

Challenges to Deflationary Theories of Truth

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In (2011), I present a general account of deflationism about truth (henceforth, ‘T-deflationism’) and dispel some misimpressions about what that view involves. As I mention there (Ibid.), while all truth theorists can accept that the truth-predicate functions as a device of semantic descent, T-deflationists go one step further, maintaining that this is the only—that is, the *sole*—function of the truth-predicate. Saying that it is just such a device implies that it is not also an important, directly informative predicate. Thus, it is not a predicate that attributes a property to sentences-under-an-interpretation (or to propositions, or what have you) to which it is applied; this is in line with T-deflationism.

I also noted [ibid.] that many of the objections to T-deflationism are best seen as directed at particular deflationary theories of truth, e.g., Disquotationalism, Minimalism, Prosententialism, etc. and are thus not directed at T-deflationism, understood as a *genus* of which the particular theories of truth are *species*. While such objections must be adequately addressed, insofar as they turn on specific features of particular deflationary theories of truth, they are, not, *per se*, objections to T-deflationism.¹ But this raises a question: What would be a problem for the view? In this paper, I address some of the chief challenges, or problems, for T-deflationism, viz., the Generalization Problem, the Conservativeness Argument, and the Success Argument.

1 The Generalization Problem

T-deflationists, like Field (1994, 2008), Leeds (1978), Quine (1970) and others, have noted that one of the main purposes for having a truth predicate is that it allows for the formulation of generalizations, which enable us to express our commitment to claims—sentences or propositions—towards which we cannot express that commitment directly.

As Quine (1970, p. 12) notes,

We may affirm the single sentence by just uttering it, unaided by quotation or by the truth predicate; but if we want to affirm some infinite lot of sentences, then the truth predicate has its use.

He (Ibid., p. 80) illustrates how the truth predicate can be so employed:

The truth predicate proves invaluable when we want to generalize along a dimension that cannot be swept out by a general term. The easy sort of generalization is illustrated by generalization on the term ‘Socrates’ in ‘Socrates is mortal; the sentence generalizes to ‘All men are mortal’. The general term ‘man’ has served to sweep out the desired dimension of generality. The harder sort of generalization is illustrated by generalizations on the clause ‘time flies’ in ‘if time flies then time flies’. We want to say that this compound when the clause is supplanted by any other; and we can do no better than to say just that in so many words, including the word ‘true’. We say “All sentences of the form ‘If p then p ’ are true.”

It is now common to expect one’s theory of truth to prove the generalizations that Quine notes, e.g., ‘All sentences of the form ‘If p then p ’ are true’, at least where ‘ p ’ is ‘true’-free. The problem—the Generalization Problem (henceforth, ‘GP’), as it is standardly called—is that, without additional resources, T-deflationists, who rely on the truth schema,

(TS) $\langle A \rangle$ is true iff A ,ⁱⁱ

cannot prove such generalizations.ⁱⁱⁱ Thus, the GP captures the worry that T-deflationary theories are inadequate to explain our commitment to certain general facts that involve ‘true’.

In an important sense, the GP should not be seen as a “new” problem. Indeed, while it appears to test, or challenge, any T-deflationary theory, the problem was clearly flagged by Tarski (1983).

Although Tarski had already assigned primacy of place to the instances of (TS) (where, for present purposes, an instance results from substituting a sentence of a given language, L, for both quoted and unquoted occurrences of ‘p’), he did not see those instances as characterizing truth, viz., as taking the totality of instances as *axioms* of one’s theory of truth-in-L.^{iv} Moreover, even where such instances are taken as theorems, Tarski pointed out that they are insufficient for the provability of a generalization like

(1) All sentences of the form ‘if p then p’ is true,

since (TS) is ω -incomplete.

We arrive at a related problem, when we combine a reliance on the instances of (TS) with Quine’s (1970, 1990) discussion of the utility of the truth predicate. He (1990, p. 81) considers (1), the purpose of which is to generalize over sentences like

(2) If it is raining then it is raining, and

(3) If snow is white then snow is white.

