

Disquotationalism, Minimalism, and the Finite Minimal Theory

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Recently, Paul Horwich has developed the minimalist theory of truth, according to which the truth predicate does not express a substantive property, though it may be used as a grammatical expedient. Minimalism shares these claims with Quine's disquotationalism; it differs from disquotationalism primarily in holding that truth-bearers are propositions, rather than sentences. Despite potential ontological worries, allowing that propositions bear truth gives Horwich a *prima facie* response to several important objections to disquotationalism. In section I of this paper, disquotationalism is given a careful exegesis, in which seven known objections are traced to the disquotational schema, and two new objections are raised. A version of disquotationalism which avoids two of the seven known objections is recommended. In section II, an examination of minimalism shows that it faces eight of the nine objections facing disquotationalism, plus a new objection. In section III, a finite formulation of minimalism proposed by Ernest Sosa is shown to meet five of the nine objections facing disquotationalism as well as the objection new to minimalism, though it faces another new objection.

I Disquotationalism

Disquotationalism shares ties to both the redundancy theory of truth and Tarski's theory of truth. The primary intuition underlying the redundancy theory is captured in Frank Ramsey's claim that 'it is evident that "it is true that Caesar was murdered"' means no more than that Caesar

was murdered'.¹ In general, the intuition is that the sentence formed by prefixing a sentence with the truth operator 'it is true that,' or by attaching 'is true' to a quoted sentence, says the same thing as the bald unprefixing or unquoted sentence. Quine, the most prominent exponent of disquotational theory,² takes the redundancy theory to be 'the perfect theory of truth' for cases where truth is predicated of a quoted sentence:

In speaking of the truth of a given sentence there is only indirection; we do better simply to say the sentence and so to speak not about language but about the world. So long as we are speaking only of the truth of singly given sentences, the perfect theory of truth is what Wilfrid Sellars has called the disappearance theory of truth.³

According to disquotationalism, the truth predicate has a more important application where the sentence of which truth is predicated does not appear explicitly.

Where the truth predicate has its utility is in just those places where ... we are impelled by certain technical complications to mention sentences.... The important places of this kind are places where we are seeking generality, and seeking it along certain oblique planes that we cannot sweep out by generalizing over objects.

We can generalize on "Tom is mortal," "Dick is mortal," and so on, without talking of truth or of sentences; we can say "All men are mortal." We can generalize similarly on "Tom is Tom," "Dick is Dick," "0 is 0," and so on, saying "Everything is itself." When on the other hand we want to generalize on "Tom is mortal or Tom is not mortal," "Snow is white or snow is not white," and so on, we ascend to talk of truth and of sentences, saying "Every sentence of the form p or not p is true," or "Every alternation of a sentence with its negation is true." What prompts this semantic ascent is not that "Tom is mortal or Tom is not mortal" is somehow about

1 F.P. Ramsey, 'Facts and Propositions,' *Proceedings of the Aristotelian Society*, supplemental volume 7 (1927) 153-171, at 157

2 Other prominent disquotationalists include Hartry Field, Stephen Leeds, and Michael Williams. See Hartry Field, 'The Deflationary Conception of Truth,' in *Fact, Science and Morality: Essays on A.J. Ayer's Language, Truth and Logic*, Graham Macdonald and Crispin Wright, eds. (New York: Basil Blackwell 1986) 55-117; Stephen Leeds, 'Theories of Reference and Truth,' *Erkenntnis* 13 (1978) 111-29, and 'Truth, Correspondence, and Success,' *Philosophical Studies* 79 (1995) 1-36; and Michael Williams, 'Do We (Epistemologists) Need a Theory of Truth?' *Philosophical Topics* 14 (1986) 223-42, and 'Epistemological Realism and the Basis of Scepticism,' *Mind* 97 (1988) 415-39. The discussion here focuses on Quine's version of the disquotational theory.

3 W.V. Quine, *Philosophy of Logic*, 2nd ed. (Cambridge, MA: Harvard University Press 1986), 11. 'The disappearance theory' is Sellars' name for the redundancy theory.

Also, it should be clear that Quine views use of the operator 'it is true that' as equally indirectionist, though it does not result in talk about language. In what follows, the truth operator will not be discussed explicitly, except where it raises separate issues.

sentences while “Tom is mortal” and “Tom is Tom” are about Tom. All three are about Tom. We ascend only because of the oblique way in which the instances over which we are generalizing are related to one another.⁴

Thus, for example, the sentence ‘Everything Tolstoy says is true’ is a generalization over all of the things Tolstoy says, abbreviating in five words what would otherwise require the very long sentence which is the conjunction of every sentence Tolstoy says. The abbreviated generalization is formed by quoting every sentence Tolstoy said and attaching to each the predicate ‘is true’; conjoining these redundified sentences; and forming the universal generalization by quantifying over sentences. The first step is licensed by the disquotational schema:

D ‘S’ is true if and only if S

in the right-to-left direction. The disquotational schema uses a single substitutional variable, ‘S’, which ranges over sentences of English.

Conversely, ‘Everything Tolstoy says is true’ is unabridged as [‘s₁’ is true and ‘s₂’ is true and ... and ‘s_n’ is true] where s₁ ... s_n are the sentences said by Tolstoy.⁵ The disquotational schema may be used on each conjunct to yield each sentence said by Tolstoy. Here ‘the utility of the truth predicate is precisely the cancellation of linguistic reference.’⁶ Thus, even where sentences are quantified over, truth is redundant, even if in a roundabout way.⁷

4 Ibid. Cf. also the following passage in W.V. Quine, *Quiddities: An Intermittently Philosophical Dictionary* (Cambridge, MA: The Belknap Press of the Harvard University Press 1987), 214:

The attribution of truth to a statement is equated to the statement itself. This has been called the disappearance theory of truth, but unjustly; the quotation marks are not to be taken lightly. What can justly be said is that the adjective “true” is dispensable when attributed to sentences that are explicitly before us. Where it is not thus dispensable is in saying that all or some sentences of such and such a specified form are or are not true, or that someone’s statement unavailable for quotation was or was not true, or that the libel laws do not apply to true statements, or that you will tell the truth, the whole truth, and nothing but the truth, so help you God.... It is there that the truth predicate is not to be lightly dismissed. If ‘dispensable’ is read as ‘eliminable,’ then Quine is making quite a concession regarding cases where the sentences of which truth is predicated do not appear explicitly. It is charitable to read ‘dispensable’ as ‘dispensable as a metalinguistic abbreviatory device’; that is, some such device is useful and even pragmatically required in ordinary discourse.

