Hollow Truth

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Few subjects have received more philosophical scrutiny than the nature of truth. The attention is warranted by the centrality of truth to theorizing in many fields and the problems that afflict systematic attempts to characterize it. Some of those problems have long been recognized and discussed. As if theorists of truth did not already have enough trouble, a raft of new problems has recently been introduced and discussed\(^1\). These problems concern the question of how ascriptions of truth are to be grounded. Most previous commentators on these new problems have drawn lessons from them for the theory of ground.

In this paper, I argue that we should also draw lessons for the theory of truth more generally. In particular, I argue that consideration of these new problems suggests a plausible way to more clearly articulate one strand of deflationary thinking about truth, on which truth is, in some sense badly in need of explanation, “metaphysically lightweight.” I will propose an account of the (entirely bearable) lightness of truth that is as clear as the notion of one fact’s obtaining in virtue of another, and then show that the resulting broadly deflationary view yields a novel solution to the problems concerning how truth is grounded. So, if the proposal I sketch is on target, the theory of truth and the theory of ground interact fruitfully: we can apply the notion of ground to offer a clear explication of the deflationist claim that truth is “metaphysically lightweight.” That explication both captures the motivations for that claim and solves the problems.

I will begin by stating some background assumptions, and then I will articulate the class of problems concerning how facts involving truth are to be grounded. These problems center on certain puzzles due to \cite{Fine2010}, with

\(^1\)See \cite{Fine2010} for the original statement of the problems and \cite{Kramerforthcoming} for variations and citations.
variations discovered by other authors. Switching tracks, I will next discuss the motivations for the deflationist view that truth is “metaphysically lightweight.” I will propose a ground-theoretic account of the lightness of truth, and argue that it captures the motivations for this deflationist view. Then, I bring our two threads back together, applying the resulting view to the problems, and demonstrating the solutions that emerge. I will next discuss a second class of puzzles, due to [Litland, 2016], showing how the broadly deflationist view I have articulated also solves those puzzles. Finally, I consider some objections and offer concluding remarks on the significance of the discussion.

1 Setup

Before I state the puzzles, it is worth being explicit about my terminology and background assumptions. Grounding is often said to be closely connected to a certain sort of explanation. In philosophical parlance, however, ‘explanation’ is used to indicate a broad array of linguistic and extra-linguistic entities. This is potentially confusing. So, for the sake of clarity I will use ‘explanation’ to indicate a class of sentences which deploy explanatory locutions. For example,

(1) ‘There are human beings’ is true because there are human beings

is an explanation, in the sense I intend here. Moreover, I will be ignoring those sentences whose explanatory locutions are epistemic or merely causal, to focus instead on what have come to be called grounding explanations. Grounding explanations tell us what obtains in virtue of what. Philosophers and scientists are fond of asking for explanations of this kind: “In virtue of what is murder wrong?” “In virtue of what am I justified in believing that I have hands?” “What makes diamonds hard?” Answering any of these questions involves asserting a grounding explanation, in the sense in play here.

Grounding has its critics. Nevertheless, I will persist in my use of the idea. In part this is because I think the criticisms don’t ultimately show that it is inadvisable at the present stage of inquiry to develop and deploy the notion [?]. In part this is because theorists of ground have, in my view, provided the clearest framework within which to express and discuss the explanatory role of

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2 See Dasgupta [2014], Fine [2010], Rosen [2010], for classical expressions of the idea.
3 See Daly [2012], Koslicki [2013], Holweber [2009], Sider [2011], §§7.2, 8.2.1, Turner [2016], and Wilson [2014].
truth. This work makes it particularly easy, as we will see, to state the broadly
deflationist view I propose. But there is another, less mercenary reason: it
seems to me that, even if the critics turn out to be right, some successor notion
to grounding is needed. The explanatory questions that structure large swathes
of philosophical and scientific theorizing are not going away. More particularly,
the intuitions that motivate both the the puzzles and the strand of deflationism
I will explore are not going away. If grounding locutions are not suitable for
framing and discussing the “metaphysical heft” of truth, then, it seems to me,
some successor notions obeying analogous principles will have to serve instead.\(^4\)

I will follow some now-standard notational conventions, writing \(\Delta < \phi\)
to indicate full grounding, where the \(\Delta\) contains sentences expressing a complete
inventory of grounds for \(\phi\), with no need for supplementation. So, for instance,(2) it’s snowy, it’s windy < it’s both snowy and windy

expresses the idea that its being snowy and its being windy are, collectively, a
complete specification of some grounds for its being both snowy and windy. I
will write \(\psi \prec \phi\) to indicate that \(\psi\) expresses a (perhaps improper) part of a
ground for \(\phi\). So, for instance,

(3) it’s snowy \(\prec\) it’s both snowy and windy

says that it is both snowy and windy partly in virtue of its being snowy.

What’s more, I will assume that every grounding explanation is accompanied
by an explanatory argument. That is, if a grounding explanation of the form

(4) \(\phi\) in virtue of the following facts: that \(\psi_0\), that \(\psi_1\), ...

is true, then there is an argument containing only truths whose conclusion is \(\phi\),
whose premises are \(\psi_0, \psi_1, \ldots\), and in which each inference proceeds in the right
direction. I will call such inferences explanatory.\(^5\) I know of no helpful analysis

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\(^4\)Some of the critics agree. Sider [2011], for instance, is happy to use the “in virtue of”
locution; he just gives it an interpretation in terms of what he calls “metaphysical truth
conditions.” Wilson [2014] seems less happy with the “in virtue of” locution, but she would
admit its appropriateness as a kind of generic stand-in for any one of an array of specific notions
that, in her view, do the metaphysical work in any particular case. In the interest of brevity, I
will leave it to those who sympathize with these critics to replace my talk of grounding below
with whatever successor notions are most suitable, and to assess the plausibility of the various
principles that result.

\(^5\)This assumption is shared with the deductive-nomological account of explanation [Hempel
and Oppenheim 1948]. I am not, however, signing on to the deductive-nomological account
in detail; in particular, I do not require the arguments in question be deductively valid, nor
of the distinction between explanatory and non-explanatory inferences, nor in
the closely related idea of proceeding in the right direction (for grounding). But
examples can help illustrate the idea. Consider

(5) (Either it’s windy or it’s snowing) in virtue of the fact that it’s windy.

(5) is true. This explanation is accompanied by the one-inference argument

\[
\begin{array}{c}
\text{It’s windy} \\
\text{Either it’s windy or it’s snowing}
\end{array}
\]

This inference is, intuitively, explanatory: it traces the direction of dependence
and determination. Similarly, one way to tell that

(6) It’s windy in virtue of the fact that it’s windy and LeBron James is tall

is not a true grounding explanation is to note that

\[
\begin{array}{c}
\text{It’s windy and LeBron James is tall} \\
\text{It’s windy}
\end{array}
\]

while valid, is not an explanatory inference. Finally, and most relevantly, Aristotle observed that

\[
\begin{array}{c}
\text{There are human beings} \\
\text{It is true that there are human beings}
\end{array}
\]

is an explanatory inference, but

\[
\begin{array}{c}
\text{It is true that there are human beings} \\
\text{There are human beings}
\end{array}
\]

is not. He is plausibly interpreted as concluding from this observation that,
while the truth of the claim that there are human beings and the existence
of human beings mutually entail one another, the existence of human beings
grounds the truth of the claim, rather than vice versa.

These examples show that, in at least some cases, we have a fairly firm grip
on the idea of an explanatory inference. Our grip does not consist exclusively
in our grip on the truth of the corresponding grounding explanations, for be-
ing backed by an explanatory argument is only a necessary condition for the
truth of the corresponding grounding explanation. Suppose it’s neither windy

that they be nomological – laws need play no special role. So, one way of summarizing the
import of my assumption is that I endorse the deductive-nomological account of explanation,
except to the extent that it is deductive or nomological.

\[ \text{Categories}, \ 14b14-22, \text{ trans. J.L. Ackrill} \]
nor snowing. Then (5) is not true. Nevertheless, it’s easy to tell that the argument in question contains only explanatory inferences. That argument has what it takes to accompany a true grounding explanation, so long as the facts cooperate. Similarly, you don’t need a weatherman to know that (6) cannot be right. In general, some inferences have what it takes to trace the direction of the sort of dependence and determination indicated by grounding locutions, so long as the other necessary conditions for such explanations are in place. Instances of disjunction introduction seem to be inferences of this sort. Other inferences clearly do not. Instances of conjunction elimination provide examples. Clearly, one such necessary condition is engendered by the factivity of grounding explanation: the inferences of any argument accompanying a true grounding explanation must proceed from true premises to a true conclusion. As we will see, there is another necessary condition on the deflationary view I will sketch.

I will call an argument backing a grounding explanation an explanatory story. An explanatory story is good iff each of its inferences is explanatory; so, we allow that the argument above involving conjunction elimination is an explanatory story, but deny that it is a good one. An explanatory story whose conclusion is \( \phi \) is an explanatory story for \( \phi \). Thus, true grounding explanations whose explanandum is \( \phi \) are accompanied by good explanatory stories for \( \phi \).