In addition to semantically descending from (1) to get (2) and (3), he also pointed out that we want to be able to generalize over those sentences and, by semantically ascending, get (1). But, as Tarski (1983) noted, this feat may not be achieved, given only a commitment to (the instances of) (TS). To be sure, from (TS) and (1), we can prove (2) and (3) but, given the finitude of deduction, equipped only with the instances of (TS), we cannot prove its generalization. As he noted, since anything provable from the totality of instances of (TS) is provable from just finitely many of them, any theory that takes the

totality of instances of (T) to characterize truth will be unable to prove any of the generalizations on the order of (1).

This suggests that just a commitment to the truth schema is not enough—that something more is needed, if deflationary theories of truth are able to prove such generalizations. But why must they be able to prove these ‘true’-involving generalizations? I turn to this question, in the next (sub)section.

1.1 Providing Generalizations?

I will take it as given that any reasonable theory of truth will allow for the *expressive formulation* of such generalizations. While we need to be able to formulate ‘true’-involving generalizations, we should distinguish the question of why we need to be able to *establish* them from that of why we need to be able to *prove* them. This distinction is important, since, while it is uniformly recognized that if we wish to assert a generalization, we must be in a position to establish it (as true, correct, etc.), there really is no need to prove *all* of the ‘true’-involving generalizations that people aim to assert.^v

For example, we need not—indeed, most likely cannot—*prove* the likes of

(4) Everything G.E. Moore said about ‘good’ was true,

in order to be sanctioned to assert it. Rather, like anyone who aims to make such an assertion, a speaker will be entitled to conclude (4) by consideration of the meaning of ‘true’, together with *induction* on the basis of a (large) class of instances. For this reason, the requirement that T-deflationists be able to prove some generalizations is restricted to *certain* ‘true’-involving generalizations, e.g., (1), the assertibility of which requires a

proof. Here, an appeal to simple induction and evidence regarding previous cases will not help us.

Given the GP, one might wonder: Why must T-deflationists be able to prove the likes of (1) and its ilk? For what follows, I consider three reasons.

Horwich (2009) imposes a condition that governs the acceptability of an account of the meaning of 'true'. Say that we accept at least some 'true'-involving propositions on the order of

(5) that every proposition of the form $\langle p \rightarrow p \rangle$ is true.^{vi}

Call the set of such propositions 'A'. According to Horwich (ibid.), an account of the meaning of 'true' will be deemed adequate only if it aids to explain why we accept the members of A, where such *explanations* amount to proofs of those propositions by, among other things, employing an explanatory premise that does not explicitly concern the truth predicate. So, one reason it is important to be able to prove a 'true'-involving generalization is because doing so serves as a condition of adequacy for an account of the meaning of that term.

Differently put, one might argue that one who grasps the concept of truth and that of the relevant conditional should be said to know (5).^{vii} But if a given account of truth, together with an account of the conditional (along, perhaps, with other logical notions), does not entail (5) then it does not provide an acceptable account of what truth is. Hence, in order to give an acceptable account of what truth is, our account of truth, together with other considerations (e.g., accounts of the meanings of the connectives), must entail 'true'-involving generalizations like (5).

Here is another reason for thinking that generalizations like (5), etc. must be proved. A theory of the meaning of 'true' should explain our acceptance of propositions like that

expressed in (5), which, as Gupta (2005) and Hill (2002) have emphasized, should be seen as *a priori*, by one who possesses the concept of truth (and who grasps the relevant logical concepts). But if such a proposition can be seen *a priori* to be correct on the basis of a grasp of the concept of truth (and that of the relevant logical concepts) then a theory that purports to specify the meaning of ‘true’ should serve the task of explaining our acceptance of that proposition. But if an account of the meaning of ‘true’ is to explain our acceptance of an *a priori* proposition such as (5) then it must be possible to derive the proposition from one or more of the clauses of which the definition is comprised.^{viii}

I have thus far considered some adequacy conditions for an account of the meaning of ‘true’. One might also contend that a good theory of truth must be able to explain all of the facts about truth. Since ‘true’-involving generalizations are among those facts, it would follow that a good theory of truth must explain those generalizations, where to *explain* those generalizations just is to be able to prove them.

