmakers too.

But the question for such a truthmaker theorist is this: why should we not assume that (GT) is more basic than (GT*), and hence that the apparent ontological commitment to truthmakers in (GT*) is illusory? The truthmaker theorist must provide us with an *argument* for assimilating (GT) to (GT*)—and not *vice versa*—and it is quite unclear that such an argument can be provided. Given that this is so, considerations of ontological economy dictate that we should withhold from positing truthmakers. (Jennifer Hornsby made me appreciate this point.)

and a proposition. There are no such things as propositions: the mind enters into a multiple relation with the items commonly regarded as the proposition's constituents.

Infamously, as an account of judgement, the multiple relation theory is seriously flawed, and Russell himself abandoned it, under Wittgenstein's influence, in favour of a version of logical atomism (Russell, 1918). But for our present concern—which is merely to introduce the possibility that what seems to be a binary relation may, in fact, be a multiple relation—this matters little. For the strategy of reconstruing an apparent binary relation as a multiple relation is applicable to the case of grounding. It may well be correct to think of grounding as a relation, but it does not follow that it is a relation between a true proposition and a truthmaker. It could be—to use a Russellian turn of phrase—a relation of a true proposition to *several* objects. Indeed, this would be another way of explaining our earlier objection to the way in which the truthmaker theorist seeks to explain what it is for truth to be grounded. Undeniably, if ⟨a is F⟩ is true, its truth must be grounded in reality. But for this truth to be grounded is not for a binary relation to obtain between ⟨a is F⟩ and a truthmaker; it is for ⟨a⟩ to refer to a, ⟨F⟩ to express F, and for a to instantiate F. The obtaining of any grounding relation consists in the obtaining of sub-sentential thought/world relations and the fact that the object instantiates the property. So even if we wish to view grounding as a relation, we are under no obligation to include truthmakers in our ontology.

## VII

Our findings thus far have been wholly negative (though none the less important for that). A commitment to an instance of (GT), such as

(7)   ⟨a is F⟩ is true because a is F,

does not thereby ontologically commit us to truthmakers because all that is required is that *a instantiates F*, not that a truthmaker such as *a's being F* or *the Fness of a* exist. But a question remains: having rejected truthmaker theory, how should we explain the asymmetry of truth: the fact that we take (7) to be true but the corresponding instance of (GR),

(8)   a is F because ⟨a is F⟩ is true,

to be false? What does the falsehood of the claim that a instantiates F because ⟨a is F⟩ is true consist in? An initially tempting explanation has it that truth's asymmetry consists in an asymmetry of existential dependence. According to this view, (GT), but not (GR), holds for the following reason. Whilst it is impossible for ⟨a is F⟩ to be true without a's being F, a could instantiate F without ⟨a is F⟩'s being true. For there is a possible world in which a is F, but in which ⟨a is F⟩ does not exist (and so could not be true).

Alas, things are not this simple. The problem with this suggestion is that it is unavailable to a Fregean about propositions, but that a Fregean nonetheless accepts the asymmetry of truth. Let us suppose that we agree with Frege (1918)—presumably, for the usual reasons[19]—that propositions are mind-independent and language-independent complexes of senses. This makes it hard to resist the conclusion that propositions are

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[19] See, for example, McCulloch (1989, Chapter 2), for a convincing motivation of the Fregean approach.

both eternally and—more importantly—necessarily existent. Consequently, there *is no* possible world in which *a* is *F* and yet ⟨*a* is *F*⟩ does not exist. And this means that, if truth's asymmetry were to be explained along the lines suggested, such asymmetry would vanish for the Fregean. This result, however, is absurd, and so we must look elsewhere for our explanation of why we accept (GT) but not (GR).

In my view, the key to finding such an explanation lies in appreciating that the asymmetrical groundedness of truth—its dependence upon reality—is not a *modal-existential* phenomenon of *any* kind. That (7) is correct, for example, is not to be explained in terms of a truthmaker's making ⟨*a* is *F*⟩ true. Equally, we cannot merely drop (TM) and yet preserve the modal-existential model by insisting that the truth of (7) and the falsehood of (8) is demonstrated by the fact that there is at least one possible world in which *a* is *F* and yet ⟨*a* is *F*⟩ does not exist. If propositions are Fregean, there is no such world, although the asymmetry of truth remains.