Finally, I will assume that sentences which figure in grounding explanations express facts, and that a given grounding explanation is true iff there is a grounding relation among those facts. On this picture, grounding is, in the first instance, a relation of dependence and determination among facts. When a fact depends on and is determined by some other facts in the relevant way, then a corresponding grounding explanation is true. This assumption is mostly a matter of convenience. We could state the puzzles, express the deflationary theory I propose, and explore its merits by just talking about sentences and other objects, and characterizing them as having certain features. Mention of facts

\[7\] Thanks to Selim Berker for discussion of the issues raised in this paragraph.

\[8\] Even theorists who express reservations in theory about the idea that grounding relates facts are happy to talk as if it does. Fine [2001], for instance, contends that, strictly speaking, we don’t need to reify facts and claim that grounding is a relation between them in order to give a theory of ground; we may instead treat talk of grounding’s being a relation between facts as a mere façon de parler. Fine argues that we should formalize our theory of ground by appeal to sentential operators which do not pick out any relation, and whose arguments, semantically speaking, do not pick out entities. Still, Fine’s formal semantic treatment in [Fine, 2012] appeals to an ontology of facts, sets of which serve as the values of an interpretation function applied to sentences.
is, in principle, dispensable. But the resulting exposition would be needlessly complex.

2 Puzzles Concerning Ground and Truth

We are going to start by focusing on a central class of puzzles for the theory of ground. The puzzles we will discuss each involve an argument from highly plausible claims about ground and some innocent-looking assumptions to a claim that something (partially) grounds itself. An assumption of the puzzles, then, is that nothing even partially grounds itself. This assumption is highly plausible on the conception of ground which is in play. Any explanation of the form

(7) \( \phi \) because \( \phi, \ldots \)

seems on its face transparently inadequate. The same goes, of course, for grounding explanations. A claim of the form

(8) \( \phi \) in virtue of the fact that \( \phi, \ldots \)

seems clearly false\(^9\). If one nevertheless admits the possibility of partial self-grounding, then the erstwhile puzzles may turn out to be results which specify conditions under which something grounds itself\(^10\).

The puzzles involve good explanatory stories, where each inference in the argument is, intuitively, explanatory. The first puzzle, due to Kit Fine [2010], involves two classes of apparently explanatory inferences. The first corresponds to the general idea that an instance of an existential generalization is a ground of the generalization. So, it seems, instances of

\[
\text{EXISTENTIAL INTRODUCTION} \quad \frac{\phi(\tau)}{(\exists x)\phi[x/\tau]}
\]

are explanatory inferences. Thus, the inference from ‘Joe is a philosopher’ to ‘someone is a philosopher’ seems explanatory. The second class of apparently explanatory inferences corresponds to the idea we gleaned from Aristotle, that

\[
\text{TRUTH-INTRODUCTION} \quad \frac{\phi}{\text{it is true that } \phi}
\]

\(^9\)Jenkins [2011] describes a view on which grounding can relate a fact to itself. Still, no explanation of the form (5) is true on Jenkins’s view. Similarly, though Rodriguez-Pereyra [2015] argues that there are reflexive instances of grounding, none of those instances are reported by sentences of the form (5).

\(^10\)Some authors urge just this view in response to the puzzles [Correia, 2014; Woods, 2018].
is explanatory. So, for instance, the inference from ‘there are human beings’ to
‘it is true that there are human beings’ is explanatory. If \( p \) is a proposition, let
\( T(p) \) abbreviate ‘the proposition \( p \) is true’, and let \( q \) be the proposition that
something is true, i.e., the proposition expressed by

\[
(\exists x) T(x).
\]

The innocent-looking assumption is that \( q \) is true: some proposition is true.
This assumption is verified by the fact, e.g., that the proposition that \( 0 = 0 \)
is true\textsuperscript{11} Given our assumptions, the following is a good explanatory story
containing only true sentences:

\[
\frac{(\exists x) T(x)}{T(q)} \quad \frac{T(q)}{(\exists x) T(x)}
\]

Given that each inference is explanatory and each sentence is true, it is difficult
to see how to avoid drawing the conclusion

\[
(\exists x) T(x) \prec (\exists x) T(x).
\]

Thus, the puzzle.

There is an obvious variant which is innocent of the theory of propositions,
but which appeals to a truth predicate for sentences. That version accepts that
instances of

\[
\text{STruth-Introduction} \quad \phi \quad S \text{ says that } \phi
\]

are explanatory. Consider

\[
(\exists x) x \text{ is true}
\]

where ‘is true’ is a truth predicate for sentences. The innocent-looking assumption
is that \( (\exists x) x \) is true. If so, we can chain explanatory inferences to yield a
good explanatory story containing only truths:

\[
\frac{(\exists x) x \text{ is true.}}{\text{\textcolor{blue}{[\textcolor{red}{S}]} says that (\exists x) x \text{ is true.}}}
\]

\[
\frac{\text{\textcolor{blue}{[\textcolor{red}{S}]} says that (\exists x) x \text{ is true.}}}{\text{\textcolor{blue}{[\textcolor{red}{S}]} is true.}}
\]

\[
\frac{\text{\textcolor{blue}{[\textcolor{red}{S}]} is true.}}{(\exists x) x \text{ is true.}}
\]

\textsuperscript{11}Fine offers another puzzle that uses the assumption that every proposition is either true
or not true \textsuperscript{[Fine, 2010]. This assumption will not look innocent to anyone familiar with the
vast literature on the law of the excluded middle and the semantic paradoxes. I don’t discuss
this puzzle here because of the additional complexities it involves.
Given that each inference is explanatory and each sentence is true, it is difficult to see how to avoid drawing the conclusion

\[(\exists x)x \text{ is true} \prec (\exists x)x \text{ is true}.\]

Again, we have a puzzle.

Fine [2010] discusses a similar puzzle involving the obtaining of facts. Let’s use a now-standard notation for facts: if \(\phi\) is true, use ‘\([\phi]\)’ as a term referring to the fact expressed by \(\phi\) (assuming there is such a thing). There is an apparently good explanatory story in which ‘Some fact obtains’ is derived from itself using **Existential Introduction** and

\[
\begin{array}{cc}
\text{Obtaining Introduction} & \phi \\
\hline & [\phi] \text{ obtains.}
\end{array}
\]

The innocent-looking assumption is that some fact obtains. Given that assumption, together with the claim that instances of **Obtaining Introduction** are explanatory, the following argument seems to be a good explanatory story containing only true sentences:

\[
\begin{array}{c}
(\exists f)f \text{ obtains} \\
\hline
([\exists f]f \text{ obtains}) \text{ obtains.} \\
(\exists f)f \text{ obtains}
\end{array}
\]

As before, it seems difficult to avoid drawing the conclusion

\[(\exists f)f \text{ obtains} \prec (\exists f)f \text{ obtains.}\]

And so, for a third time, we have a puzzle.

Krämer [2013] poses a similar puzzle involving quantification into sentential position: there is an explanatory story in which ‘(\exists S)S’ is derived from itself using

\[
\begin{array}{cc}
\text{SentQ Introduction} & \Phi(\psi) \\
\hline & (\exists S)\Phi[S/\psi].
\end{array}
\]

Since instances of **SentQ Introduction**, like instances of **Existential Introduction**, seem explanatory, we again appear to be under pressure to accept a reflexive instance of partial ground.

So, we have a battery of puzzles. There are key differences among the puzzles. In particular, each puzzle centers on a slightly different bit of vocabulary. The first puzzle concerns the locution ‘it is true that \(\phi\),’ which we have interpreted as the ascription of truth to a proposition. The second concerns a
truth predicate for sentences, and the third a predicate ‘obtains’ and the operator “the fact that ...” for forming terms for facts from sentences. Still, the similarities among the puzzles are striking. Each of the puzzles involves an ascription of truth or a truth-like notion. Each of them appeals to plausible claims about good explanatory stories, some innocent-seeming assumptions, and the idea that chaining good explanatory stories yields good explanatory stories. It would appear, then, that we face an unappetizing menu of options: deny that the inferences in question are explanatory, deny that chaining good explanatory stories yields good explanatory stories, or accept that partial grounding has reflexive instances. In fact, as I will show, there is a fourth kind of solution. The motivation for the theoretical commitments of the version of that kind of solution is to be found in a certain strand of deflationist thinking about truth. Let’s turn our attention to that strand.

3 The Explanatory Role of Truth

A core idea of deflationism is that truth is, in a sense badly in need of explanation, “metaphysically lightweight.” It is very unclear what the metaphor of metaphysical heft comes to. Let’s briefly review some extant explications of the idea. Horwich, a prominent defender of deflationism, claims that truth is not a “complex” property, and that no naturalistic analysis of it is either possible or necessary [Horwich, 1990, p. 39]. It is not clear how this would make truth “metaphysically lightweight.” G.E. Moore, for instance, is famous for claiming that goodness is not susceptible of naturalistic analysis, and presumably he might be brought to agree that it is not “complex” in the sense Horwich intends. But Moore’s view cannot be characterized as claiming that “good” is “metaphysically lightweight” in any reasonable sense.

Some deflationists claim instead that truth is a logical property, and that makes it “lightweight” [Horwich, 1990 | Field, 1992]. The idea is that we have a predicate for truth in order to enable us to say things that could not be said without substitutional quantification or infinitary conjunction. But it is not clear why the fact that we introduce a bit of syntax for a logical purpose of this sort should entail anything about metaphysical heft. For instance, we might (try to) introduce classical negation into an otherwise intuitionistic language.

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12This point is pressed in [Stoljar and Damnjanovic, 2014, §7.6].
to enable us to say things that could not be said without it. Or, we might introduce higher-order quantification to enable us to say things that could not be said with mere first-order quantification. Or, we might introduce relational predicates into a first-order monadic predicate calculus. Or, most simply, we might introduce predicates, terms, and first-order quantification and identity into a propositional language. It, famously, is not obvious that these additions to our expressive power are “metaphysically lightweight,” even though our purposes are logical\(^\text{[13]}\).