This last point is worth emphasizing. ‘True’-involving generalizations, like (5) and ilk, do seem to be part of an overall theory of truth. As such, it seems that they ought to be provable from our theory of truth, if that theory is to be deemed acceptable. If they are not provable (alternatively: not derivable, in some sense of “derive”) from a given theory of truth then it would seem that that theory would be too weak to meet our needs. So, any theory of truth that does not deliver such ‘true’-involving generalizations would be too weak to meet (at least some of) our needs for having the truth predicate in the first place.

The jury is still out as to whether T-deflationists will be able to resolve the GP. Rather than seeing this as a problem for T-deflationism, it is best to treat it as a challenge—one that has not yet been met. One reason for being sceptical about whether

the challenge will be met is that there seem to be fairly good reasons for thinking that even if T-deflationists were to be given additional resources, they could not prove any infinite generalizations (and, while they can prove certain finite generalizations, in those cases the truth predicate would, indeed, be dispensable.) So, T-deflationists do not appear to have the resources available to prove generalizations of the sort we saw previously. So, what can be done about this?

It seems unacceptable for T-deflationists to deny that such generalizations do not need to be proved. After all, they presumably *accept* such generalizations and wish, at least sometimes, to assert those generalizations. Perhaps they will deny that it is the job of a theory of truth to prove such generalizations? But this seems also to be unacceptable—if not the theory of truth, what would provide the means for so-establishing? In the case of something like (1), the sentence seems to be “about” the conditional; hence, it would seem, at least *prima facie*, that nothing beyond a theory of truth (and logic) will do the trick. If that is insufficient to facilitate the proof of that sentence then, one might think, so much the worse for T-deflationism. At any rate, and at present, the challenge remains. For attempts to prove at least some such ‘true’-involving generalizations, see Field (1994, 2001, 2005), Hill (2002) and Horwich (1998a, 2001, 2009). For replies to Horwich, see Armour-Garb (2004, 2011), Gupta (1993), and Soames (1999).

2. T-deflationism and the Explanatory Role of Truth

One of the chief premises in the argument for T-deflationism is that there is no *explanatory* role for truth beyond the logical or expressive ones that the truth predicate performs, as a device of semantic descent. A standard objection to T-deflationism is that, *contra* their claim, there is more to truth than what they contend; that is, the truth predicate plays an explanatory role that is incompatible with standard deflationary theories of truth.

There are at least two pressing objections, or challenges, to T-deflationism, each of which aim to establish that truth has an explanatory role that requires the T-deflationist to go beyond what is properly thought of as part of her theory. They are: the Conservativeness Argument and the Success Argument.^{ix} Although both arguments raise different sorts of concerns for T-deflationism, it is best to see them as, at base, raising a single worry: that truth goes beyond what standard T-deflationists are prepared to admit.

I have said that the Conservativeness and the Success arguments, if correct, both raise the specter of there being roles for truth that go beyond what T-deflationists are prepared to admit. But there is a significant difference between the two arguments. As we shall see, if the Conservativeness argument is correct then, *contra* what T-deflationists maintain, truth is a metaphysically substantial property. By contrast, while the Success argument is not concerned with establishing that truth is metaphysically weighty, if correct, it shows that something like a correspondence theory of truth will be needed, if we are to explain the nature and role of content in standard psychological explanations. In what follows, I spell out the arguments and, where possible, point to responses on behalf of T-deflationists.

2.1 The Conservativeness Argument

The Conservativeness Argument (also called the “Reflection Argument”, in Ketland (2005)) concerns the apparent incompatibility of T-deflationism with the Gödelian Incompleteness phenomenon in mathematics. The chief worry is that if the property of truth is metaphysically “thin” (if there is one, of course) then it should not contribute to our overall knowledge of the world. What the Conservativeness argument aims to show is that truth does so contribute.

