Can logical consequence be deflated?*

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1 Introduction

Deflationism about truth is the view that truth is not a substantive property, e.g. it does not make for genuine similarity. Two truth-bearers (say, sentences) may be true without being similar or without reflecting any similarity in their subject matter or the world. Such is the case with 'Roses are red' and 'Two succeeds one': there just doesn't seem to be much in common between numbers and the successor relation and roses and redness, nor between whatever natural relations might hold between these two pairs. There is, moreover, a certain equivalence (analytic or otherwise) between asserting, believing, etc. that a sentence is true and asserting, believing, etc. the sentence itself. This equivalence suggests that truth (or the truth predicate) plays a merely expressive role and lends further support to deflationism about truth; for any notion employed for mere expressive purposes seems not to mark out any substantive feature of the world.

An interesting question is whether deflationism about truth (and falsity) extends to related properties and relations on truthbearers. Lionel Shapiro ([Shapiro, 2011]) answers affirmatively by arguing that a certain deflationism about truth is as plausible as an analogous version of deflationism about logical consequence. I'll call this the *equi-plausibility thesis*. If correct, logical consequence does not count as a substantive relation and

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instances of valid arguments need not share any substantive property, such as having a special logical form or necessarily preserving truth (assuming these properties substantive). The equi-plausibility thesis is striking, for whereas deflationism about truth is highly compelling, deflationism about logical consequence seems far less plausible. There is good reason to think that logically valid arguments do share a substantive property, such as holding in virtue of the meaning of the logical constants or necessarily preserving truth in virtue of form alone. The equi-plausibility thesis, then, constitutes an important claim deserving of careful consideration.

After presenting Shapiro's arguments for the analogy between a certain brand of deflationism about truth and about logical consequence, I argue that the argument fails on two counts. First, it trivializes to any relation between truthbearers (which I'll assume for concreteness and neutrality are sentences), including substantive ones; in other words, his argument can be used to establish that deflationism about truth is as plausible as deflationism about an arbitrary sentential relation. Second, the alleged analogy between the arguments for deflationism about truth and deflationism about consequence fails. Along the way I consider what implications the failure of the equi-plausibility thesis has for deflationism about falsity.

2   Mere expressive device deflationism

The precise formulation of deflationism that is the target of Shapiro's argument he calls *mere expressive device deflationism*, which I'll abbreviate as MEDD.[1] MEDD about truth claims that the primary role of the truth predicate is merely expressive and that the rules which underwrite this expressive role give us no reason to believe that truth is a substantive property, so we should not think truth is a substantive property.

The view is inspired by remarks of Quine on the role of the truth predicate, in particular that it allows for the expression (by finite means) of generalizations over infinitely many sentences.[2] For instance, letting $\phi_1, \phi_2, \ldots$ be an enumeration of the sentences of Peano arithmetic, one may express the infinite disjunction of sentences:

- ϕ_1 is true (in the standard model) but not provable in Peano arithmetic;

- ϕ_2 is true (in the standard model) but not provable in Peano arithmetic;

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[1]Shapiro abbreviates it as 'MED deflationism'.

[2]There are, of course, other secondary expressive roles the truth predicate has. E.g. it allows one to indirectly agree with what someone has uttered, as in 'Everything Sam uttered is true', without knowing precisely what that person has uttered.

by the sentence

- Not every sentence true (in the standard model) is provable in Peano arithmetic.

MEDD about truth holds that the expressive role the truth predicate has is underwritten by a pair of inferential rules that equate each sentence with the statement that the sentence is true:

$$\text{T-Intro } \frac{p}{\text{`}p\text{' is true}} \qquad\qquad \text{T-Elim } \frac{\text{`}p\text{' is true}}{p}$$

Not enough has been said yet to determine whether the T-rules *alone* suffice to underwrite the expressive role of the truth predicate. That role may require that the truth predicate be *transparent* in the sense that 'p' and the statement that p is true are intersubstitutable *salva veritate* in appropriate contexts, and this will depend further on the underlying logic. While taking note of this complication, Shapiro builds into the argument for MEDD about truth the assumption that the T-rules are sufficient to underwrite its expressive role. This is not an innocent assumption since it bears on the plausibility of MEDD about truth and hence on the significance of the "equi-plausibility" thesis. For if MEDD about truth turns out an implausible form of deflationism, the equi-plausibility thesis loses its significance. The reason the assumption lacks innocence is that MEDD about truth is much more plausible when it is assumed that the T-rules alone are sufficient to underwrite the expressive role of the truth predicate. The need for any additional rules brings into doubt (T3) (see below) of the argument for MEDD about truth, so the T-rules alone ought to be enough to give the truth predicate its primary expressive role. Whether they are in fact strong enough depends further on how strongly they are interpreted (as e.g. analytic or strict implications), an issue which resurfaces in §4.