At this point, I turn to recent work on ontological dependence, the precise moral of which has been that we should dispense with the modal-existential construal of this notion. Consider the ontological dependence of a set upon its members: {*a*}, we want to say, ontologically depends upon *a*. But such ontological dependence cannot be a matter of its being necessary that {*a*} exists only if *a* exists. Intuitively, such onto-logical dependence is asymmetric, but the above explication of the notion generates the counter-intuitive consequence that the set is also ontologically dependent upon the particular (Fine, 1995: p. 271; Lowe, 1994: p. 39). To avoid just this paradoxical result, Jonathan Lowe has suggested that we reconstrue the notion of ontological dependence as *identity-dependence*, not modal-existential dependence. According to Lowe's alternative account, for *a* to depend ontologically upon *b* is for it to be the case that, necessarily, the *identity* of *a* depends upon the *identity* of *b*, where this means that *which* thing of its kind *a* is (at least, partially) determined by which thing of its kind *b* is (Lowe, 1994: p. 41). Clearly, this yields the right answers when it comes to the example of {*a*} and its singleton. Is {*a*} ontologically dependent upon *a*? Yes, since what makes {*a*} *that* set is that it has *a* as its only member: the axiom of extensionality is a criterion of identity for sets. Is *a* ontologically dependent upon {*a*}? No, because the identity of *a* is not to any degree fixed by the identity of {*a*}. What makes *a that* object has nothing to do with the identity of any set.

Now let us return to the asymmetry of truth. My suggestion is that we make use of the asymmetric relation of ontological dependence—once this is properly construed as identity-dependence—to cash out what truth's asymmetry consists in. True enough, if we assume that propositions are Fregean, there is no possible world in which *a* is *F* and yet ⟨*a* is *F*⟩ is not true. But the proposition *is* ontologically dependent (*i.e.* dependent for its identity) upon *a* and upon *F*. The identity of ⟨*a* is *F*⟩ is partially determined by the items to which its constituents refer:[20] it would not be *that* proposition, if its constituents did not refer to *those* entities. This being so, an explanation of truth's asymmetry emerges: it is a *conceptual*, rather than a modal-existential asymmetry. Since ⟨*a* is *F*⟩ is dependent for its identity upon *a* and upon *F*, it follows that one can understand what is required for ⟨*a* is *F*⟩ to be true—*i.e.* that *a* be *F*—by engaging in semantic descent and ceasing to talk of propositions. By contrast, semantic ascent from '*a* is *F*' to '⟨*a* is *F*⟩ is true' introduces a concept—*viz.* that of a proposition—that was not in use before such ascent took place. In this latter case—by contrast with the

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[20] Only *partially* determined, of course, because Fregean propositions are sufficiently fine-grained to accord with our intuition that ⟨Hesperus = Hesperus⟩ and ⟨Hesperus = Phosphorus⟩ are distinct propositions.

instance in which semantic descent occurs—understanding what follows the 'because' requires more of us than grasping what precedes it.

We have thus located the source of our asymmetry. The fact that (7), but not (8), is true is explained by the fact that the 'because' here signals that what follows it is claimed to be *conceptually more basic than* what precedes it. Such a sentence asserts that what precedes the 'because' can be understood in terms of what follows it. The sense in which a proposition's truth is grounded in reality is conceptual rather than metaphysical, and it is a counterpart of the relation of identity-dependence that obtains between entities.[21] The groundedness of truth concerns, not truthmaking, but *understanding*.


## VIII

Having discharged the responsibility of providing an alternative account of truth's asymmetry, I can now sum up the state of play. In the wake of the problem of negative truthmakers, the outlook appears bleak for the truthmaker theorist. If she seeks to avoid the problem of finding truthmakers for negative truths by weakening (TM), she thereby detaches herself from the thinking behind truthmaker theory. If, on the other hand, she sticks with (TM), and claims the problem of negative truths to be merely a local difficulty, it emerges that (TM) itself is insufficiently motivated to bear the strain of such apparent counter-examples.

By now the moral of the tale should be obvious. Since there cannot be a truthmaker theory that solves the problem of negative truths whilst remaining well motivated, we should give up on truthmaking altogether. In the light of Sects. VI and VII, any residual suspicion that such a move would force us to compromise essential features of our concept of truth would be misguided. Both the groundedness of truth and truth's asymmetry are explicable in ways that do not require us to accept (TM).

This being so, we may return to the case of negative truths. If truthmaker theory has turned out to be an intellectual *cul de sac*, how should we explain the truth of negative propositions? The answer is as easy as it is intuitive. A negative existential, such as ⟨There are no arctic penguins⟩ is true *not* because some thing or things exists, but because there are no things of a certain kind (arctic penguins, in this case). Likewise, a negative inessential predication, such as ⟨This liquid is odourless⟩, is true not because something exists that necessitates its truth, but because the liquid in question lacks the property of having an odour. We knew this all along, of course. It took a philosophical theory to prevent us from seeing what was right under our noses from the very start.


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[21] Here I agree with Fine that '[t]he notion of one object depending upon another is . . . the real counterpart to the nominal notion of one term being definable in terms of another' (1995: p. 275).

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