Central to the conservativeness argument is the technical notion of *conservativeness*. Let A be a theory that is formulated in a formal language L and let A' be an extension of A in an expanded language L' . We say that A' is *conservative* over A (or: is a conservative extension of A) if, for any sentence, Φ , in L , if Φ is a consequence of A' then Φ is a consequence of A .

Advocates of the Conservativeness Argument—primarily Shapiro (1998, 2005) and Ketland (1999, 2005)—maintain that deflationary theories of truth should be conservative in the sense that if L does not contain any terminology for truth but if L' expands L by adding a truth predicate T then the resultant theory, A' , formulated in L' , should be a conservative extension of L . More specifically, for present purposes, if we assume that our *base language*, L , for a given arithmetical theory, A , includes terminology for the natural numbers but is ‘true’- free, then, by invoking axioms or rules for the notion of truth, T-deflationists are committed to the resultant truth theory being conservative over the arithmetical theory.

Shapiro (Ibid.) and Ketland (Ibid.) both argue that conservativeness is an essential feature of what the non-substantiality of truth amounts to, where being non-substantial is a central feature of T-deflationary theories.^x The leading thought is that if adding the truth predicate to a language enables us to prove something in that original ('true'-free) language that could not have been proven before the truth predicate was added then 'true' has an *explanatory* role that goes beyond its expressive one.

The Conservativeness Argument is best seen as presenting a dilemma. Before presenting the dilemma, we should note two constraints that have been imposed, by Shapiro and Ketland, on deflationary theories of truth. The first is what Ketland (2005, p. 77) calls the *conservation constraint*:

Conservation Constraint: On a deflationary conception of truth, given one's non-semantic base theory, *S*, one should not be able to prove new results for this domain merely by invoking axioms or rules for the notion of truth.^{xi}

The second constraint regards the *reflective adequacy condition*.

Reflection Constraint: We should be able to prove the reflection principle, 'All theorems of *S* are true', given a base theory, *S*, that is consistent and sufficiently rich, e.g. one that is adequate to the elementary arithmetic of natural numbers.

What reflective adequacy ensures is that when we add a truth theory to such a non-semantic theory, *S*, the resultant theory ought to prove 'All theorems of *S* are true', which essentially expresses the *soundness* of *S*.^{xii} Reflective adequacy can be seen as serving as a generalization of *material adequacy*: A truth theory ought to be able to prove 'Φ is

true', from a single sentence, Φ (and *vice versa*), and, from a consistent theory (e.g.) S, it ought to be able to prove 'All theorems of S are true'.

Given the afore-noted constraints, we can now turn to the proof that drives the Conservativeness argument. Now, as Azzouni (1999), Field (1999), Halbach (2001), Ketland (1999, 2005), and Shapiro (1998) point out, if our T-deflationist begins with a non-semantical base theory, S (e.g., PA), that is sufficiently rich so that there is a statement, 'S is consistent', which can be expressed in the language of S, and if she extends the theory by adding Tarski's inductive axioms for truth without expanding the induction scheme to formulas that contain the truth predicate then the extension will be conservative, which is in line with the Conservation Constraint. However, in that case, although all theorems of S will be true, the Global Reflection Principle, 'All theorems of S are true', cannot be proved in the resultant theory, in violation of the Reflection Constraint.

This problem can be remedied: If Tarski's *inductive definition* is added to S and the induction scheme in S is expanded to formulas in the new language that contain the truth predicate then 'All theorems of S are true' can be proved. But from 'All theorems of S are true', we can deduce 'S is consistent' which, while expressible in the base language, was unprovable in S, by Gödel's second incompleteness theorem. Hence, the addition of a truth-theory to S enables us to prove a statement, which can be expressed in the language of S, that S itself could not prove, which means that the addition of this truth-theory to S is a non-conservative extension, in violation of the Conservation Constraint. So, if we abide the Reflection Constraint and extend our theory in order to prove 'All theorems of S are true', then we wind up violating the Conservation Constraint; and if we

abide the Conservation Constraint then we cannot prove ‘All theorems of S are true’, in violation of the Reflection Constraint.