Another strand of deflationist thinking holds that truth ascriptions are semantically equivalent to the sentences to which truth is ascribed. So, for instance, on this view

(14) ‘There are human beings’ is true

is semantically equivalent to

(15) There are human beings.

Call this view disquotationalism. A disquotationalist can hold that the truth predicate is “metaphysically lightweight” because whatever can be said, thought, or believed with it can also be said, thought, or believed without it: it is, so to speak, a bit of conceptual or linguistic vaporware that disappears on analysis. There are a variety of classical expressions of disquotationalism\(^\text{[14]}\) and a great deal of controversy over its merits\(^\text{[15]}\).

For present purposes, we can set these controversies to the side. Disquotationalism is not the strand of deflationism we will be exploring. As we will see, there is a way of developing the idea that truth is “metaphysically lightweight” that does not incur the semantic, epistemic, and logical commitments that make disquotationalism so controversial. Moreover, disquotationalism seems not to solve all of the problems for the theory of ground presented by the class of puzzles we are considering. As Litland \(\text{[2015]}\) has shown, there are “postcard” cases which appear to give rise to a puzzle of essentially the same sort as those

\[^{13}\text{See }\text{Heck, 2004, p. 331} \text{ for an argument that adding a truth predicate and instances of the T-schema (for the original language) to first-order PA non-conservatively extends it. This result suggests that truth ascriptions are not “metaphysically lightweight” in every sense.}\]

\[^{14}\text{See }\text{Ayer, 1936, Field, 1992, Grover et al., 1975, Quine, 1970, and Ramsey, 1927} \text{ for some classic developments of disquotationalism.}\]

\[^{15}\text{As noted above (n. 13), adding a truth predicate and instances of the T-schema (for the original language) to first-order PA non-conservatively extends it. So, it seems, truth ascriptions are neither semantically nor cognitively equivalent to the sentences to which truth is ascribed.}\]
we have already posed. The puzzle uses two further examples of apparently explanatory forms of inference:

**Disjunction Introduction**

\[
\begin{array}{c}
\phi \\
\psi \\
\hline
\phi \lor \psi
\end{array}
\]

**Conjunction Introduction**

\[
\begin{array}{c}
\phi \\
\psi \\
\hline
\phi \land \psi
\end{array}
\]

We have a postcard with two sides, A and B. The sentence

\[(16) \quad 0 = 0 \lor (\exists s)(s \text{ is written on } B \text{ and } s \text{ is true}).\]

is written on side A, and

\[(17) \quad (\exists s)(s \text{ is written on } A \text{ and } s \text{ is true})\]

is written on B. The innocent-seeming assumption in this case is that \(16\) is true, since \(0 = 0\). The following argument, then, seems like a good explanatory story, assuming the disquotationalist’s view that ‘\(16\) is true’ is semantically equivalent to ‘\(0 = 0 \lor (\exists s)(s \text{ is written on } B \text{ and } s \text{ is true})\)’ and ‘\(17\) is true’ to ‘\((\exists s)(s \text{ is written on } A \text{ and } s \text{ is true})\)’:

\[
\begin{array}{c}
\text{\(16\) is true} \\
\text{\(16\) is written on A and \(16\) is true} \\
\hline
\text{\((\exists s)(s \text{ is written on } A \text{ and } s \text{ is true}) \text{ (i.e., } \text{\(17\) is true})\)} \\
\hline
\text{\((\exists s)(s \text{ is written on } B \text{ and } \text{\(17\) is true})\)} \\
\hline
\text{\(0 = 0 \lor (\exists s)(s \text{ is written on side } B \text{ and } s \text{ is true}) \text{ (i.e., } \text{\(16\) is true.})\)}
\end{array}
\]

As before, it seems difficult to avoid drawing the conclusion

\[(18) \quad \text{\(16\) is true} \rightarrow \text{\(16\) is true.}\]

And so, again, we have a puzzle.

So, the disquotationalist strand of deflationism does not help with this simple variant of the original puzzle. We will be better served if we focus on the strand which emphasizes the idea that truth is “metaphysically lightweight” without the additional commitment of disquotationalism. Unfortunately, while it is tolerably clear what the claim that truth is “metaphysically lightweight” comes to on the disquotationalist view, it remains mysterious what it might come to absent disquotationalist commitments.

The mystery is lessened, perhaps, if we attend to the use to which deflationist theories are put. Briefly, deflationism is used to show that truth ascriptions
play no robust explanatory role whatsoever. One might have hoped or feared that the ascription of truth will play an important role in a variety of philosophically important enterprises. For instance, one might have thought that truth ascription will play an important role in explaining and defending realism about a certain swath of discourse, the validity of certain logical inferences, or the nature and value of successful inquiry. Deflationists have proposed that these issues are clarified and progress made possible when we recognize that the role of truth in such explanations is very minimal: truth ascriptions serve in such explanations simply to stand in for the things to which truth is ascribed. They have no explanatory role to play, other than as devices to summarize and generalize over the claims to which truth is ascribed. In a Tarski biconditional like

\[(19) \text{‘Snow is white’ is true iff snow is white}\]

the left-hand side exerts no explanatory oomph. Instead, its role in giving explanations is exhausted by its serving to indicate those representation-independent conditions which actually do the explaining. In this sense, the left-hand side is “metaphysically lightweight,” in comparison to the right-hand side.

An example may help illustrate the plausibility of the idea that truth-ascriptions play no robust explanatory role. One explanatory role claimed for truth is that certain scientific theories are useful because they are true (or nearly true). For instance, the GPS system relies on the General Theory of Relativity. The GPS system is successful in getting us around in part because that theory is true. Deflationists have pointed out that, if we have an explicit formulation of the General Theory of Relativity on offer, then the appeal to truth is otiose. Instead of saying that the General Theory of Relativity is useful because it is true (or nearly true), we might more perspicuously say that the theory that mass warps spacetime, etc., is useful because mass warps spacetime, etc.

What explains the success of the GPS system are the features of physical reality, rather than the features of a certain theory about physical reality. Appeal to the truth of a certain representational entity, the theory, serves simply to point

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16 See esp. [Field, 2004, p. 29] and [Horwich, 1990].

17 This example is adapted from [Horwich, 1990, pp.49-50]. The centrality of the explanatory vacuity of truth to deflationary views is also indicated by the fact that one of the most serious worries about deflationism according to its proponents is that, when the representations we deploy are true, their truth seems to explain our successful navigation of the world [Field, 1992, p. 329].
us toward the relevant features of physical reality when stating them is either impossible or inconvenient. In this sense, the truth ascription is a mere placeholder for a statement of those representation-independent physical conditions which actually do the explanatory work.

The idea that truth ascriptions play no robust explanatory role is obviously still in need of clarification and defense. As we have seen, one way of making sense of this idea appeals to disquotationalist commitments, which have lots of interesting and controversial semantic, cognitive, and epistemic consequences. I now turn to an alternative construal of this key idea that truth plays no robust explanatory role. The guiding thought for this alternative construal is to explore views on which truth ascriptions are “lightweight,” metaphysically speaking, and let the semantic, cognitive, and epistemic chips fall where they may. I aim thereby to arrive at a deflationist view which is compatible with a wide range of plausible views on the meanings of truth ascriptions and the inferences and behavior that their acceptance brings with it. So, the view I will develop differs from its disquotationalist competitors in two ways. First, it skirts the semantic, cognitive, and epistemic controversies to which I have alluded. Second, it solves the puzzles for the theory of ground that I have described.

4 Truth as Hollow

The theory I will describe is one on which truth ascriptions may be thought of as “hollow vessels” so far as grounding goes. In particular, their role in grounding is simply to stand in for the facts expressed by the claims or sentences to which truth ascribed. For ease of reference, I will call the theory I will describe HT, for “Hollow Truth.” Our description of HT specifies the role of truth ascriptions in grounding. As we will see, that requires specifying both the role of the facts expressed by truth ascriptions in grounding and the (slightly different) role such ascriptions play in (good) explanatory stories. Let’s start with the role of facts involving truth in grounding.

What grounds the facts expressed by truth ascriptions? As we have already seen, it is highly plausible to think that, in a large class of cases, the facts expressed by truth ascriptions are grounded in the facts expressed by the things to which truth is ascribed. So, for instance, Aristotle is plausibly interpreted to suggest that the fact stated by
‘There are human beings’ is true

is grounded in that stated by

There are human beings

together with the facts concerning what the sentence ‘there are human beings’ says. Thus,

There are human beings ≺ ‘There are human beings’ is true

is a true grounding explanation. HT endorses Aristotle’s claim: both

There are human beings ≺ it is true that there are human beings

are true. Call this claim Aristotle’s insight. It generalizes, of course, to a broad class of other truth ascriptions. HT claims that, in a broad class of cases, if a sentence $P$ is true, and $P$ says that $\phi$, then

$\phi ≺ P$ is true

and

$\phi ≺ P$ is true

are both true grounding explanations.

These commitments concern how facts reported by truth ascriptions are grounded. But the heart of the idea that truth plays no robust explanatory role concerns instead what those facts ground. HT holds that the the fact stated by a truth ascription plays no further role in grounding. In particular, no such fact grounds anything. Once we have said how facts involving truth are grounded,

18 It might plausibly be thought that these two claims are related. One way of explaining the relation is to endorse a full grounding claim corresponding to an instance of a minor variant on STruth-Introduction:

(22) (‘There are human beings’ says that there are human beings, it is true that there are human beings) ≺ ‘There are human beings’ is true.