The arguments for MEDD about truth and consequence

Now that we have seen the underlying motivation for MEDD about truth, we come to Shapiro's formulation of an argument for the thesis, which I reproduce in full.

T1. If it were not for the need to express a certain kind of generality, we would have no need for the predicate 'is true'. Instead of predicating 'is true' of a sentence, we could employ the sentence itself.

T2. To explain how 'is true' allows us to express the kind of generality in question, we need only make use of the predicate's logical features, namely, the T-rules.

T3. There is no reason to think that the T-rules require 'is true' to express a property whose nature is amenable to substantive characterization.

T4. From (T1), (T2) and (T3), it follows that there is no reason to think that in order to understand how 'is true' serves the function that is its raison d'être, we must take this predicate to express a property whose nature is amenable to substantive characterization.

T5. Hence we have no reason to hold that 'is true' expresses a property whose nature is amenable to substantive characterization.

Premise (T3) needs to be flagged as an important but mysterious premise. For it is not clear what it would take for a pair of inferential rules to give us reason to think that a property they refer to *is* substantive. Similarly, exactly what features of the T-rules give us no reason to think that the truth predicate picks out a substantive property? Is it that they seem to allow truth to be explained away? This cannot be so, since it is important that MEDD about truth not entail the claim that truth can be explained away. If the entailment went through, as we will see, it would show that MEDD about truth and consequence are not analogous after all. For the rules which underwrite the main role of the consequence predicate certainly do not lead us to think that consequence can be explained away. It is not clear then what it is about the T-rules that justify (T3) nor whether these features are had by the C-rules (below) which underwrite the expressive role of the consequence predicate. If the C-rules lack these features, the analogy between the arguments for MEDD about truth and about consequence fails.

It is crucial for MEDD about truth that the T-rules be read in such a way that they at least preserve truth rather than, say, mere warranted assertibility (or weaker properties in the vicinity) for the following reason. It is possible that we use sentences to convey, not the truth of what they express, but rather the falsity of what they express. We might also use sentences to convey that what they express is true on a certain hypothesis. Indeed, we could use them any way we like and it is a contingent fact about us as language users that we typically use sentences to convey their truth. Now suppose a linguistic community, say the Samsons, used sentences in such a way that a sincere utterance of 'p' conveyed that p is believed by some person, Sam.[3] Then the main role of the predicate 'is believed by Sam' would (for the Samsons) be merely expressive in the sense that an utterance of ' 'p' is believed by Sam' would convey precisely the same thing as an utterance of 'p'. This equivalence would be underwritten by the following rules structurally identical to the T-rules:

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[3]The sentential variable here is to be filled with a sentence, such as 'Snow is white', rather than a name of the sentence. This explains why it occurs in quotes in the first instance.

$$\text{Sam-Intro} \ \frac{p}{\text{`}p\text{' is believed by Sam}} \qquad \text{Sam-Elim} \ \frac{\text{`}p\text{' is believed by Sam}}{p}$$

But importantly, *the Sam-rules do not preserve truth.* Rather they preserve some notion of being correct to utter: if it is correct for a Samson to utter 'p' then it is correct for her to utter ' 'p' is believed by Sam', and conversely. This crucial disanalogy between the T-rules and the Sam-rules prevents the Samsons from running an argument for MEDD about the property of being believed by Sam (which invokes the Sam-rules) that is parallel to the one for MEDD about truth.

By now, one may have anticipated how the argument for MEDD about logical consequence runs. It essentially replaces the T-rules in the argument for MEDD about truth by the following C-rules, making obvious changes elsewhere:

$$\text{C-Intro.} \ \frac{\text{That } p \text{ entails that } q}{\text{`}p\text{' has `}q\text{' as consequence}} \qquad \text{C-Elim.} \ \frac{\text{`}p\text{' has `}q\text{' as consequence}}{\text{That } p \text{ entails that } q}$$

These rules are assumed to underwrite the expressive role of the consequence predicate. Here is the argument for MEDD about consequence in full.