5 ‘s₁’ ... ‘s_n’ are substitutional variables.

6 Quine, *Philosophy of Logic*, 2nd ed., 12

7 Alternately, a disquotationalist may understand a sentence such as ‘Everything

Although Quine identifies generalizations as just the place where the truth predicate has its utility, these cases are properly seen as a challenge to disquotationalism. That is, although the claim that the truth predicate is redundant is fairly plausible for sentences in which truth is predicated of a quoted sentence, this claim is unjustified until it is shown that the truth predicate is redundant in the whole range of cases for the language.⁸ Sentences in which the truth predicate is coupled with a quantified noun expression are not handled straightforwardly by the claim that the truth predicate is redundant, and challenge the disquotationalist to account for the truth predicate's redundancy in these cases. Without an account such as the abbreviatory algorithm Quine proposes, disquotationalism's claim that the truth predicate is redundant is unjustified.

Note that an appeal to the redundancy of the truth predicate in the course of the abbreviatory algorithm begs the question as to whether the truth predicate is redundant. Yet there is such an appeal, though it is quite subtle. Note that what is to be preserved in every step of the algorithm is not merely truth value, but meaning,⁹ and that the algorithm

Tolstoy said is true' as a conjunction of the form: [if Tolstoy said 's₁' then s₁ is true, and if Tolstoy said 's₂' then s₂ is true, and ... and if Tolstoy said 's_n' then s_n is true]; and a sentence such as 'Something Tolstoy said is true' as the concomitant disjunction. This version of disquotationalism avoids the meaninglessness objection (see below), but incurs an additional objection which Quine's version does not, namely, that 'Everything Tolstoy said is true' is analyzed as an infinite conjunction, though intuitively it is finite, as Quine's version analyzes it. Although this version of disquotationalism is somewhat popular, it otherwise faces the same objections as Quine's version of disquotationalism, and so is not discussed separately.

- 8 Alternatively, a truth theorist may argue that the truth predicate has different roles, or uses, each calling for its own theory. This is the approach taken by Robert Brandom, 'From Truth to Semantics: A Path through *Making it Explicit*,' in *Philosophical Issues 8: Truth*, Enrique Villanueva, ed. (Atascadero, CA: Ridgeview Publishing Company 1997) 141-54. The possible theories stemming from this point multiply copiously, and I cannot hope to survey them here. Note also that these theories need not be disquotational in whole or part. I thank an anonymous referee for emphasizing the importance of this approach.
- 9 In places it may appear as though Quine argues only for the weaker claim that sentences and their truth predications are logically equivalent; for example, that "'Snow is white' is true' and 'Snow is white' are logically equivalent, which is to say that "'Snow is white' is true if and only if snow is white' is a tautology. (See Quine, *Philosophy of Logic*, 2nd ed., 12.) However, sentences obviously different in meaning can be logically equivalent in extensional contexts; for example, 'Triangles have three sides' and 'Squares have four sides' are logically equivalent in extensional contexts. Quine is committed not only to the weaker thesis that sentences and their truth predications are logically equivalent, but also to the stronger thesis that they are equivalent in meaning.

for abridging and unabridging a sentence in which the truth predicate is coupled with a quantified noun expression appeals to D either in forming or disquoting “‘S’ is true.’ Hence, D is appealed to not as a mere material biconditional, but as a meaning equivalence. As a material biconditional (setting aside paradoxical instances), D is virtually beyond dispute. However, as a meaning equivalence, D is true only if the truth predicate is redundant in just the way disquotationalism claims, but which it has not yet justified. Therefore, offering the abbreviatory algorithm to account for the redundancy of the truth predicate where it is coupled with a quantified noun expression begs the question; it is to argue for disquotationalism circularly. Call this objection ‘the circularity objection.’¹⁰

Of course, a disquotationalist may avoid the circularity objection by proposing an alternative account which does not beg the question, but no such account is obvious or forthcoming. For example, it is not possible to meet the circularity objection by claiming that the abbreviatory algorithm is intuitive, since it is far more intuitive to understand ‘Everything Tolstoy said is true’ as a *single* ascription of truth to *everything Tolstoy said*. In fact, supposing that the things Tolstoy said are propositions, a universally quantified truth predication such as ‘Everything Tolstoy said is true’ may be understood as predicating truth of those propositions, in which case the disquotational schema and the entire algorithm are otiose. Quine’s loyalty to Ockham’s razor is tested here!

It is clear that according to the disquotational theory, ‘is true’ is in principle eliminable and does not express a substantive property. It is

10 The following remark should emphasize this point: for those already inclined to accept the redundancy of the truth predicate based on the cases where truth is predicated of a quoted sentence, then the appeal in the algorithm to D, though circular, is perhaps not objectionable. However, Quine must argue against the intuition that a sentence in which truth is predicated of a quoted sentence does *not* say the same thing as the unquoted sentence. For example, Russell registers this intuition:

Consider, again, what it is we mean when we judge. At first sight, we seem to mean that a certain proposition is true; but “*p* is true” is not the same proposition as *p*, and therefore cannot be what we mean. And the complex “*p*’s truth” may be assumed just as *p* may: as assumed, it is not a judgment. Thus, when we affirm *p*, we are concerned only with *p*, and in no way with truth. (Bertrand Russell, ‘Meinong’s Theory of Complexes and Assumptions (III)’ *Mind* 13 (1904) 509-24 at 511)

In other words, though D, taken as a meaning equivalence, may strike some philosophers as intuitive, there are strong grounds for the intuition that D is false, taken as a meaning equivalence. Therefore, an appeal to D in the course of the algorithm is circular and objectionable.

tempting, then, to identify the useful role of 'is true' in the algorithm as the (non-substantive) property, truth. However, even if it were accurate to attribute this useful role to the truth predicate, the property of playing this useful role is a property *had* by the truth predicate, it is not *expressed* by it.¹¹ In other words, on the disquotational theory the truth predicate is syncategorematic; it does not *express* any such property as the property of serving in (or reminding of) a linguistic mechanism of semantic ascent, even if Quine were right that it *has* it. Call the objection that disquotationalism misattributes a property allegedly had by the truth predicate as a property expressed by the truth predicate 'the syncategorematicity objection.'