We might thus present the Conservativeness Argument as follows:

- 1) Deflationary theories of truth must be conservative
- 2) Adequate theories of truth must be reflective
- 3) Theories of truth that are reflective will be non-conservative

Therefore,

- C) Deflationary theories of truth are inadequate.

T-deflationists, and advocates thereof, deny the soundness of the conservativeness argument, rejecting one or another of its premises. So, Halbach (2001) rejects a version of (1); Azzouni (1999, 2006) presents two arguments the first of which denies the validity of the argument, the second of which rejects (1); Tennant (2002, 2005, 2010) rejects a version of (2);^{xiii} and Field (1999) rejects a version of (3).^{xiv} For illuminating replies, see Ketland (2005, 2010) and Shapiro (2005).

2.2 From The Conservativeness Argument to the Success Argument

Before turning to the Success Argument, it bears noting an interesting connection between it and the Conservativeness Argument.

The proof that drives the Success Argument runs as follows:

- P_{s1} (1) If we have true beliefs about how to achieve our goals, in general, we will attain them.

(2) We have true beliefs about how to achieve our goals;
Therefore,

(3) In general, we will achieve our goals.

As discussed below, the T-deflationists have provided responses to the Success Argument. But it is useful to consider what Putnam (1978) gleaned from P_{s1} .

P_{s1} is an *explanatory* proof of a non-logical statement that does not involve the truth predicate. But the argument uses as a major premise a law-like generalization that involves the notion of truth. Since truth enters such a (law-like) generalization, in order to establish the non-logical statement, which does not involve truth, Putnam concludes that truth has a substantive nature.

Now return to the Conservativeness Argument. As we saw there, we have a non-logical conclusion, 'S is consistent', which does not involve truth, deduced from an argument the major premise of which, 'All theorems of S are true', is a generalization that does involve truth. As such, in both cases, it seems that we will have to conclude, *contra* T-deflationism, that truth is substantial.

2.3 The Success Argument

As noted, the Success Argument takes off from the seemingly uncontroversial thought that true beliefs lead to successful actions.^{xv} Here is a version of the Argument, originally proposed by Putnam (Ibid.):

Let us grant that if an agent has true beliefs about how to Φ , she is more likely to Φ (if she wants to). Put differently, if an agent has beliefs about how to Φ that are true then she is more likely to get what she wants. It seems, then, that *truth* is being appealed to in order to explain successful behavior from which it follows that truth has an explanatory role that goes beyond its expressive one—it contributes to explaining practical success. Since, according to T-deflationists, truth (or, more specifically, the truth predicate) has merely a logical, or an expressive role, if truth does play a role in the explanation of the success of such behaviors then the truth predicate has a role beyond its expressive one, in which case T-deflationism is false. Hence, T-deflationism is false.

Different T-deflationists provide different sorts of responses to the success argument.^{xvi} For what follows, I consider 2 sorts of replies.

Horwich (1998a, pp. 22-3 and 44-6) attempts to provide a full explanation of how it is that true beliefs contribute to practical success without appealing to anything more about truth than the instances of (ES). Simplifying somewhat, we can see how one of those explanations might go. So, consider how Horwich might explain how Bill's true belief contributes to his success at finding a beer:

- (i) Bill wants <Bill will find a beer>
- (ii) Bill believes <Bill goes to the 'fridge→Bill will find a beer>
- (iii) [Bill wants <Bill goes to the 'fridge> & Bill believes < Bill goes to the 'fridge→Bill will find a beer>]→Bill goes to the 'fridge.
- (iv) Bill goes to the 'fridge.
- (v) Bill's belief is true.
- (vi) < Bill goes to the 'fridge→Bill will find a beer> is true.
- (vii) < Bill goes to the 'fridge→Bill will find a beer> is true iff Bill goes to the 'fridge→Bill will find a beer.
- (viii) Bill goes to the 'fridge→Bill will find a beer
- (ix) Bill will find a beer.