C1. If it were not for the need to express a certain kind of generality, we would have no need for the predicate 'is a consequence of'. In place of 's_2 is a logical consequence of s_1', we could employ sentences s_1 and s_2 themselves, joined by a suitable sentential connective.

C2. To explain how 'is a consequence of' allows us to express the kind of generality in question, we need only make use of the predicate's logical features, namely, the C-rules.

C3. There is no reason to think that the C-rules require 'is a consequence of' to express a property whose nature is amenable to substantive characterization.

C4. From (C1), (C2) and (C3), it follows that there is no reason to think that in order to understand how 'is a consequence of' serves the function that is its raison d'être, we must take this predicate to express a property whose nature is amenable to substantive characterization.

C5. Hence we have no reason to hold that 'is a consequence of' expresses a property whose nature is amenable to substantive characterization.

Note that the unwritten assumption that the main role of the consequence predicate is merely expressive is much more contentious than it is for the truth predicate. Locutions of the form ' 'q' follows from 'p' ' are much more natural than those of the form 'That p entails that q' which suggests that the connective- rather than predicate-involving locutions play a merely expressive role. The same is not true for truth: an utterance of p is almost always more natural than an utterance of ' 'p' is true', suggesting that the latter are only used in special circumstances, e.g. in making generalizations. This already marks a disanalogy between (the arguments for) MEDD about truth and consequence, but those discussed in §4 are far more worrying for the equi-plausibility thesis.

3   Trivializing the equi-plausibility thesis

Consider the following rules:

$$\text{Jan-Intro.} \quad \frac{\text{It is believed by Jan that } p}{\text{'}p\text{' is believed by Jan}}$$

$$\text{Jan-Elim.} \quad \frac{\text{'}p\text{' is believed by Jan}}{\text{It is believed by Jan that } p}$$

The Jan-rules necessarily preserve truth (unlike the Sam-rules, recall). Moreover, they have the same form as the C-rules: the predicate-involving statement is interchangeable with the connective-involving statement. Making suitable changes in the argument for MEDD about consequence, do we obtain an analogous argument for MEDD about the sentential—*and clearly substantive*—property of being believed by Jan? Not quite. One key premise of MEDD about consequence is that the primary role of the consequence predicate is expressive. The premise may be objectionable, but certainly not to the extent that its analog for MEDD about being believed by Jan is—there just is no reason to think that the primary role of 'is believed by Jan' is expressive. So there is yet no completely analogous argument for MEDD about being believed by Jan, at last not one involving the Jan-rules.

However, suppose we introduce a predicate which is *by stipulation* both extensionally identical to 'is believed by Jan' and whose primary role is expressive; call it 'is Janned'. We may, moreover, stipulate that its expressive role is underwritten by the following pair of rules:

$$\text{Janned-Intro} \quad \frac{\text{It is believed by Jan that } p}{\text{'}p\text{' is Janned}}$$

$$\text{Janned-Elim } \frac{\text{`}p\text{' is Janned}}{\text{It is believed by Jan that } p}$$

There is now an argument for MEDD about *being believed by Jan* which completely parallels the one for MEDD about consequence. We have a predicate, 'is Janned' whose primary role is expressive and underwritten by a pair of truth-preserving rules that provide just as much reason as the C-rules (i.e. none, according to the argument) for thinking that the property they involve is substantive.

Indeed, we may rerun a parallel strategy for *any* sentential relation for which we can introduce a corresponding predicate. In other words, *the equi-plausibility thesis trivializes*. Since some sentential relations are substantive, either the analogy between MEDD about truth and other relations fails or there is already something wrong with MEDD about truth itself. Since MEDD seems a plausible deflationist position, the problem is likely to be located in the analogy.

Trivializing MEDD will require in certain cases introducing both a predicate and a corresponding sentential connective used in formulating the rules which underwrite the expressive role of the predicate. In the case of Jan's beliefs, we needed only to introduce a predicate whose primary role—it was stipulated—is expressive and, moreover, underwritten by the Janned-rules. The corresponding sentential connective, 'it is believed by Jan that' already exists in English, so we did not need to introduce it alongside 'is Janned'.