Recall that what is to be preserved in every step of the algorithm is not merely truth value, but meaning. It is obvious that what is required to understand 'Everything Tolstoy said is true' is much different than what is required to understand the very long conjunction. An even clearer illustration is Quine's example, 'Every sentence of the form $[p \vee \sim p]$ is true.' As Anil Gupta has pointed out,¹² this sentence is maximally conceptual on the disquotational theory, since it is by hypothesis equivalent to the infinite conjunction of every sentence of the form $[p \vee \sim p]$, which includes every concept. Therefore, it is obvious that someone may have the quantified belief and not the conjunctive belief: though many people understand and believe (the proposition expressed by) 'Every sentence of the form $[p \vee \sim p]$ is true,' it seems nearly impossible, due both to the length and to the conceptual resources required, for someone to understand or believe (the proposition expressed by) the infinite conjunction of sentences of the form $[p \vee \sim p]$. By Quine's own lights, the stimulus meaning of the two differ greatly, since, in contrast to 'Every sentence of the form $[p \vee \sim p]$ is true,' it is doubtful that the stimulus meaning for the infinite conjunction is, has been, or will be actual. Call this objection to disquotationalism 'the maximal conceptuality objection.'

An even more problematic case arises where the universally quantified term refers not to an infinity of sentences but to no sentence at all.

11 This point is made by Matthew McGrath, 'Weak Deflationism,' *Mind* 106 (1997) 69-98 at 71, n.1, and in *Between Deflationism & Correspondence Theory* (New York: Garland 2000), 26, n.1; and also by Michael Devitt, 'Minimalist Truth: A Critical Notice of Paul Horwich's *Truth*,' *Mind & Language* 6 (1991) 273-83 at 276. Hartry Field seems to have this point in mind when he suggests that truth for Horwich is a logical predicate; see Hartry Field, 'Critical Notice: Paul Horwich's *Truth*,' *Philosophy of Science* 59 (1992) 321-30. This point also underlies Anil Gupta's discussion in §IV of 'A Critique of Deflationism' *Philosophical Topics* 21 (1993) 57-81, though he does not make it.

12 Gupta, 'A Critique of Deflationism,' 69-70

Consider the case, 'Every sentence I have said to Quine is true.' It is wholly implausible to analyze this sentence as being elliptical for a predication of truth to a quoted sentence, since there are no such quoted sentences, and hence no unabridged sentence. Nevertheless, 'Every sentence I have said to Quine is true' is an understandable sentence, and might even be something I could convince someone of. I could even do this without deceit, since it is trivially true. The disquotational theory is committed to its being meaningless, while it is clear that it is not. Call this objection to disquotationalism 'the meaningfulness objection.'

Several other objections to disquotationalism are well-known. There are two serious problems facing what for the disquotational theory is the simplest case, truth predicated of a quoted sentence. Where 'S' is ambiguous or contains context-sensitive terms, instances of D are problematic. For example, instantiating D for the semantically ambiguous 'S' = 'Josephine is sitting on the bank' yields

D1 'Josephine is sitting on the bank' is true iff Josephine is sitting on the bank

D1 is problematic, since it is simply undetermined whether 'Josephine is sitting on the bank' is true if and only if both truth conditions are met, or one of the two. All of the available options are problematic: it cannot be that both conditions need to be met, since the sentence can be true without Josephine sitting on two objects at once. If the truth condition is a disjunction of the two conditions, it may be met when the contextually irrelevant disjunct obtains. If one of the conditions is prioritized outright, then the other cannot serve as a truth condition, though there may be occasions where it is the contextually relevant truth condition. The same difficulty arises for syntactically ambiguous sentences, such as 'He didn't leave Davenport because of the flood.' Call this objection to disquotationalism 'the ambiguity objection.'

Sentences containing indexical terms raise similar difficulties. Instantiating the disquotational schema for a sentence containing an indexical term yields context-dependent truth conditions, but without a specification of the context of evaluation. As a result, there is no way for D to be sensitive to the context dependence of context-sensitive terms.¹³ Call this objection to disquotationalism 'the context sensitivity objection.'

13 Note that Tarski was well aware of these problems; for these and other reasons, Tarski worked with formalized languages, for which problems of ambiguity and context-sensitivity do not arise. Detailed discussion of these problems is given by Marian David, *Correspondence and Disquotation: An Essay on the Nature of Truth* (New York: Oxford University Press 1994) § 5.8.

Another pair of well-known difficulties affecting disquotationalism stems from an inability to handle true sentences of languages other than the language in which the disquotational schema is formulated. Consider a language L^* distinct from the language in which the disquotational schema is formulated, L_D , but having a syntax according to which certain well-formed sentences of L^* are type-identical to sentences of L_D . The disquotational schema automatically establishes the same sufficient truth conditions for these sentences of L^* which it establishes for the type-identical sentences of L_D . For example, consider the instantiation of D for $S =$ 'snow is white': 'snow is white' is true if and only if snow is white. According to this instantiation, the sentence of L^* , 'snow is white', is true, since snow is white, even if it is synonymous with the English sentence 'Hamsters are birds.' Following Marian David, call this 'the foreign intruders objection.'¹⁴

Conversely, the disquotational schema provides incorrect necessary truth conditions for any sentence of L^* type-identical with a sentence of L_D but with which it is not synonymous. For example, the sentence of L^* 'William S. Burroughs won the 2003 Boston Marathon' is evaluated as untrue, even if it translates into L_D as 'The New York Mets won the 1969 World Series.' Similarly, any sentence of L^* which is not type-identical with a sentence of L_D is evaluated as untrue, because the relevant instantiation of D fails to establish the correct truth conditions. For example, the sentence 'uhrjee peepa noolop' is evaluated as untrue, even if it translates into English as 'Dennis Miller has been seen wearing a beard.' Again following Marian David, call this 'the isolation objection.'¹⁵

One response to the foreign intruders and isolation objections is to relativize the truth predicate to a language:

D_R 'S' is true-in-L if and only if S

14 Problems arising from sentences of foreign languages are discussed by David, *Correspondence and Disquotation: An Essay on the Nature of Truth*, § 5.6. David's preference is to put the problem in terms of idiolects, but like considerations give rise to analogous problems of truth relativized to an idiolect, or to a language.