Then (20) can be obtained from (21) and (22) by the transitivity of full ground and the principle partial and full ground, on which, if $\phi, \Delta < \psi$, then $\phi < \psi$.

19 The generalization may be complicated by the presence of context-sensitive expressions in the language. I am assuming that these complications can be handled somehow.

20 See n. 22 and n. 25 for an explicit delineation of the class.
we have said all there there is to be said about their role in grounding. On HT, for instance, the only role in grounding played by the fact stated by (26) it is true that there are human beings is that it is grounded by the fact stated by (15). In particular, the fact stated by (26) plays no role in grounding any further fact. Nothing depends on and is determined by that fact, in the sense at issue in grounding explanations. This is the sense in which the facts stated by truth ascriptions play no robust explanatory role according to HT.

This deflationary claim about the facts stated by truth ascriptions might seem implausible in light of the fact that truth ascriptions appear to play a role in explanatory stories. Consider again the question of what makes the GPS system successful. A tempting proposal, recall, was to explain this (in part) by appealing to the truth of the General Theory of Relativity. It is not completely clear how the explanatory story that backs the grounding explanation is supposed to go. Plausibly, it might involve the inference

\[
\begin{align*}
\text{The General Theory of Relativity is true} \\
\text{The GPS system is successful.}
\end{align*}
\]

Suppose so. Then we appear to have a truth ascription playing a supporting role in an explanatory story. If the structure of grounding relations among facts mirrors the structure of explanatory inferences among sentences, then the deflationary claim made by HT is false.

Plausibility requires, then, that HT identify a mismatch between the inferential structure of explanatory stories and the structure of grounding relations among facts. But we already have the notions needed to characterize that mismatch. HT proposes that truth ascriptions can be premises in explanatory

---

15

21More precisely, HT says all there is to be said about what the fact stated by a truth ascription grounds or is immediately fully grounded by. There may be mediate grounds for truth ascriptions that are yielded by Aristotle’s insight on plausible ancillary premises. For instance, the truth of (25) It is windy ≺ ‘it is either windy or snowy’ is true is consistent with the theory I am describing.

22This aspect of the view requires exceptions to the schemas and . For instance, if \( P \) is itself a truth ascription, then, according to the HT, the fact stated by \( P \) does not ground anything, including the fact that \( P \) is true. Thus, on HT (27) ‘There are human beings’ is true. ‘There are human beings’ is true. HT systematically delineates the exceptions; see n. 25

23For the sake of clarity I have omitted from the statement of this inference certain ancillary premises concerning, e.g., how the GPS system relies on the General Theory of Relativity. Plausibly, those ancillary premises would be required to fill out the explanatory story.
inferences, but their function in such inferences is to stand in for their grounds. Thus, though

\[
\begin{array}{c}
\text{The General Theory of Relativity is true} \\
\text{The GPS system is successful}
\end{array}
\]

is, we might grant, a perfectly fine explanatory inference, it does not back the grounding explanation

\[ (28) \quad \text{The General Theory of Relativity is true} \prec \text{The GPS system is successful}. \]

Instead, since the truth ascription is standing in for its grounds, one should look to the grounds of

\[ (29) \quad \text{The General Theory of Relativity is true} \]

for grounds for the success of the GPS system. That is, one should conclude

\[ (30) \quad \text{Mass warps spacetime, etc.} \prec \text{The GPS system is successful}. \]

We have already seen reason to suspect that, in the envisioned explanatory story, the truth ascription

\[ (29) \quad \text{The General Theory of Relativity is true} \]

is a mere placeholder for non-semantic claims stating certain features of physical reality. This suspicion turns out to be right on target according to HT.

This view can be developed systematically. Represent explanatory stories as (converse) trees where each node is decorated with a sentence, but allow that a branch may contain infinitely many nodes. An explanatory story is complete iff all of its leaves are occupied by sentences that are basic in the sense that there is nothing from which they may be inferred in an explanatory inference.\footnote{Notice that this specification of a complete explanatory story allows the possibility of branches with no initial node. Suppose, for instance, that there is infinite descent in the grounding structure among facts. Then, assuming that the target language has the resources to express all of the facts in an infinitely descending chain of grounds, the infinite descent may be mirrored by branches in complete explanatory stories that contain no underived premise. For discussion of the possibility of infinite descent, see Bliss 2013, Fine 2001, Litland 2016, Rabin and Rabern forthcoming, and Schaffer 2003.}

Suppose we are given an explanatory story. A completion of that story is a complete explanatory story that (properly or improperly) extends it. For instance, assume that \( e \) is an electron, and
is basic. Further, suppose that

\[
\neg\neg(e \text{ is spin-up})
\]

is an explanatory story. Then, plausibly

\[
\neg\neg(e \text{ is spin-up}) \lor \text{I’m a monkey’s uncle}
\]

is one of its completions. Furthermore, since this second explanatory story has no proper extension, it is its own completion.

In accord with Aristotle’s insight concerning how truth ascriptions are grounded, instances of \textsc{Truth-Introduction} and \textsc{STruth-Introduction} are explanatory inferences. To accommodate the plausible claim that sentences ascribing truth may figure as premises in explanatory inferences, we allow that such sentences may occupy non-root nodes in complete explanatory stories. So, for instance, we allow that there is a complete explanatory story of the form

\[
\ldots
\]

\[
The \text{General Theory of Relativity is true}
\]

\[
The \text{GPS system is successful}
\]

where the dots might be filled in by an argument tracing the relations of ground between certain fundamental features of physical reality and the truth of the General Theory of Relativity. In accord with the deflationary claim made by HT, we mark nodes in a complete explanatory story derived by an application of \textsc{Truth-Introduction} as \textit{conduit nodes}: the sentence occupying a conduit node serves as a mere placeholder in the explanatory story for those non-semantic claims that are its grounds. Suppose again that

\[
The \text{General Theory of Relativity is true}
\]

\[
The \text{GPS system is successful}
\]

is an explanatory inference. If we extend this explanatory story to yield one of its (good) completions, the truth-ascription will turn out to be a conduit node. Thus, the role of the ascription of truth to the General Theory of Relativity in explanatory stories in which it figures is to serve as a mere placeholder for its physical grounds. When it appears as a premise in a good explanatory story, it indicates that whatever grounds the fact it states also grounds the fact stated.
by anything derived from it. In that sense, it serves as a mere conduit. Any descendant of a conduit node in a complete explanatory story is, as it were, fruit of a poisoned tree, and so also a conduit node. Then $\phi_0, \phi_1, \ldots$ ground $\phi$ iff there is a good explanatory story for $\phi$ containing only truths, whose leaves are occupied by $\phi_0, \phi_1, \ldots$, and which has no good completion in which any of the leaf nodes are conduit nodes. Call a claim which appears in a conduit node in some good, complete explanatory story hollow: its role in explanatory stories in which it figures is simply to stand in for its grounds. Intuitively, we may think of a hollow truth as a light, thin shell encasing its grounds. Intuitively, on HT, grounding claims are true when there’s a good explanatory story whose nodes contain only truths and whose leaves contain only non-hollow claims.

In summary, the core commitments of HT comprise four claims:

1. Instances of $\text{Truth-Introduction}$ are explanatory inferences.

2. Nodes in a complete explanatory story derived by an application of $\text{Truth-Introduction}$ are conduit nodes.

3. Any descendant of a conduit node in a complete explanatory story is also a conduit node.

4. $\phi_0, \phi_1, \ldots < \phi$ iff there is a good explanatory story for $\phi$ containing only truths, whose leaves are occupied by $\phi_0, \phi_1, \ldots$, and which has no good completion in which any of its leaf nodes are conduit nodes.

Pictures are more efficient than words. Let’s suppose that

\begin{itemize}
  \item $e$ is spin-up
\end{itemize}

is basic and was asserted by Joe. Then the following, we may assume, is a good explanatory story.

\begin{center}
\begin{tabular}{c|c|c}
 & $e$ is spin-up & Joe said that $e$ is spin-up \\
\hline
it is true that $e$ is spin-up & & Joe said something true
\end{tabular}
\end{center}

In n. 22 I noted that there are exceptions to the schemas (23) and (24), and thus to the general claim that truth assertions are grounded in the facts expressed by the sentences or propositions to which they ascribe truth. These exceptions are cases in which the erstwhile grounds are themselves mere conduits. The systematic development of HT in the main text implies that these are, in fact, the only cases in which those schemas fail. So, not every instance of the schemas is true, but the schemas hold in a broad class of cases, including standard cases like the one involving (15) and (26) that Aristotle discussed. Thanks to an anonymous referee for indicating that the treatment in the main text did not make the specification of the class of exceptions obvious.
Conduit nodes are marked with asterisks. Any good completion of this argument will either terminate in basic premises from which ‘Joe said that \( e \) is spin-up’ is inferred, or will have a branch tracing an infinitely descending chain of such facts. Make the plausible assumption that no such completion involves any application of Truth-Introduction or STRuth-Introduction.\(^{26}\) On our assumptions, this explanatory story backs the grounding explanation

\[(32) \quad e \text{ is spin-up, Joe says so} < \text{Joe said something true.} \]

because it has no completion of the form

```
\begin{array}{c}
  \text{it is true that } e \text{ is spin-up} \\
  \text{Joe said that } e \text{ is spin-up} \\
\end{array}
```

where the nodes containing ‘\( e \) is spin-up’ and ‘Joe said that \( e \) is spin-up’ are mere conduits. Moreover, since the node containing \[(33) \quad \text{It is true that } e \text{ is spin-up} \]
is a mere conduit node, HT entails that no explanatory story backs the grounding explanation

\[(34) \quad \text{It is true that } e \text{ is spin-up, Joe says that } e \text{ is spin-up} < \text{Joe said something true.} \]