In general, let R be any n-place *sentential* relation. Then the following three claims, which are enough to show that the equi-plausibility thesis trivializes, are all highly plausible:

1. we can introduce an n-place predicate '$s_1, \ldots, s_n$ stand in R' denoting R and a corresponding n-place sentential connective $\mathcal{R}(s_1, \ldots, s_n)$ expressing that $s_1, \ldots, s_n$ stand in R;

2. the primary role of '$s_1, \ldots, s_n$ stand in R' is (perhaps by stipulation) expressive;

3. the expressive role of '$s_1, \ldots, s_n$ stand in R' is (perhaps by stipulation) underwritten by the pair of rules:

$$R\text{-Intro } \frac{\mathcal{R}(s_1, \ldots, s_n)}{\text{`}s_1, \ldots, s_n \text{ stand in } R\text{'}} \quad R\text{-Elim } \frac{\text{`}s_1, \ldots, s_n \text{ stand in } R\text{'}}{\mathcal{R}(s_1, \ldots, s_n)}$$

An equi-plausibility claim concerning MEDD about truth and R follows straightforwardly.

How might an MEDD deflationist respond to this trivializing argument? First, they might demand that 'suitable sentential connective', as it occurs

in premise (C1), requires that the connective already exist in natural language. There are two problems with this response. One is that it appears to block the argument for MEDD about consequence itself since likely there is no connective 'entails' in any natural language, let alone English, that exactly corresponds with any philosopher's sense of logical entailment. Two, while the response blocks MEDD from trivializing, it does not block the equi-plausibility of MEDD about *being believed by Jan* and MEDD about consequence and truth since 'is believed by Jan that' already exists in natural language. So while this response blocks the equi-plausibility thesis from trivializing, we still have the equi-plausibility of MEDD about a deflationary-looking notion like truth with MEDD about a substantive notion like *being believed by Jan* which is bad enough to undermine Shapiro's argument.

Second, one might respond to the trivializing argument by claiming that only properties expressible by predicates characterizable by inferential rules are admissible in MEDD arguments. For the fact that the expressive role of the truth (and consequence) predicate is claimed to be underwritten by such rules is essential to the argument for MEDD about truth (and consequence). The thought would be that MEDD about such properites look equally plausible because these notions, being characterizable by inferential rules, appear to be (broadly) logical and deflatable. (Indeed, most deflationists think of truth as logical.)

Consider the property *being believed by Jan*. It doesn't appear to be characterizable by inferential rules in the sense that there is a predicate expressing the property that is characterized by inferential rules. But indeed it is: it is characterized, among many others, by the Jan- and Janned-rules! Indeed, for any sentential relation for which we introduce (by stipulation, say) a predicate and a corresponding connective, we get rules characterizing the relation for free.

One might deny that such rules need not genuinely characterize a sentential relation. The problem now is that whatever genuine characterizability amounts to, I do not see how it can rule out *being believed by Jan* as being characterized by the Jan- or Janned-rules without also ruling out logical consequence (and perhaps truth even) from being ruled out as being characterized by the C-rules (T-rules in the case of truth). The rules are exactly analogous, equating statements involving a sentential operator with corresponding statements involving a sentential predicate.

Moreover, if logical consequence is not ruled out on the grounds of being an inferentialist-friendly logical notion, then it looks like the sort of deflationism involved no longer has anything to do with *mere expressive device* deflationism. Rather, the deflationist position now appears to be that consequence is deflatable *in virtue of being* an inferentialist-friendly logical notion. So maintaining that only inferentialist-friendly notions yield plausible MEDD arguments cannot save the equi-plausibility thesis from trivializing.

The upshot is that MEDD about any sentential relation is as plausible about MEDD about consequence. For any sentential relation we can introduce a predicate and corresponding sentential connective expressing the relation such that the main role of the predicate is both expressive and underwritten by a pair of rules completely parallel to the C-rules. Since there are substantive and non-substantive sentential relations, there must be something wrong with the argument from MEDD about consequence. It simply isn't true that *all* sentential relations are equally plausibly deflatable. The problem with the argument, I shall now argue, is that the analogy fails.