Also note that, again, Tarski is well aware of these problems. Tarski observes that '[the] same expression can, in one language, be a true statement, in another a false one or a meaningless expression.' Thus, '[there] will be no question at all here of giving a single general definition of the term [i.e., the truth predicate]. The problem which interests us will be split into a series of separate problems each relating to a single language' (Alfred Tarski, 'The Concept of Truth in Formalized Languages,' in Alfred Tarski, *Logic, Semantics, Mathematics: Papers from 1923 to 1938*, 2nd ed. [Indianapolis: Hackett 1983] 152-278, at 153).

15 See footnote 14.

Thus a sentence of a foreign language, L^* , which is type-identical to a sentence true-in- L_D will be evaluated as true-in- L_D , but only because the truth conditions already established for the type-identical sentence of L_D are met, not because the appropriate truth conditions are met. This difficulty may be avoided by adopting a D-style schema formulated with a different predicate, true-in-L, for each language, L. However, this response gives up on capturing a notion of truth which applies across languages.

Although Quine treats sentences such as 'Everything Tolstoy said is true' and 'Every sentence of the form $[p \vee \sim p]$ is true' as representative of cases where the sentence of which truth is predicated does not appear explicitly, several additional cases should be recognized. The subject of a truth predication may also be an existentially quantified term, it may name a sentence, it may describe a sentence, or it may demonstrate a sentence. The last three cases present a problem for the disquotational theory, since names, descriptions, and demonstrations (ordinarily) do not contain quotation marks to be disquoted. As it is formulated, D cannot handle truth predications of names, descriptions, or demonstrations. Call this 'the versatility objection.'

The versatility objection may be met by replacing D with D_N :

D_N N is true if and only if S

where 'N' is a substitutional variable ranging over expressions denoting sentences, including quotation names, quantified expressions, proper names, descriptions, and demonstratives; and 'S' is the sentence or conjunction of sentences denoted by 'N'. Notice that while D has a single substitutional variable, D_N has two substitutional variables, and that while the instances of D are a proper subset of the instances of D_N , D_N is not a disquotational schema, strictly speaking.¹⁶

Call the version of disquotationalism which adopts D 'original disquotationalism' and that which adopts D_N 'generalized disquotationalism.' Since D_N may be instantiated for expressions, N, which name, describe, or demonstrate a sentence, including quotation names of sentences, generalized disquotationalism avoids the versatility objection. Generalized disquotationalism also avoids the isolation objection by the additional stipulation that where 'N' denotes a non-English sentence, 'S' is its translation into English. However, since the disquotational theory is nonetheless committed to the claim that 'N is true' is equivalent in meaning to the denotation of 'N', the circularity, syncategorematicity,

16 For the same reasons, Tarski's schema T is not a disquotational schema.

maximal conceptuality, meaninglessness, ambiguity, context sensitivity, and foreign intruders objections raised above apply equally to generalized disquotationalism.

Because it avoids the versatility and isolation objections, generalized disquotationalism is the most plausible version of the disquotational theory of truth.¹⁷ Nevertheless, generalized disquotationalism faces these seven objections: the circularity objection, the syncategorematicity objection, the maximal conceptuality objection, the meaninglessness objection, the ambiguity objection, the context sensitivity objection, and the foreign intruders objection.

II Minimalism

Although Quine would not advocate such a move, it might be suggested that formulating a disquotational-style schema in terms of propositions would avoid the ambiguity and context sensitivity objections, as well as the isolation objection. Various alternatives are exhibited below; ' x ' is an objectual variable ranging over propositions, and ' p ' and ' q ' are substitutional variables ranging over sentences, quotation names of sentences,

17 Marian David considers the following version of the disquotational schema to be 'the deflationist's main attempt' at a deflationary theory of truth:

D' x is a true sentence if and only if for some p , x is identical to ' p ' and p
 D' has several advantages over D . First, x ranges over descriptions and proper names of sentences, as well as quotation names. Second, x may be universally and existentially quantified over. Third, David points out that D' is in the form of an explicit definition from which the property of truth may be specified. However, unless D' is read as a mutual entailment, it is not strictly speaking in the form of an explicit definition; reasons are given below (§ III) for the implausibility of reading D_N as a mutual entailment which apply to D' *mutatis mutandis*. Also, the property truth cannot be specified from D' , since ' p ' is a substitutional variable. Tarski considers and rejects D' on the grounds that the definiens is of questionable significance; David, who reports Tarski's verdict, concludes that the semi-technical apparatus is essential to D' . Because the truth predicate is syncategorematic and does not express a property on the disquotational theory, these problems are not especially bothersome. For David's discussion, see *Correspondence and Disquotation: An Essay on the Nature of Truth*, § 4.3. For Tarski's discussion, see 'The Concept of Truth in Formalized Languages,' 159ff. For further development of this theory, see Christopher S. Hill, 'The Marriage of Heaven and Hell: Reconciling Deflationary Semantics with Correspondence Intuitions,' *Philosophical Studies* 104 (2001) 291-321.

The difference between D' and D_N is slight: D' relates ' x ' and ' p ' through the clause ' x is identical to " p "', whereas D_N is supplemented with the clause that N denotes S .

proper names of sentences, and demonstratives denoting sentences, restricted as grammatically appropriate.

- M₁ x is true if and only if x
- M₂ x is true if and only if p
- M₃ the proposition denoted by p is true if and only if q
- M₄ the proposition expressed by ' p ' is true if and only if p

Objections to M₁ are obvious: the right side of the biconditional is ill-formed, since it lacks a predicate. Yet it seems that the only predicate which can plausibly be supplied renders M₁ as the tautology: x is true if and only if x is true.¹⁸ M₂ is similar to D_N, with the objectual variable ' x ' where D_N has the substitutional variable 'N'. Like D_N, M₂ must be supplemented with a principle ensuring that its instances are true; for example, ' p ' expresses x . M₃ is like M₂, except the objectual variable is replaced by a definite description containing a substitutional variable, such that it needs to be supplemented with a different principle ensuring that its instances are true; for example, q is a sentence expressing the proposition p denotes. While M₃ is well-suited for truth ascriptions to named, described, and demonstrated propositions, because the range of ' p ' must be limited to denoting expressions, M₃ is ill-suited for truth ascriptions to quoted sentences. Provided every proposition can be named or described, this is not a problem, since M₃ can be taken as establishing the truth conditions for every proposition; truth conditions for sentences may be given secondarily. Assuming that the description can take any value which can be assigned to ' x ', M₃ offers no advantages over M₂.