So, that grounding explanation is false. Suppose now that \( e' \) is a spin-down electron, and consider the following explanatory story

```
\begin{array}{c}
  \text{it is true that } e \text{ is spin-up} \\
  \text{Joe said that } e \text{ is spin-up} \\
  \text{it is true that } e \text{ is spin-up and Joe said that } e \text{ is spin-up} \\
\end{array}
```

As above, no explanatory story backs a grounding explanation

\[(35) \quad \text{Joe said something true} < \text{either Joe said something true or } e' \text{ is spin-down.} \]

\(^{26}\) This assumption is made solely for the purposes of illustration. But another, related claim is necessary if HT is to have any plausibility. It would be implausible to deny that the fact expressed by ‘Joe said that \( e \) is spin-up’ has a ground. Given the commitment to the metaphysical hollowness of truth ascriptions and the correspondence between true grounding claims and the availability of a good explanatory story whose leaves are all “hefty”, this will require the availability of a good explanatory story containing only truths for ‘Joe said that \( e \) is spin-up’ whose leaves are all “hefty.”.
But this explanatory story does back

(36) $e$ is spin-up, Joe said so $<_{e}$ either Joe said something true or $e'$ is spin-down.

Moreover, another explanatory story

\[
\begin{array}{c}
\text{e' is spin-down} \\
\text{Joe said something true or e' is spin-down}
\end{array}
\]

backs

(37) $e'$ is spin-down $<_{e}$ either Joe said something true or $e'$ is spin-down.

This is the core of HT. (I later consider some generalizations.) I take it to be supported in some measure by the fact that it accommodates both Aristotle’s insight concerning how the facts expressed by truth ascriptions are grounded and the deflationist’s insight that truth ascriptions play no robust explanatory role. The theory captures Aristotle’s insight straightforwardly, by entailing the truth of explanations like

(38) There are human beings $<_{e}$ it is true that there are human beings.

The deflationist insight is also captured. Suppose again that we want to know what makes it the case that the GPS system is successful. Recall the plausibility of appealing to the truth of the General Theory of Relativity in answering our question. The view at hand does particular justice to the deflationist’s insight by holding that

(29) the General Theory of Relativity is true

is serving in any explanatory story we may give as a placeholder – a mere conduit – for the non-semantic claim that mass warps spacetime, etc. Thus, the truth of the General Theory of Relativity plays no robust explanatory role. Similarly, HT says that the fact expressed by

(26) It is true that there are human beings.

plays no robust explanatory role; instead, whatever explanatory work one might have thought that fact does is done instead by the fact expressed by

(15) There are human beings.
In this sense, the truth ascription (26) adds nothing to (15), and is, by comparison, “metaphysically lightweight.”

So, both Aristotle’s insight and the deflationist insight are explicated and accommodated by HT. Moreover, unlike more familiar disquotationist theses, it does so without taking a detour through a theory of the psychological, epistemic, or semantic role played by truth-ascriptions. So, it is compatible with a wide range of plausible views on the meanings of truth-ascriptions and the inferences and behavior that their acceptance brings with it. Finally, the sense in which truth-ascriptions are “metaphysically lightweight” is explained in terms of ground: truth-ascriptions express facts that are grounded, but that ground nothing. As a result, the sense in which a truth ascription is “metaphysically lightweight” is as clear as the ground-theoretic notions in play.

These considerations strike me as powerful reasons in favor of HT. A further consideration in HT’s favor is that it performs well when applied to the puzzles stated in §2. Let us, then, turn our attention back to the puzzles, and show how the application of HT yields a solution.

5 Solutions

Recall the first puzzle we encountered, concerning how the proposition \( q \), that something is true, is grounded. The puzzle arises because the explanatory story

\[
\frac{\exists x T(x)}{T(q)}
\]

seems to be a good explanatory story, employing instances of Truth-Introduction and Existential Introduction. Given that we have a good explanatory story containing only true claims, it is unclear how we are to avoid concluding that

\( \exists x T(x) \)

This is the only sense in which HT entails that (26) “adds nothing” to (15). As I have emphasized, HT makes no commitment on whether (26) “adds something,” semantically or cognitively speaking, to (15). I have characterized the deflationist’s insight in explicitly non-semantic terms, as the plausible thought that (26) and its fellow travelers play no robust explanatory role, but rather serve as mere placeholders for the fact expressed by (15). If one thinks, contrary to my presentation, that we have a basic intuition to the effect that (15) and (26) are semantically or cognitively equivalent, then HT does not, on its own, capture this intuition. For what it’s worth, I appear to lack any such basic intuition, and I doubt that I am unusual in this respect. Moreover, the corresponding claim concerning ascription of truth to sentences is, in my view, implausible on its face; but see Field [1994] for an attempt to mitigate the implausibility.

21
\[ (\exists x)T(x) \prec (\exists x)T(x). \]

is true, and thus that there is a reflexive instance of partial ground.

HT avoids this puzzle. The explanatory story given above is not complete. We may not infer from the existence of such a story anything about what grounds what, since, for all we have said so far, one of the leaf nodes might contain a hollow truth. To see whether that is so, we need to look at the completions of this explanatory story. One obvious completion is simply to chain the explanatory story to itself, \textit{ad infinitum}:

\begin{align*}
\ldots \\
(\exists x)T(x)^* \\
T(q)^* \\
(\exists x)T(x)^* \\
T(q)^* \\
(\exists x)T(x)^* \\
(\exists x)T(x)^*
\end{align*}

As above, asterisks mark conduit nodes in this explanatory story. This completion demonstrates that the leaf nodes of the original explanatory story are mere conduits, so the original explanatory story backs no grounding explanations.

If we just said that, however, we would fall short of a satisfying solution to the puzzle, which plausibly requires that we offer a principled account of how the fact stated by (9) is grounded. This is easily obtained. Assume that \(0 = 0\) is a basic truth, let \(r\) be the proposition that \(0 = 0\), and apply our explanatory inference rules to yield this explanatory story:

\begin{align*}
0 = 0 \\
T(r)^* \\
(\exists x)T(x)^*
\end{align*}

On our assumptions, this is a good, complete explanatory story containing only true sentences and no hollow truths. So, on HT (9) is grounded in the fact that \(0 = 0\).\footnote{The assumption that \(0 = 0\) is basic is made solely for the purposes of illustration. If \(0 = 0\) turns out to be the conclusion of some explanatory inference, whatever that may be, then there is a complete explanatory story witnessing this fact. Assume no complete explanatory story for ‘\(0 = 0\)’ involves any hollow claims. If this assumption fails, we may adapt the illustration by using some other basic truth better suited for the task.) Then there is no complete explanatory story that can be chained with the explanatory story above to yield a complete explanatory story in which the node occupied by ‘\(0 = 0\)’ is a conduit node.} A similar result can be obtained by using the fact that snow is white. In fact, any truth whose good explanatory stories nowhere involve truth-ascriptions or other hollow claims will do the trick. So, we have the satisfying solution we seek.
The puzzle involving grounds for the fact that some fact obtains is handled similarly. On HT, the good explanatory story

\[
\begin{array}{c}
0 = 0 \\
\quad \text{It is true that } 0 = 0^* \\
\quad [\text{It is true that } 0 = 0^*] \text{ obtains}^* \\
\quad (\exists f) f \text{ obtains}^* \\
\quad [(\exists f) f \text{ obtains}] \text{ obtains}^* \\
\quad (\exists f) f \text{ obtains}^*
\end{array}
\]

demonstrates both how the fact that some fact obtains is grounded, and that it is not a ground of itself. Many theorists have noted an affinity between the notions of something’s being the case, something’s being true, and something’s obtaining. HT exploits this affinity to entail that claims inferred by applications of \textsc{Obtaining Introduction} in the explanatory stories that give rise to the puzzles are hollow, just as claims inferred by applications of \textsc{Truth Introduction} are.

We also have a solution to Krämer’s puzzle involving the application of \textsc{SentQ Introduction} to derive ‘(∃S)S’ from itself. HT entails that the relevant application of \textsc{SentQ Introduction} yield hollow conclusions. On our assumptions, this explanatory story

\[
\begin{array}{c}
0 = 0 \\
\quad \text{It is true that } 0 = 0^* \\
\quad (\exists S) S^*
\end{array}
\]

is good, complete, and contains only truths. It thus demonstrates both how the fact expressed by ‘(∃S)S’ is grounded and that the relevant application of \textsc{SentQ Introduction} has a hollow conclusion, according to HT.

HT also handles the “postcard” puzzle easily. Recall that that puzzle involved the sentence

\[16\] 0 = 0 ∨ (∃s)(s is written on B and s is true).

\[29\] HT is in principle compatible traditional attempts to analyse truth of the sort exemplified by correspondence theories of truth. It nevertheless sits uneasily beside such attempts, since the combination of HT with such an analysis seems to require that we motivate the claim that the proposed analyses is itself hollow. But, as I have shown, HT entails that certain instances of \textsc{SentQ Introduction} have hollow conclusions. It is tempting to generalize HT so that it says that \textsc{SentQ Introduction}, like \textsc{Truth Introduction} always yields hollow conclusions. If we accept this suggestion, the resulting generalization of HT can be easily combined with an analysis along lines similar to the proposal in \cite{Hill2002, p. 22}:

\textsc{S} An object \(x\) is true iff \((∃P)((x = \text{ the thought that } P) \text{ and } P)\).