Notice that if this sort of explanation generalizes, then Horwich will have explained how true beliefs contribute to success without ever relying on anything like correspondence or, indeed, any truth-related resources that go beyond Minimalism. For a worry about Horwich's approach, see Gupta (1993) and, for a response, see Hill (2002).

For his part, while Field (2001, pp. 153-6) would not deny that we use 'true' in explanations, he does note that for such a use to be compatible with the dictates of T-deflationism, it must be performing its generalizing role. And he goes on to argue that in explanations of the success of human behavior, 'true' is just performing that role.^{xvii} As he notes, we enlist the truth predicate when we are not in a position to set out the full explanation as to how an agent's beliefs correlate with the external world, in order to explain why her behavior is successful in achieving certain results. But, as he goes on to show, this does not create any problem for the T-deflationist. For details, see Field (Ibid.). For a different answer to the challenge that the Success Argument presents, see Leeds (1995). And for a recent attempt to re-cast the Success Argument, see Damnjanovic (2005).

3. Concluding Remarks

In this article, I have discussed some of the more pressing problems, or worries, for T-deflationism. But one of the issues that I did not discuss in this paper regarded the semantic paradoxes. This is not because I think that the paradoxes are unimportant—far from it. Rather, it is because the semantic paradoxes are *everyone's* problem. They are

neither more vexing, nor less worrisome, for the T-deflationist than for any other truth theorist. For that reason, I have not addressed the issue in this paper. For considerations regarding T-deflationism and the semantic paradoxes, see Armour-Garb and Beall (2001), (2003), Field (2008), and the papers collected in Armour-Garb and Beall (2005), Beall and Armour-Garb (2005) and Priest, Beall and Armour-Garb (2004).^{xviii}

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- ⁱ As noted, this enables us to ignore a host of objections commonly, but incorrectly, associated with T-deflationism. For example, there are objections, such as Lewy’s (1947) argument, which argues for the contingency of the instances of the truth schema. But this argument, whatever are its merits, only applies to particular deflationary accounts—in particular, those that take sentences as primary truth bearers. But such a worry, while it may be serious for a *sententialist* like Field (although, to be honest, I do not think that Field ought to be vexed by Lewy’s argument), does not arise for a *propositionalist* like Horwich.
- ⁱⁱ Since different truth theories take different things—utterances, sentence tokens, propositions, etc.—to be the primary bearers of truth, and since I intend the claim that follows to cover all deflationary theories of truth, I leave open the interpretation of the name-forming device that I employ in (TS). T-deflationists also offer different readings of the biconditional (‘iff’). For what follows, please read it as a material biconditional.
- ⁱⁱⁱ For details, see Halbach (2011), pp. 57-9.
- ^{iv} What Tarski *did* hold (1983: 187) was that a good definition of truth would be one that implied an attribution of truth-conditions to all sentences, *s*, of a given language, *L*, of the form “*s* is true iff *p*”, where that sentence that goes in for “*p*” translates *s*.
- ^v Since the issue at hand does not specifically trade on a particular conception of ‘proof’, I shall assume a rather generic reading of that notion, viz., as a general notion under which “derivation” and “deduction” are subsumed.

^{vi} For present purposes, I shall assume that we are dealing with propositions, rather than sentences, although this assumption is dispensable (and is only in place so as to comport with Horwichian Minimalism).

^{vii} Assuming, of course, that (5) is correct (and, if not, please substitute a (5)-style generalization that is).

^{viii} This creates a problem for a Minimalist like Horwich. If, as noted, a theory of truth will be adequate only if it explains our acceptance of *a priori*, truth-involving propositions then it must derive such propositions from one or more clauses that comprise the definition for ‘true’. Let us suppose that one such proposition is expressed by (5).