M₄ differs from M₂ and M₃ in that it uses a single substitutional variable, and so does not require a supplementary principle. While M₁ uses a single objectual variable, none of M₁, M₂, and M₃ are disquotational schemas, strictly speaking, though this point by itself does not indicate an advantage of M₄ over M₁, M₂, and M₃. However, M₄ faces the ambiguity and context sensitivity objections. For example, the instantia-

18 Alternately, it might be held that the truth predicate as it occurs in instances of M₁ does not contribute its semantic content to the proposition expressed by sentences containing it. Frege was driven to this view at one point. (See Gottlob Frege, 'My Basic Logical Insights,' in Gottlob Frege, *Gottlob Frege: Posthumous Writings* (Chicago: The University of Chicago Press 1979) 251-2 at 251.) However, not only is this move *ad hoc*, but it also renders M₁ ill-formed on both the right and left sides.

tion 'the proposition expressed by "I am hungry now"' is true if and only if I am hungry now' founders both because the definite description on the left side of the biconditional does not denote a proposition without additional contextual information, and because the context of instantiation from which the indexical terms on the right side of the biconditional take their content is inappropriate for providing the necessary and sufficient truth conditions for the proposition (purportedly) denoted by the description on the left side.¹⁹ Similarly, where M_4 is instantiated for an ambiguous sentence, the truth or falsity of the instance is indeterminate. The instance 'the proposition expressed by "humans are flying planes"' is true if and only if humans are flying planes' may be evaluated as both true and false, since 'humans are flying planes' has both a true and a false reading.

M_4 is also vulnerable to the foreign intruders and isolation objections. Instantiating M_4 for the Canadianese sentence, 'Hockey is a sport', yields incorrect necessary and sufficient truth conditions, supposing that it translates into English as 'Broken noses are not injuries.' The converse case is likewise a problem, as above. Though one of the hoped-for advantages to formulating a schema in terms of propositions is to avoid interlinguistic difficulties, M_4 faces them as a result of using a single substitutional variable.

Finally, M_4 encounters problems where ' p ' denotes but does not express a proposition, i.e., where ' p ' names, describes, or demonstrates a proposition. Assigning values to ' p ' such as 'McTaggart's Thesis', 'the proposition expressed by the first sentence said by Quine on his tenth birthday', or 'that proposition' (a demonstration) yield ill-formed instances of M_4 .

Paul Horwich has developed the minimal theory of truth in a spirit much akin to Ramsey's redundancy theory and Quine's disquotational theory, with the difference that on the minimal theory truth-bearers are propositions.²⁰ Horwich writes,

In fact, the truth predicate exists solely for the sake of a certain logical need. On occasion we wish to adopt some attitude towards a proposition ... but find ourselves thwarted by ignorance of what exactly the proposition is. We might know it only as "what Oscar thinks" or "Einstein's principle"; perhaps it was expressed, but not clearly or loudly enough, or in a language we don't understand; or — and this is

19 The context of instantiation may coincidentally provide the correct semantic information for the context-sensitive terms, though such coincidences are expected to be rare, and because fortuitous, inappropriate.

20 Horwich, *Truth*, 2nd ed. (Oxford: Clarendon Press 1998)

especially common in logical and philosophical contexts — we may wish to cover infinitely many propositions (in the course of generalizing) and simply can't have all of them in mind. In such situations the concept of truth is invaluable. For it enables the construction of another proposition, intimately related to the one we can't identify, which is perfectly appropriate as the alternative object of our attitude.²¹

The minimal theory (MT) makes use of a schema, E:²²

E $\langle p \rangle$ is true iff p

Surrounding an expression, e , by brackets ' $\langle e \rangle$ ' produces an expression referring to the propositional constituent expressed by e .²³ It is clear that in order for E to be well-formed, ' p ' is to be a substitutional variable ranging over sentences.²⁴

Horwich writes that 'the axioms of MT are given by the principle: For any object x , x is an axiom of the minimal theory if and only if, for some y , when the function E^* is applied to y , its value is x .'²⁵ E^* is the result of enclosing schema E in angled brackets:²⁶

E^* $\langle \langle p \rangle$ is true iff $p \rangle$

In order to restrict truth-bearers to propositions, MT requires the supplementary axiom: $(x)(x$ is true $\rightarrow x$ is a proposition).²⁷ Horwich is careful

21 Horwich, *Truth*, 2nd ed., 2-3

22 Horwich, *Truth*, 2nd ed., 18. Also, see footnote 26.

23 Horwich, *Truth*, 2nd ed., 18, n.3.

24 This, despite Horwich's explicit rejection of substitutional quantification; see Horwich, *Truth*, 2nd ed., 25f. I discuss later in this section whether it is necessary to restrict the domain of ' p ' to sentences of English.

Marian David observes similarly that 'it does not make sense' for values of p to be propositions; see Marian David, 'Minimalism and the Facts about Truth,' in *What Is Truth?: Current Issues in Theoretical Philosophy, Volume 1*, Richard Schantz, ed. (Berlin: Walter de Gruyter 2002) 161-75, at nn.27 and 28. I thank an anonymous referee for calling my attention to this passage.

25 Horwich, *Truth*, 2nd ed., 19

26 Horwich presents E as: ' $\langle p \rangle$ is true iff p .' For Horwich, instances of E are expressions, and corresponding instances of E^* (i.e., E^* instantiated for the same value of p) are the propositions expressed by those instances of E. Thus, for E to be related to E^* in this way, the quotation marks Horwich presents in schema E must be dropped.