Hill interprets the resulting theory (which also accepts some instances of robust correspondence between truths and the world) as “fully deflationary in spirit” \cite{Hill2001, p. 318}.
written on side A of a postcard while

\[(\exists s)(s \text{ is written on } A \text{ and } s \text{ is true})\]

is written on side B. Abusing notation, let’s use ‘A’ and ‘B’ to abbreviate the sentences \[(\exists s)(s \text{ is written on } A \text{ and } s \text{ is true})\] and ‘(\exists s)(s \text{ is written on } B \text{ and } s \text{ is true})’, respectively. The explanatory story

\[
\begin{array}{c}
0 = 0 \\
0 = 0 \lor B \\
16 \text{ is true*} \\
16 \text{ is written on } A \\
16 \text{ is written on } A \text{ and } \quad 16 \text{ is true*} \\
A^* \\
17 \text{ is true*} \\
17 \text{ is written on } B \\
17 \text{ is written on } B \text{ and } \quad 17 \text{ is true*} \\
B^* \\
0 = 0 \lor B^* \\
16 \text{ is true*}
\end{array}
\]

is good. Moreover, on our assumption that ‘0 = 0’ is basic, this explanatory story demonstrates both how the facts expressed by \[16\] and \[17\] are grounded, and that there are no grounding relations among them. By that token, there is no reflexive instance of ground in the offing.

6 A Problem for Internality

A second class of puzzles, taken from [Litland, 2015], uses the assumption that ground is internal:

\[
\text{INT } (\psi_0, \psi_1, ... < \phi) \Rightarrow \Box(\psi_0 \land \psi_1 \land ... \land \phi \Rightarrow (\psi_0, \psi_1, ... < \phi))
\]

Intuitively, INT says that, if some facts fully ground the fact that \(\phi\), then it is impossible for all of those facts, together with \(\phi\), to obtain without fully grounding \(\phi\). This claim is highly plausible. Suppose we have an explanatory story involving only true sentences which backs a grounding explanation. Now consider a possible situation in which that explanatory story still involves only true sentences. In the actual situation, that very explanatory story had what it takes to back a grounding explanation. In particular, if we told this explanatory story, we would say only true things, and the argument would genuinely trace the relations of dependence and determination leading from premises to conclusion. Turn now to the possible situation. In the possible situation, none of the inferences fails to be explanatory. None of the sentences involved in the
explanatory story are false. This means that we could still tell this explanatory story without saying anything false and without failing to explain the conclusion by appeal to the premises. It is hard to imagine what more could be required in the possible situation to establish a grounding explanation than to produce such an explanatory story.\footnote{See \cite{Bennett2011} for a different defense of internality. Litland \cite{Litland2015} shows that, if, in general, grounds for $\varphi$ necessitate $\varphi$, then $\text{int}$ is a commitment of each of the extant proposals \cite{Bennett2011, Dasgupta2014, deRosset2013, Litland2016} for systematically answering the question of what grounds grounding facts. Sider \cite{Siderforthcoming} suggests a number of relatively unsystematic proposals.}

Litland shows, however, that internality, together with plausible principles governing ground, turns out to be at odds with the idea that ground is irreflexive. Suppose that, in the actual situation, we are presented with the following sentences, labeled as shown:

(L$_g$) $0 = 0$

(R$_g$) (D) is true

(L) (L$_g$) is true

(R) (R$_g$) is true

(D) (L) is true or (R) is true.

Each of these sentences is straightforwardly true. The labels are chosen with the following mnemonic in mind: (D) is a disjunction; its left-hand disjunct is (L); its right-hand disjunct is (R); (L$_g$) is supposed to be the ground for (L); and (R$_g$) is supposed to be the ground for (R).

One important stipulation regarding the interpretation of these sentences bears mention. The occurrences of ‘(D)’ and the other sentence labels in the sentences themselves are not intended to be interpreted as names of the relevant sentences, but rather stand in for russelian definite descriptions. For instance, ‘(D) is true’ is to be interpreted as an abbreviation of the existential generalization

(39) There is something which is uniquely a sentence with label ‘(D)’, and every sentence with label ‘(D)’ is true.

This unexpected wrinkle ensures that (L) and (R) are existential generalizations. Like many other facts expressed by existential generalizations, this allows that
they might have been grounded by facts other than the facts which actually ground them. The availability of other possible grounds for (L) and (R) turns out to be crucial for the statement of the puzzle.

What grounds what in the actual situation? Assume that ψ is true, and φ is true and has the label (τ). Since instances of Truth-Introduction and Existential Introduction are explanatory inferences, it is plausible that any instance of either of the schemas

**Existential Grounding** \( φ(α) ≪ (∃x)φ(x) \)

**Truth Grounding** \( φ ≪ (τ) \) is true

is also true. As before, we assume that instances of Disjunction Introduction are explanatory inferences. So it is also plausible to think that instances of

**Left Disjunctive Grounding** \( φ ≪ (φ ∨ ψ) \)

**Right Disjunctive Grounding** \( φ ≪ (ψ ∨ φ) \)

are true. This gives us (partial) grounding relations represented by the arrows in:

```
(D) : (L) ∨ (R)
(L) : (Lg) is true
(Lg) : 0 = 0
(R) : (Rg) is true
(Rg) : (D) is true
```

Because (partial) grounding is transitive and irreflexive, the presence of a cycle in the diagram indicates a contradiction.

Following Fine, Litland suggests that we may avoid this problem by denying the validity of Left and Right Disjunctive Grounding. Assuming that \( (φ ∨ ψ) \) is true, we should rely instead on the validity of

**Weak Disjunctive Grounding** \( φ ≪ (φ ∨ ψ) \) or \( ψ ≪ (φ ∨ ψ) \)

A fully satisfying solution would offer a principled motivation for rejecting the stronger disjunctive grounding principles in favor of Weak Disjunctive Grounding. Litland offers one, appealing to the way in which a fact obtains. Let’s grant that the way a fact obtains is given by those of its explanatory stories which contain only true premises. Then, Litland suggests, the disjunctive grounding principles will fail when the way the disjunct obtains involves the disjunction. As the arrows indicate, the way that (R) obtains in the actual situation involves (D).
Then, the other grounding principles yield this picture

\[
\begin{align*}
(D) : (L \lor R) & \\
(L) : (L_g) \text{ is true} & \quad (R) : (R_g) \text{ is true} \\
(L_g) : 0 = 0 & \quad (R_g) : (D) \text{ is true}
\end{align*}
\]

**Weak Disjunctive Grounding** requires that we either draw an arrow from (L) to (D) or draw one from (R) to (D). If we drew one from (R) to (D), we would have a contradiction, so we must draw one from (L) to (D):

\[
\begin{align*}
(D) : (L \lor R) & \\
(L) : (L_g) \text{ is true} & \quad (R) : (R_g) \text{ is true} \\
(L_g) : 0 = 0 & \quad (R_g) : (D) \text{ is true}
\end{align*}
\]

Now consider a counterfactual situation in which the sentences uniquely labeled ‘(L_g)’ and ‘(R_g)’ say something other than what the sentences actually so-labeled say:

\[
\begin{align*}
(L_g) : (D) \text{ is true} \\
(R_g) : 1 = 1
\end{align*}
\]

Assume that, in the counterfactual situation, the rest of the sentences are uniquely labeled as they actually are. Again, all of the sentences would be straightforwardly true in this situation. Application of our grounding principles yields this picture:

\[
\begin{align*}
(D) : (L \lor R) & \\
(L) : (L_g) \text{ is true} & \quad (R) : (R_g) \text{ is true} \\
(L_g) : (D) \text{ is true} & \quad (R_g) : 1 = 1
\end{align*}
\]
In this situation, (L) would not have (fully) grounded (D). So, (L) actually (fully) grounds (D), but might have co-obtained with (D) without grounding it. This contradicts internality.

We can solve the puzzle by simply giving up on internality. An assumption of the puzzle, then, is that grounding is internal. If one denies this, then the erstwhile puzzle turns out to be a result which specifies conditions under which some fact $f$ (fully) grounds another $g$, and it’s possible that both $f$ and $g$ obtain without $f$’s (fully) grounding $g$.

At the beginning of this section we noted that internality is highly plausible. But that abstract and impressionistic defense of internality confronts the problem posed by the puzzle. If there were no alternative, internality would have to go. Fortunately, there are a number of other principles in play, and denying any of those would evade the puzzle. In fact, HT denies the validity of all of the schematic grounding principles we have stated: when the premise of any instance $\phi$ of Existential Grounding, Truth Grounding, Left Disjunctive Grounding, or Right Disjunctive Grounding is a truth-ascription, the fact expressed by $\phi$ does no grounding work whatsoever. Similarly, Weak Disjunctive Grounding fails when both disjuncts are truth-ascriptions. This is the sense in which, according to HT, truth is “metaphysically lightweight.”

Even so, HT is consistent with the plausible paradigm cases of grounding explanations involving existential generalizations, disjunctions, and truth-ascriptions which motivate theorists to propose these schemas. More generally, the view holds that the default case is one in which these schemas are valid. They fail only when some truth-ascription plays a supporting role in some explanatory story in the background. So, all of these principles fail, particularly in application to (L), (R), and (D).