4   The disanalogy between truth and consequence

There are two crucial points of disanology in the arguments for MEDD about truth and consequence: the first concerns the third premises (T3) and (C3) and the second the T- and C-rules. Recall that (T3) claims that the T-rules give us no reason to think that the truth predicate picks out a substantive property. What justifies this premise? One thought is that the T-rules allow the elimination of all traces of reference to truth (in suitable contexts, e.g. *not* in generalizations, self-reference and indirect agreement). Clearly the C-rules do not allow the elimination of reference to logical consequence in similarly suitable contexts since they allow only the swapping of the consequence predicate with the entailment connective, where each refers in different ways to logical consequence. Recall, however, that this point about eliminability does not mark out a relevant disanalogy according to Shapiro because, unlike certain other brands of deflationism, it is not part of MEDD about consequence or truth that consequence or truth be in any sense eliminable.[4]

Yet there *is* something less plausible about (C3) when compared with (T3). What is it about the C-rules that gives us no reason to think that the consequence predicate picks out a substantive property? It cannot be anything about the eliminability of the notion of logical consequence, since there is no such eliminability. And it cannot be the mere fact that the C-rules underwrite the expressive role of the consequence predicate, for then the Janned-rules would equally give us no reason to think that 'is Janned' picks out a substantive property. Indeed, there isn't much reason to think (C3) is true, not even if one holds MEDD about truth. On the other hand (T3) has independent plausibility from the fact e.g. that the T-rules permit the eliminability of reference to truth (in suitable contexts) even if that eliminability is not supposed to be part and parcel of MEDD about truth.

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[4]The primarily expressive function of the truth predicate implies that reference to truth, outside of certain expressive purposes, *is* eliminable. When the truth predicate isn't playing its expressive role, reference to truth will be eliminable. In an important sense, then, the eliminability of reference to truth *is* part of MEDD about truth.

Why else would (T3) be plausible? (Recall that if (T3) isn't plausible, neither is MEDD about truth, and thus the equi-plausibility thesis loses any import.)

The second point of disanalogy concerns the interpretation of the C-rules. It is crucial to the argument for MEDD about consequence that the C-rules be read so that in each the conclusion *logically follows from* the premise. If they are read as anything weaker than strict implications they will fail to secure transparency in the contexts required for the expressive role of the consequence predicate to be underwritten by them (i.e. the C-rules). In fact, transparency may even require that they be read as strictly stronger than strict implications—indeed, as logical entailments.

There are still other reasons (besides those concerning transparency) that suggest the C-rules need to be read as logical entailments. For if they are read so that the premise *merely* strictly implies the conclusion, the failure of the rules to preserve truth in all logically possible circumstances brings (C3) into doubt. The fact that the rules do not apply generally suggests that there is a substantive feature of logical consequence that explains precisely the cases under which the C-rules fail and those under which they hold. Why else would the rules necessarily—in the merely alethic rather than logical sense—preserve truth? It is not clear any answer could be given without positing consequence to be a substantive property. It follows that the plausibility of the argument for MEDD about consequence requires that the C-rules be taken as logical entailments.

But this need to read the C-rules as logical entailments introduces a circularity into the argument for MEDD about consequence that is not present in the case of truth. The circularity is this. The C-rules are to suggest that the consequence predicate picks out no substantive property. However, this is only plausible if the rules themselves do not essentially invoke the very relation they suggest is not a substantive property. Shapiro may not think eliminability is part of MEDD, but if (contra Shapiro) it must be (because the plausibility of third premises of MEDD arguments hinges on it) then there is a sense in which reference to consequence can never be eliminated in the argument for MEDD about consequence—for the C-rules themselves must be regarded as logical entailments.

Notice that some of these considerations apply equally to MEDD about truth: the T-rules must too be regarded as logical entailments lest the T-rules fail to secure full transparency. The difference in this case, however, is that there is no threat of circularity since entailment needn't be thought of in terms of *truth* preservation. Entailment can be spelled out in terms quite independently of any talk of preservation of *truth*, even if such spelling out implies that entailment necessarily preserve truth. The fact that the T-rules must be taken as logical entailments in the argument for MEDD about truth brings out an important difference between MEDD and other forms of deflationism which do not require the T-rules (or the corre-

sponding T-schema) to be read in such a way. Other forms of deflationism may read the T-schema as something other than logical equivalences, such as "cognitive equivalence" and strict implication (see e.g. [Field, 1994] and [Horwich, 1998] respectively), since they do not require that the expressive role of truth be underwritten by the T-rules alone.