27 See Horwich, *Truth*, 2nd ed., 23, n.7. This requirement was first noted by Anil Gupta; see his 'Minimalism,' *Philosophical Perspectives* 7, James E. Tomberlin, ed. (Atascad-

to exclude paradoxical instances of E^* from the axioms of the minimal theory; therefore, his considered claim is that all axioms of MT are instances of E^* , not that all instances of E^* are axioms.²⁸ In other words, the axioms of the minimal theory are the propositions resulting from the instantiation of E^* for all sentences y which are non-paradoxical, plus the supplementary axiom $(x)(x \text{ is true} \rightarrow x \text{ is a proposition})$.

Since there are an infinite number of non-paradoxical English sentences, the minimal theory has an infinite number of axioms. The axioms of MT also include instances of E^* for sentences of languages other than English containing concepts not expressible in English, presumably infinite in number. Thus the axioms of the minimal theory come in a large package, *pace* its name. Despite Horwich's overt acceptance of this feature of MT, the inability to finitely state MT may be raised as an objection against it; call it 'the infinitude objection.'²⁹

It may be noticed that the angled brackets may be interpreted in one of two ways. The result of surrounding an expression, e , by ' $\langle \rangle$ ' might be taken to refer indirectly to the propositional constituent expressed by ' e ', as in 'the proposition expressed by ' e '', a functor which takes an expression of English and returns a noun phrase referring indirectly to the proposition expressed by ' e ', if there is one. It is clear that on this interpretation of the brackets, ' e ' is a substitutional variable ranging over sentences.

If the angled brackets are given this interpretation, E is the same schema as M_4 , and, therefore, is open to the same objections as M_4 : E faces the ambiguity, context sensitivity, foreign intruders, isolation, and ver-

ero, CA: Ridgeview 1993) 359-69. The requirement may be met by changing the informal principle to read, 'For any proposition x' However, a supplementary axiom needs to be added to properly restrict Horwich's formal statement of the axioms constituting MT:

$$(x) (x \text{ is an axiom of MT} \leftrightarrow (\exists y) (x = E^*(y)))$$

28 Vann McGee argues that if our only guidance in collecting the axioms of the minimal theory is that the axioms are to be those belonging to the maximal consistent set of instances of E^* , our guidance will be too weak to form such a set, because there are too many, and we are given no further guidance to choose among them. See Vann McGee, 'Maximal Consistent Sets of Instances of Tarski's Schema (T)' *Journal of Philosophical Logic* 21 (1992) 235-41. I thank an anonymous referee for recalling this article to my attention.

In addition, there are an infinite number of instances of E^* whose paradoxicality depends on empirical circumstances, so that excluding the paradoxical instances of E^* is not as straightforward or as minor as it may appear at first blush.

29 Horwich writes that '[the] single respect in which the minimal theory can seem unattractive is its infinite, list-like character' (Horwich, *Truth*, 2nd ed., 107).

satility objections. For a given value of ' p ', an instance of E^* denotes the proposition expressed by E . Note that enclosing E in angled brackets to yield E^* does not avoid any of these objections.

Alternatively, the expression resulting from enclosing an expression ' e ' in angled brackets might be taken to refer directly to the proposition expressed by ' e ', similar to David Kaplan's $dthat(e)$ operator.³⁰ Let ' $\langle e \rangle$ ' be read as ' $dprop(e)$ ', an operator which takes an expression, ' e ', as its argument and returns the proposition which ' e ' expresses, if there is one. Thus, ' e ' is a substitutional variable ranging over expressions,³¹ and ' $\langle e \rangle$ ' refers directly to the proposition expressed by ' e '.

If the angled brackets are given this interpretation, then E is the same schema as M_2 , where the definition of the operator is the supplementary principle ensuring that instances of M_2 are true; i.e., x is the proposition expressed by ' p '. Therefore, this reading of ' $\langle \rangle$ ' yields a schema open to the same objections as M_2 : E faces the ambiguity, context sensitivity, foreign intruders, isolation, and versatility objections. Obviously, these are the same objections faced by the functor reading. Note, again, that enclosing E in angled brackets to yield a schema whose instances denote a proposition — namely, E^* — does not avoid any of these objections.³²

On either reading of ' $\langle \rangle$ ', MT requires the restriction that ' p ' range only over sentences of the language in which E is stated. MT may avoid the isolation objection by adopting the instances of versions of E^* for every language, presumably infinite in number. Since the minimal theory is explicitly not finitely stateable, the result of this move is to strengthen the infinitude objection while escaping the isolation objection.

Similarly, MT may avoid the versatility objection by adopting the instances of M_3 , or a related schema such as ' e is true iff p ', where ' e ' is a substitutional variable ranging over expressions denoting proposi-

30 David Kaplan, ' $dthat$ ', in *Syntax and Semantics*, volume 9, Peter Cole, ed. (New York: Academic Press 1978) 221-53.

31 Where ' x ' is an objectual variable, ' $dthat()$ ' cannot operate on ' x ' since ' x ' is not an expression. Therefore, ' p ' is a substitutional variable, since both readings of ' $\langle \rangle$ ' have this result.

32 The angled brackets may also be read as an operator taking an expression ' p ' as its argument and returning the proposition denoted by ' p ', if there is one. On this reading, E is well-formed for names, descriptions, and demonstratives of propositions, but ill-formed for sentences expressing propositions. No problems are avoided by reading the angled brackets in E as a functor and the additional angled brackets in E^* as an operator, or *vice versa*.

tions.³³ Call this theory 'the generalized minimal theory,' or GMT. GMT has an additional infinity of axioms for each of an infinite number of languages. Again, since MT is not finitely stateable, the result of adopting GMT is to strengthen the infinitude objection while escaping the versatility objection.

As above, E^* faces the ambiguity and context sensitivity objections on either reading of the angled brackets. It may be pointed out that Horwich does not accept as axioms any paradoxical instance of E^* , and so may likewise elect not to accept instances of E^* where ' p ' is ambiguous or contains context-sensitive terms. However, since such sentences express propositions and are well-formed, it is a severe shortcoming of MT if it contains no axioms establishing their truth conditions. Therefore, MT can avoid the ambiguity and context sensitivity objections only by countenancing concomitant restrictions which do not improve the plausibility of the theory. The same conclusion follows for GMT.