If we just said that, however, we would fall short of a satisfying solution to the puzzle, which plausibly requires that we offer a principled account of how the facts stated by (D), (L), and (R) are grounded. This is easily obtained. Assume that $0 = 0$ is a basic truth in the actual situation. Assume for illustration that instances of STRUTH-INTRODUCTION are explanatory inferences. On HT, the conclusions of such inferences are mere conduits when they figure as further premises in some explanatory story: their function in such explanatory stories is

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32This is Litland’s solution, though he proposes a weaker sense in which ground turns out to be internal.
to indicate that whatever grounds them also grounds what is derived from them. Assume that no complete explanatory story for ‘S says that 0 = 0’ involves a truth-ascription. Then, no completion of this explanatory story

\[
\begin{array}{c|c}
0 = 0 & (L_g) \text{ says that } 0 = 0 \\
\hline
(L) & (L) \text{ is true}^* \\
(D) & (L) \lor (R)^* \end{array}
\]

makes either of the leaf nodes a conduit. Thus, this explanatory story will back a grounding explanation

(40) 0 = 0, (L) says that 0 = 0 < (L) is true \lor (R) is true.

Similarly, the explanatory story

\[
\begin{array}{c|c}
0 = 0 & (L_g) \text{ says that } 0 = 0 \\
\hline
(L) & (L) \text{ is true}^* \\
(D) & (L) \lor (R)^* \text{ (D) says that } (L) \lor (R) \\
(R_g) & (D) \text{ is true}^* \\
\end{array}
\]

backs

(41) 0 = 0, (L) says that 0 = 0 < (D) is true \text{[33]}

Extending the explanatory story still further backs

(42) 0 = 0, (L) says that 0 = 0 < (R) is true.

So, given our truth conditions for grounding explanations, here are the grounding relations in the actual situation:

\[
\begin{array}{c|c}
\text{0 = 0, (L) says that 0 = 0} & (L) \text{ is true}^* \\
\hline
(D) & (L) \lor (R) \text{ (D) says that } (L) \lor (R) \\
(R_g) & (D) \text{ is true}^* \\
\end{array}
\]

This is a pleasing picture if we are at all tempted by the deflationist’s idea that truth ascriptions play no robust explanatory role. The fact that 0 = 0, together

\[\text{[33] To prevent clutter, I simplify this grounding claim and the one below by omitting the facts concerning what } (D), (L), (R), \text{ etc., say from the grounds.}\]
with the facts about what the sentences say, does all the grounding work; facts stated by truth-ascriptions do nothing, just as the deflationist says.

Something similar goes for the grounding relations in the possible situation:

```
(D) : (L) ∨ (R)

(L) : (Lg) is true

(R) : (Rg) is true

(Lg) : (D) is true

(Rg) : 1 = 1
```

Finally, there is no counter-example to internality here. The sentence actually uniquely labeled (Lg) says something that the sentence labeled (Lg) in the counterfactual situation does not say. So, the (full) ground for (D) in the actual situation does not obtain in the counterfactual situation. In fact, a virtue of the solution provided by HT is that it locates the source of the differences in grounding connections in the actual situation and the possible situation so plausibly: the grounding connections are different in the two situations because the relevant sentences say something different in those situations.

7 Objections

I have advertised HT as a new way to capture a kind of deflationism about truth. It might be objected, however, that it does not do justice to the intentions of a certain kind of deflationist. Deflationists of this ilk insist that truth ascriptions are “metaphysically lightweight” in approximately the way that conjunctions and disjunctions are. They contend that the nature of, say, disjunction is exhausted by the introduction and elimination rules for disjunction. Similarly, they might argue, the nature of truth is exhausted, either by the instances of 

\[ \text{E } \langle p \rangle \text{ is true iff } p \]

or the corresponding introduction and elimination rules for ‘true’. I have said several times already that the sense in which truth is “lightweight” needs clarification, and I have argued that HT fills that need. Still, it might be held that,

\[ \text{I have not found any actual deflationists or disquotationalists explicitly endorsing this claim. But this interpretation would make sense of their contention that truth is a “logical” property; see } [\text{Horwich}, 1990], [\text{Field}, 1992, 1994] \]
insofar as HT treats the facts expressed by truth ascriptions as “lightweight” and those expressed by some disjunctions as “hefty,” it does not capture the intentions of deflationists.

It must be admitted that HT fails to realize every aspiration of every deflationist (and, perhaps, fails to realize every aspiration of any deflationist).\footnote{Among other things, HT does not reserve any special role for instances of the schema (e), a hallmark of many views characterized as deflationary in the literature. For this reason, it does not fit the (stipulative) characterization of deflationism given at \cite{Eklund2010} pp. 30-31; instead, it is closely related to the view Eklund calls \textit{sophisticated rejectionism}, on which, roughly, the truth predicate plays no robust role in serious theorizing aside from expressing commitment to a large class of instances of (e).} It does, however, capture the idea that truth ascriptions play no robust explanatory role. This idea guides my sense of what’s required for an adequate explication of the claim that truth is “metaphysically lightweight.” It is not clear whether the analogue of this idea for disjunctions is plausible. My suspicion is that the relevant sense in which truth-ascriptions are “lightweight” is not a sense in which disjunctions are.\footnote{See, however, \cite{Lewis1986} p. 61, \cite{Fodor1974} pp. 109-110, and \cite{Kim1993}, each of which argues that facts or properties expressed disjunctively play no determinative role. The discussion of disjunctions in \cite{?} may be relevant in this connection.} Suppose, however, that I am wrong about this, and we should accept the claim that disjunctions are hollow in the very same sense as truth ascriptions on HT: their role in explanatory stories is simply to serve as placeholders for their grounds. Then HT can be extended in the obvious way to yield the conclusion that disjunctions are “metaphysically lightweight” in just the same way as truth ascriptions. So, there is no bar in principle to treating truth ascriptions and disjunctions on a par, if that should turn out to be necessary.\footnote{Thanks to Gideon Rosen and Selim Berker for discussion of the issues raised here. See \cite{?} for an explication of a completely different sense in which disjunctions or other claims might turn out to be “metaphysically lightweight.”}

Another generalization of HT bears mention. HT is expressed in terms of grounding explanations. Disquotationalists and deflationists have explicitly concerned themselves, however, with the claim that truth ascriptions play no robust role in \textit{causal} explanations \cite{Field1994, Horwich1990}. So, again, deflationists about truth might complain that HT fails to do justice, even to the idea that truth ascriptions play no robust explanatory role. It is straightforward, though, to generalize HT to handle causal explanations. The idea would be that, though facts expressed by truth-ascriptions don’t cause anything, their grounds do. Suppose, for instance, that you used a GPS device to navigate to your in-
laws’ home for a holiday meal. The idea would be that the truth of the General Theory of Relativity plays no causal role in your arrival at your in-laws. Instead, the relevant aspects of physical reality play that causal role.

Given that HT can be generalized to yield a view on which large swathes of facts in addition to truth ascriptions are “metaphysically lightweight,” one might wonder about other, more radical generalizations. One might wonder, for instance, whether every fully grounded truth has the feature that HT attributes to truth ascriptions. Call this view the generalized HT. On the generalized HT, the facts expressed by fully grounded truths ground nothing; and, though fully grounded truths figure in explanatory arguments, they serve in those arguments as mere placeholders for their grounds.

The generalized HT is implausible. We have seen that the deflationist’s claim that truth ascriptions play no robust explanatory role is highly plausible, as was illustrated by the fact that the truth of the General Theory of Relativity was, on reflection, not among the grounds of the success of the GPS system. By contrast, the analogue of the deflationist’s insight for other fully grounded claims is implausible. Suppose, for instance, that the wrongness of telling lies (in circumstances $C$) is fully grounded in some further facts. It seems implausible to think that

$$\text{(43)} \text{ It is wrong to tell lies (in circumstances } C \text{)}$$

is hollow. That is, it is implausible to think that $\text{(43)}$ itself does no further explanatory work, but instead serves merely as a placeholder for its grounds in explanatory arguments in which it figures. So, to adapt an example discussed by Simon Blackburn, it is highly plausible to think that it is wrong to get your little brother to tell lies (in $C$) partly in virtue of its being wrong to tell lies (in $C$) [Blackburn, 1984]. Something similar goes for facts involving genes or clades. So, for instance, a truth of the form

$$\text{(44)} \text{ These soybean seeds have gene } G$$

is as “chunky” as one could hope for, even though the fact it expresses is, presumably, fully grounded by certain physical and chemical facts. It appears, for instance, that one such truth expresses a fact that partially grounds the fact that plants grown from certain seeds are “Roundup ready” – that is, resistant to certain herbicides.

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38Thanks to Matti Eklund for suggesting this generalization of HT.
I conclude that, though HT can be generalized, considerations of plausibility set bounds on how far such a generalization should go. Nevertheless, it is clear that HT provides resources for anyone who wishes to vindicate analogues of the deflationist’s insight for other classes of facts. So long as the target class of facts can be characterized as those expressed by some class of explanatory inferences, HT exemplifies a way to develop a view that captures the idea that facts in that class play no robust explanatory role.