Restricted to the resources available through Horwich’s Minimalism, we can show that (12) cannot be derived. Here is how. If (5) could be derived then it would have to be derived from instances of (ES). But this is problematic. First, the instances of (ES) do not contain any universal generalizations; so, (ES) will not include

(5*) $\langle \text{Every proposition of the form } \langle p \rightarrow p \rangle \text{ is true} \rangle$ is true iff every proposition of the form $\langle p \rightarrow p \rangle$ is true.

But, second, in general, there cannot be a valid derivation of a universal generalization from a set of particular propositions unless that set is inconsistent. Now, since, *ex hypothesi*, every instance of (ES) is consistent, it follows that there cannot be a derivation of (5) that takes us from the instances of (ES). This is a purely logical point. As such, considerations of pure logic appear to dictate that our acceptance of (5) cannot be explained by the definition of truth that is provided by Horwich’s Minimalism. This is a serious problem for the theory but it is not necessarily a problem for T-deflationism. What would be a problem for T-deflationism is if none of the species of which T-deflationism is genus could prove such generalizations.

^{ix} There is a third worry that I shall not be able to discuss in this paper, which is known as the “Determination Argument”. The Determination Argument, originally presented by Lewis (1972), but further developed by Bar-On, Horisk, and Lycan (2001), aims to show that whatever accounts for the meaning of a sentence, it must at least include truth conditions, *contra* the deflationist’s claim that truth conditions play no role in determining, or explaining, the meaning of a sentence. For an important reply to Bar-On, Horisk, and Lycan (*Ibid.*), see Patterson (2007).

^x Shapiro (1999, p. 97) states that conservativeness is a necessary condition for a theory of truth to be deflationary, while Ketland (1999, p. 79) equates non-substantiality with conservativeness, the former feature of which he identifies with deflationary accounts of truth.

^{xi} Put differently, adding a truth predicate to a given theory should not enable us to prove anything in the original base language that we could not prove before adding the truth predicate.

^{xii} See Ketland (2005), for details.

^{xiii} According to Tennant, if the impetus for insisting on proving reflection principles is so that the relevant Gödel sentence, ‘S is consistent’, is a “truth-theoretic” consequence of PA then, since there is another way of establishing that sentence, which is not deflationarily illicit, one need not accept (2). Tennant goes on to show (2005, p. 92) that one can establish the Gödel sentence while accepting a schematic principle of uniform primitive recursive reflection, which, while adequate to the proof of the Gödel sentence for S does not invoke the truth predicate at all. For a response, see Ketland (2010). For a response to Ketland (2010), see Tennant (2010).

^{xiv} This is not to say that Field denies that the resultant theory will be non-conservative. He (*Ibid.*, p. 537) does concede that if a theory of truth that involves only axioms that are essential to it have non-trivial consequences that are about matters that do not involve truth then we should not call that notion of truth “deflationary”. But he (1999) denies that the ‘true’-involving instances of induction are truth-theoretic. This move involves granting much of what Shapiro (1998) and Ketland (1999, 2005) initially argue without seeing the resultant non-conservativeness as creating a problem for deflationism, even given adherence to the “conservation constraint”. For a discussion of Field’s (1999) response to the Conservativeness Argument, see Shapiro (2005).

^{xv} This sort of “success-based” reasoning is fairly common in philosophy. It is probably most familiar in philosophy of science, where success arguments aim to support realist views about unobservable objects.

^{xvi} See, for example, Williams (1986).

^{xvii} Field (1986) considers what seems to be a further challenge that the Success Argument appears to present: provide theories of content (i) that are compatible with the T-deflationist’s proposed theory of truth and (ii) that actually explain how the truth of an agent’s belief explains why her behavior was successful. He (2001) takes up the challenge, arguing that that the explanation (e.g.) as to how a seasoned pilot manages to land a plane safely will not rely on an assignment of truth conditions to mental states. The discussion is important but I suppress it here, given space considerations.

^{xviii} Thanks to Jeff Ketland and an anonymous referee, for very helpful comments.