Horwich insists that 'the view advanced here ... associates a definite propositional constituent to the truth predicate.'³⁴ But in arguing that this propositional constituent is minimal, Horwich plainly confuses the property semantically expressed by a predicate with a property had by a predicate.³⁵ Even if MT is correct in claiming that the concept of truth is invaluable where we wish to cover infinitely many propositions in the course of generalizing, the truth predicate's role in such generalizations is a property *had* by the truth predicate, not one it expresses. Therefore, MT faces the syncategorematicity objection, just as original and generalized disquotationalism.

Along the same lines, because Horwich follows Quine in arguing that 'the concept of truth is invaluable'³⁶ where 'we may wish to cover infinitely many propositions (in the course of generalizing)'³⁷ MT faces the circularity objection, just as original and generalized disquotationalism.

33 Horwich recognizes the problem, but does not adopt a solution. Cf. Horwich, *Truth*, 2nd ed., 39. Notice also the examples he gives of 'what Oscar thinks' and 'Einstein's principle' in the passage cited by n.21.

34 Horwich, *Truth*, 2nd ed., 38

35 The confusion is explicit in the Postscript: 'the minimalist thesis is that the meaning of "true" is constituted by our disposition to accept those instances of the truth schemata that we *can* formulate' (Horwich, *Truth*, 2nd ed., 128; Horwich's italics).

36 Horwich, *Truth*, 2nd ed., 3

37 Horwich, *Truth*, 2nd ed., 2

As above, the sentence 'Every sentence of the form $[p \vee \sim p]$ is true' is maximally conceptual on MT, since by hypothesis it is equivalent to the infinite conjunction of every sentence of the form $[p \vee \sim p]$, which includes every concept.³⁸ Since the infinite conjunction plainly differs in semantic content from 'Every sentence of the form $[p \vee \sim p]$ is true', as evidenced by the ungraspability of the former, MT faces the maximal conceptuality objection, just as original and generalized disquotationalism.

Homologously to disquotationalism, minimalism faces a problem where truth is predicated of a non-referring universally quantified term, such as in 'Everything I have said to Quine is true.' The proposition expressed by my utterance of this sentence is trivially true, yet for MT, the sentence is meaningless. Hence, MT faces the meaninglessness objection, just as original and generalized disquotationalism.

In sum, minimalism faces all of the same objections facing original disquotationalism except the isolation objection, though it faces a new objection, the infinitude objection. Generalized minimalism avoids the versatility objection by countenancing an extra infinity of axioms, which strengthens the infinitude objection. GMT faces the same seven objections as generalized disquotationalism, plus the infinitude objection. Therefore, MT is no better as a theory of truth than original disquotationalism, and GMT is no better as a theory of truth than generalized disquotationalism. In fact, both versions of minimalism face the infinitude objection in addition to the objections faced by the respective version of disquotationalism.

III The Finite Minimal Theory

Minimalism fails to solve the problems facing original and generalized disquotationalism because E uses a substitutional variable. A more promising solution is to work with a carefully formulated schema using objectual variables ranging over propositions. Since an objectual variable ranging over propositions is assigned its value independently of whether it is expressed by a sentence, or denoted by a name, demonstrative, or description, a schema formulated in terms of an objectual variable avoids several attendant objections to disquotationalism and minimalism. Thus, Ernest Sosa proposes the finite minimal theory: 'Every proposition is necessarily equivalent to (entails and is entailed by)

38 Anil Gupta, 'A Critique of Deflationism,' *Philosophical Topics* 21 (1993) 57-81

the *de re* proposition that it is true.³⁹ Formally, the finite minimal theory is captured by:⁴⁰

$$\text{FMT} \quad (x) [x \Leftrightarrow \langle x \text{ is true} \rangle]$$

Wide arrows (\Leftrightarrow) represent mutual entailment; the objectual variable ' x ' ranges over propositions. Let the obtuse angle brackets ' $\langle \rangle$ ' be the functor 'the proposition that'; for example, ' $\langle \text{snow is white} \rangle$ ' is to be read as: the proposition that snow is white.⁴¹ Thus, instantiating FMT for $x = \langle \text{snow is white} \rangle$, yields:

$$\text{SW} \quad \langle \text{snow is white} \rangle \Leftrightarrow \langle \langle \text{snow is white} \rangle \text{ is true} \rangle$$

Instantiations of FMT are combined with appropriate instantiations of the principle of entailment, PE, to yield the axioms of the finite minimal theory.

$$\text{PE} \quad (\langle p \rangle \Rightarrow \langle q \rangle) \rightarrow (p \rightarrow q)$$

For instance, let $p = \langle \text{snow is white} \rangle$ and let $q = \langle \langle \text{snow is white} \rangle \text{ is true} \rangle$. Instantiating PE and running modus ponens on the left-to-right entailment of SW yields

$$\text{snow is white} \rightarrow \langle \text{snow is white} \rangle \text{ is true}$$

Reversing assignments of p and q , instantiating PE, running modus ponens on the right-to-left entailment of SW, and combining with the conditional just derived yields:

$$\text{snow is white} \Leftrightarrow \langle \text{snow is white} \rangle \text{ is true}$$

FMT and PE are used together to derive all of the axioms of the minimal theory.

39 Ernest Sosa, 'The Truth of Modest Realism,' *Philosophical Issues 3: Science and Knowledge*, Enrique Villanueva, ed. (Atascadero, CA: Ridgeview 1993) 177-95 at 188. See also Ernest Sosa, 'Epistemology, Realism, and Truth,' *Philosophical Perspectives 7: Language and Logic*, James E. Tomberlin, ed. (Atascadero, CA: Ridgeview 1993) 1-16.

40 Sosa, 'The Truth of Modest Realism,' 188

41 This is the reading of ' $\langle \rangle$ ' which is needed for FMT to capture Sosa's statement of the finite minimal theory. Also, it accords with his use of ' $\langle \rangle$ ' throughout his discussion of the finite minimal theory.

Two readings of FMT may be obtained by distinguishing between semantic entailment and logical entailment. A proposition, A, semantically entails a proposition, B, if and only if B follows from A.⁴² For example, ⟨snow is orange⟩ semantically entails ⟨snow is colored⟩, though ⟨snow is colored⟩ does not semantically entail ⟨snow is orange⟩. By contrast, a proposition, A, logically entails a proposition, B, if and only if every world where A holds is one where B holds.⁴³ For example, ⟨snow is orange⟩ logically entails ⟨snow is colored⟩, and ⟨2+2=4⟩ and ⟨3+3=6⟩ logically entail one another, though neither of ⟨2+2=4⟩ and ⟨3+3=6⟩ semantically entails the other.