Another objection is inspired by the fact that there are analogues of Fine’s original puzzle that involve knowledge and other epistemic notions. Krämer [forthcoming], for instance, notes the plausibility of the idea that Joe’s knowing that \( P \) is partially grounded in \( P \). If we take this plausible claim in full generality, then, assuming Joe knows that he knows something, Joe’s knowing that he knows something is partially self-grounded. It is not clear how HT might handle a puzzle of this sort; one of the difficulties is that it is simply unclear how epistemic facts, including facts concerning what Joe knows, are grounded. So we don’t yet have a clear statement of the puzzle. Here however, is a natural way to state a puzzle of this sort. One might hold that the following partial grounding claim is generally true, where \( p \) is any proposition:

**Epistemic Grounding** \( p \) is true \( \prec \) \( S \) knows \( p \).

Given **Existential Grounding** (or some appropriate analogue)\(^{39}\) if we assume that Joe knows that Joe knows something, then we appear to have

\[
(45) \quad \text{Joe knows that Joe knows something} \prec \text{Joe knows something} \prec \text{Joe knows that Joe knows something}.
\]

Given the transitivity of partial ground, this entails a reflexive instance of partial ground.

HT already handles this class of puzzles, given the wide ambit of good completions for explanatory stories. To illustrate the application of HT, it will be helpful to switch to an example where, unlike in the case of knowledge, identifying the backing explanatory stories is easy. Suppose that Joe uses an intransitive verb ‘t-believes’ and that his use of this intransitive verb intuitively corresponds to our notion of *believing something true*. So, for instance, if Joe

\(^{39}\)Epistemic Grounding and Existential Grounding are used here solely for illustration. The exact means of regimenting the explanatory story for the claim we colloquially express by ‘Joe knows something’ may differ significantly. The response below is neutral on the differences between them.
believes that grass is green, then, as he would put it, he t-believes. Suppose further that we insist that all complete explanatory stories for a claim of the form ‘Joe t-believes’ employ the explanatory inference

\[
\text{T-Belief Introduction} \quad \frac{\text{Joe believes that } \phi}{\text{Joe t-believes.}}
\]

Assume, as above, that Joe believes that he t-believes. Then, the explanatory story

\[
\text{Joe believes that Joe t-believes Joe t-believes Joe t-believes}
\]

is good. It therefore seems hard to resist the claim that there is a reflexive instance of partial grounding:

(46) Joe t-believes \prec Joe t-believes.

But HT already entails that the claim that Joe t-believes is hollow. This is because completions of our explanatory story will involve claims that HT already regards as hollow. So, for instance, on HT, there is a good completion of our explanatory story of the form:

\[
\ldots \quad \text{Joe believes that it is true that } 0 = 0 \quad \text{it is true that } 0 = 0^* \quad 0 = 0 \\
\text{Joe believes that Joe t-believes Joe t-believes Joe t-believes}^{*} \quad \text{Joe t-believes}^{*}
\]

So, HT is already committed to the hollowness of the claim that Joe t-believes; the fact expressed by that claim grounds nothing. So, on HT it does not (even partially) ground itself.

The explanatory stories that accompany grounding explanations for knowledge are not so easily specified, but the lesson in the case of t-beliefs transfers readily. Whatever the explanatory story for the claim that Joe knows something may be, it will have a wide range of good completions. Some of those

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IT might be objected that, in the case at hand, Joe has no such belief. Recall, however, that good explanatory stories may contain falsehoods; we introduced the idea of a good explanatory story in \(\text{§1}\) by appeal to this argument:

(47) \[
\text{It’s sunny.} \\
\text{So, either it’s sunny or it’s snowy.}
\]

As we saw, this is a good explanatory story, even if (as it turns out) the weather is neither sunny nor snowy. Similarly, basic claims need not be true.
completions involve truth, sentential quantification, or other matters already recognized by HT as “metaphysically lightweight.” For instance, there will be some good, complete explanatory story for ‘Joe knows something’ on which it is inferred from a lemma ‘it is true that 0 = 0’ via ‘Joe knows that it is true that 0 = 0’. So, the claim that Joe knows something, however regimented, will be hollow on HT.

A final objection, unlike those objections we have already considered, targets a core commitment of HT. Recall that HT requires exceptions to

**Truth Grounding** $\phi \prec (\tau)$ is true

(where $\phi$ has the label $(\tau)$). This requirement follows from the ideas at the heart of HT, that truth ascriptions themselves play no robust explanatory role, and that the thinness of that role should be explicated by the idea that the facts expressed by truth ascriptions ground nothing. So, if $\phi$ is itself a truth ascription, then, according to HT, the fact stated by $\phi$ does not ground anything, including the fact that $\phi$ is true. Thus, HT denies

$\text{(48) It is true that there are human beings } \prec \text{ it is true that it is true that there are human beings.}$

The objection is that Truth Grounding (and analogous principles for sentential truth ascriptions, obtaining, etc.) in its full generality enjoys basic plausibility, and that these core commitments of HT are therefore implausible. It should be noted that similar objections may be formulated with respect to all of the grounding principles used in the paradoxes. So, for instance, HT requires exceptions to

**Left Disjunctive Grounding** $\phi \prec (\phi \lor \psi)$

in cases in which $\phi$ is a truth ascription. For example, HT requires the rejection of

$\text{(49) It is true that there are human beings } \prec (\text{it is true that there are human beings } \lor 0 = 1).$

And it might be held that such principles are so plausible that a theory which rejects them is unacceptable.

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41 Thanks to Gonzalo Rodriguez-Pereyra for discussion of an objection along these lines.
It does seem to me that principles like Truth Grounding and Left Disjunctive Grounding enjoy some plausibility. It seems to me, however, that their plausibility stems from the profound plausibility of the particular cases which motivate them. So, for instance, as we have seen several times, Aristotle’s insight that

\[ (38) \text{ There are human beings} < \text{it is true that there are human beings.} \]

is powerfully plausible. Similarly,

\[ (50) \text{ there are human beings} < (\text{there are human beings} \lor 0 = 1) \]

is powerfully plausible. Because of the plausibility of these particular claims, their natural schematic generalizations enjoy a great deal of plausibility. I have learned, however, to be wary of generalizing from the plausibility of particular cases to a problematic general principle. Moreover, one lesson of the puzzles is that some plausible principle governing ground will have to go.

As we have seen HT entails the truth of (38) and (50), given plausible ancillary principles. What’s more, it provides a principled basis on which to distinguish true instances of, e.g., Truth Grounding from untrue instances. In addition, that principled basis itself is intuitively motivated by the deflationist insight that truth ascriptions may figure in explanatory arguments, but don’t themselves state facts that ground anything. Finally, HT relies on a neglected distinction between two of the many different things that philosophers have called “explanations:” explanatory stories and the facts stated by true grounding claims. Though HT denies Truth Grounding, it asserts that all instances of Truth Introduction are explanatory. So, the plausibility of Truth Grounding can be diagnosed as the result of running together the idea that an explanatory story is good (and contains only truths) and the idea that its corresponding grounding explanation is true.\[ p.42 \]

It might be held that denying (48) and (49) is too implausible. If so, then we can ramify HT to yield a theory on which it comes out true. We might assign degree 0 to all claims for which all good, complete explanatory stories are truth-free; degree 1 to all claims for which all good, complete, explanatory stories contain at most degree 0 claims in non-root nodes; and so on through all of the ordinals. The degree of a claim is unbounded if, for every good, complete explanatory story for it that contains only degree-\(\alpha\) claims at non-root nodes, there is a good, complete explanatory story for it that contains degree \(\beta\) truths (for some \(\beta > \alpha\)). The truth ascriptions that give rise to the puzzles we have considered all have unbounded degree, on plausible ancillary premises. Then HT might be weakened so that an explanatory story is permitted to back a true grounding explanation when its conclusion has a bounded degree. Since, presumably, ‘it is true that it is true that there are human beings’ has degree
8 Conclusion

Our discussion of HT has been brief. There is much that remains to be worked out. In particular, HT leaves central issues in the theory of truth unaddressed. First, HT is a theory of the lightness of truth: what truth’s being “metaphysically lightweight” comes to. HT does not offer an analysis of the nature of truth; at least, no theory is proposed here that purports to provide interesting necessary and sufficient conditions for something’s being true or to articulate the essence of truth. In this way, HT differs from some of the more traditional attempts to define truth that might figure, e.g., in a correspondence theory of truth. Second, nothing in our discussion addresses the semantic paradoxes in any way. I will leave the application of HT to the semantic paradoxes for another time.

Still, the puzzles we have encountered are interesting, and the solutions that HT offers to them are attractive. There are, as one might expect, other proposals in the literature for solving these and related puzzles. Considerations of space prevent me from discussing these alternative solutions in any detail here. My conclusion is, therefore, modest: HT offers solutions worth taking seriously. I believe the stronger claim that its solutions are better than other extant alternatives, but haven’t begun to show that here.

Suppose that HT is ultimately acceptable. Then we have a concrete demonstration of the utility of the theory of ground. That theory gives us the materials to offer a clear explication of an important strand of deflationism about truth. It also offers, in its proposed solutions to the puzzles, a new source of potential evidence favoring that theory. So, insofar as we are interested in deflationism about truth, we should also be interested in the theory of ground. I have assumed from the beginning that skepticism about ground may be set aside. I offered no explicit argument against such skepticism. But the utility of HT offers a kind of response to skeptics: the notion of ground turns out to be theoretically useful. To my mind, this is the best kind of response.

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2. this would allow us to avoid the puzzles while affirming (45). Something similar holds for (46). I don’t myself think that (48) and (49) are particularly plausible prima facie, so the extra complication involved in ramification seems to me unwarranted. You may think differently.

43. It may be worth noting that the present emphasis on complete explanatory stories comports well with Yablo’s [1982] use of dependence trees to develop Kripke’s [1975] theory.


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References


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