5 MEDD about falsity

Deflationists about truth are typically also deflationists about falsity. In particular, MEDD about falsity claims that the expressive role of falsity is underwritten by the following rules:

$$\text{F-Intro } \frac{\text{not-}p}{\text{'}p\text{' is false}} \qquad\qquad \text{F-Elim } \frac{\text{'}p\text{' is false}}{\text{not-}p}$$

The F- and C-rules look exactly analogous, and this gives Shapiro a defense against certain objections to the equi-plausibility thesis. Any objection against the equi-plausibility thesis that is equally an objection against the similar, and let us assume correct, thesis concerning MEDD about truth and falsity can't be a good objection, the defense goes, at least not by the deflationists own lights. Here is one such objection that Shapiro considers to which he uses this defense. The conclusion of the argument for MEDD about consequence cannot be right since the C-rules make essential use of an entailment connective whose nature is open to "substantive enquiry" [Shapiro, 2011, p. 328]. Shapiro responds to this objection by noting that the same is true concerning MEDD about falsity: the argument makes essential use of a negation connective whose nature is also open to substantive enquiry. Thus, Shapiro concludes, the objection is not convincing, assuming that MEDD about truth and falsity are on equal footing.

I agree that the objection is unconvincing but not because it equally undermines the correct thesis that MEDD about truth and falsity stand and fall together. It fails because whatever "substantive enquiry" or substantive theorizing amounts to, the fact that a property is open to substantive enquiry need not entail that the property is substantive. Surely people can substantively theorize about non-substantive properties. There is, nonetheless, an important disanalogy between the arguments for MEDD about falsity and consequence such that arguments put against the latter do not necessary carry over, *mutatis mutandis*, to the former. The disanalogy is this.

Given the usual definition of falsity as truth of negation, viz. ' 'p' is false' iff ' 'not-p' is true' (where 'iff' is understood as definitional equivalence), *the F-rules are merely special cases of the corresponding T-rules*. The F-rules are simply rewritings of the following rules:

$$\text{F-Intro } \frac{\text{not-}p}{\text{`not-}p\text{' is true}} \qquad\qquad \text{F-Elim } \frac{\text{`not-}p\text{' is true}}{\text{not-}p}$$

If we interpret them as universally quantifying over all their instances, the F-rules are *logically equivalent* to the T-rules.[5] It is no wonder, then, that deflationism (including MEDD) about truth and falsity stand or fall together.

The C-rules, however, are neither special cases of, nor are they logically equivalent to, the T-rules. Suppose, like falsity, we define logical consequence in terms of truth of entailment, so that 'p' has 'q' as consequence iff 'that p entails that q' is true. Then the question is whether the C-rules are, on this definition, special cases of the T-rules, suggesting—just as in the case of falsity—that truth is deflatable if and only if consequence is. It is not difficult to see, however, that the C-rules are not special cases of the T-rules: the consequence predicate is binary whereas the truth predicate is not.

Conversely, there is equally no hope of setting things up so that the T-rules turn out to be special cases of the C-rules. For that to be the case we would need to find a sentence 'q' involving only 'p', the consequence predicate and the entailment connective which implies ' 'p' is true'. But what sentence could 'q' be? It cannot be the obvious candidate, ' 'not-p' has p as consequence', for truth need not be logical truth. It can be true that ' 'p' is true' (e.g. ' 'Snow is white' is true') without it being true that ' 'not-p' has p as *logical* consequence', i.e. that p is a *logical* truth. There is therefore no reason to think that the arguments for MEDD about falsity and consequence are as similar as it might at first seem. The F-rules may appear to be exactly analogous to the C-rules but appearances here are entirely misleading.

6   Conclusion

While I think the equi-plausibility thesis does not in the end succeed and that on many popular conceptions of consequence the relation is indeed a substantive one, there is at least one conception of consequence that could be viewed in a deflationary spirit. That conception takes logical consequence to be the smallest relation which necessarily preserves truth from premises to conclusion, where both necessity and truth are understood in deflationary terms. A Lewisian view of necessity, for instance, might qualify as deflationary since on that view necessary truths need not mark out

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[5]This assumes a certain feature of the underlying logic, viz. that every sentence is logically equivalent to a negation. If this is contentious, the stronger point about logical equivalence (versus being a special case of the T-rules) is only meant for emphasis. It is certainly not essential to the point at hand.

any metaphysically natural property.[6] But I doubt such a conception of consequence qualifies as *logical*—i.e. I doubt strict implication and logical entailment exactly coincide. Consequence has a formality aspect that strict implication lacks. Shapiro has nonetheless given us reason to explore notions besides truth and falsity that may just fit the deflationary mold.

References

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[6]All sentences that are necessary truths would, of course, express the same proposition, viz. the set of all worlds. In that sense the necessary truths have a property in common, but it is far from clear that this property is a substantive (i.e. sufficiently natural) one.