Although the right-to-left entailments of FMT may be understood as semantic, the left-to-right entailments of FMT may not, since no proposition semantically entails its own truth. To claim that ⟨snow is orange⟩ semantically entails the *de re* proposition that it is true is to claim that ⟨⟨snow is orange⟩ is true⟩ follows from ⟨snow is orange⟩, which is absurd; again, no proposition semantically entails its own truth. By contrast, it is highly plausible that every world where ⟨snow is orange⟩ holds is one where ⟨⟨snow is orange⟩ is true⟩ holds, and vice versa. Therefore, FMT is properly read as claiming that every proposition and the *de re* proposition that it is true are related by mutual logical entailment.⁴⁴

One important advantage of FMT over MT is that FMT is finitely stateable. The theory itself is the claim made by Sosa that ‘every proposition is necessarily equivalent to (entails and is entailed by) the *de re* proposition that it is true.’⁴⁵ Since FMT is used together with PE to derive the axioms of the minimal theory, it is important that PE be finitely stateable. If PE is read as a schema, there are an infinite number of instances which are used together with FMT to derive the axioms of the minimal theory. Instead, the substitutional variables ‘*p*’ and ‘*q*’ may be universally quantified over so that all of the axioms of the minimal theory are derivable from FMT together with the quantified principle of entailment, QPE.

$$\text{QPE} \quad (\Pi p) (\Pi q) [(\langle p \rangle \Rightarrow \langle q \rangle) \rightarrow (p \rightarrow q)]$$

42 This is the relation most commonly called ‘entailment’.

43 The notion here called ‘logical entailment’ is sometimes called ‘implication’ or ‘logical implication’. The relation of mutual logical entailment is standardly called ‘logical equivalence’.

44 Sosa has confirmed this by e-mail correspondence.

45 Sosa, ‘The Truth of Modest Realism,’ 188

The finite minimal theory is then finitely stateable as FMT and QPE, and so does not face the infinitude objection.⁴⁶

As presented, FMT faces the versatility objection, since it does not provide axioms for named, described, or demonstrated propositions. Since 'x' is an objectual variable, there is an instance of FMT for all propositions. However, QPE is not formulated to handle named, described, or demonstrated propositions, since 'p' and 'q' are substitutional variables ranging over sentences. For example, the axiom 'force is the product of mass and acceleration if and only if ⟨force is the product of mass and acceleration⟩ is true' is derivable from FMT and QPE, but not 'force is the product of mass and acceleration if and only if Newton's second law is true.' FMT's versatility can be improved by adopting an additional principle of entailment for propositions denoted by a name, description, or demonstration, such as QPE2.

$$\text{QPE2} \quad (\Pi m) (\Pi n) [(m \Rightarrow n) \rightarrow (E(m) \rightarrow E(n))]$$

'm' and 'n' are substitutional variables ranging over expressions denoting a proposition. E(x) is an operator which takes a denoting term and returns a sentence expressing the proposition denoted by the denoting term if any, and returns nothing otherwise. Axioms for named, described, and denoted propositions may be derived from FMT together with QPE2.

If FMT adopts both QPE and QPE2, it faces the versatility objection only if there is an inexpressible proposition which nevertheless can be named, described, or demonstrated. One candidate is the proposition formed by conjoining ⟨snow is white⟩ to itself an infinite number of times. Though this proposition may be named and described, its inexpressibility reflects the inability of any (human) speaker to utter it, rather than an inability for it to be expressed in the language. Perhaps a more challenging case is a full inventory proposition, i.e., a proposition which is the conjunction of every proposition expressible in English. It is a substantive philosophical issue whether such a proposition is genuinely inexpressible, or whether its apparent inexpressibility shows that there is no such proposition. If either there is no such proposition, or it is expressible, there is no objection to FMT forthcoming. Even if a full inventory proposition is inexpressible, the versatility objection to FMT is not at all strong. For the purposes of this discussion, there are no grounds for

46 Those philosophers, like Peter van Inwagen, who have qualms about the intelligibility of substitutionally quantified expressions may raise a stability objection, but since this is a separate philosophical issue, I do not pursue it here.

raising the versatility objection against FMT, provided it adopts both QPE and QPE2:

Note that QPE may be instantiated for sentences of any language. Instantiating FMT for $x = \langle \text{Snow is white} \rangle$ and QPE for ' $p' = \text{'La neige est blanche'}$ ' and ' $q' = \langle \text{'La neige est blanche'} \rangle_i \text{ est vrai'}$ ' (where ' $\langle \rangle_i$ ' abbreviates ' i la proposition que'), and performing the obvious steps yields the appropriate axiom for the French sentence ' $\text{La neige est blanche.}$ ' Since an axiom can be likewise derived for sentences of any language which express a proposition, FMT does not face the isolation objection.

But consider the sentence of L^* , ' Snow is white, ' which is synonymous with the English sentence ' $\text{Hamsters are birds.}$ ' Suppose that ' is true' ' is the truth predicate for L^* , just as it is for English, and that L^* has an expression synonymous with ' $\text{the proposition that'}$ ' which ' $\langle \rangle$ ' likewise abbreviates. Instantiating FMT for $x = \langle \text{hamsters are birds} \rangle$ and QPE for the sentences of L^* , ' $p' = \text{'Snow is white'}$ ' and ' $q' = \langle \text{'Snow is white' is true'}$ ', and performing the obvious steps yields an axiom ambiguous between English and L^* . It may appear that the ambiguity is not problematic, since the axiom is correct for both English and L^* . However, if ' is true' ' in L^* is synonymous with the English predicate ' is false' ', the resulting axiom is incorrect for L^* . Thus, FMT faces the foreign intruders objection.

Similarly, FMT faces the ambiguity and context sensitivity objections. Since the values of ' x ' are assigned independent of whether x is expressible only by an ambiguous sentence, or expressible only using context-sensitive terms, there are instances of FMT for all propositions. However, propositions expressible only by ambiguous sentences or only by sentences containing context-sensitive terms pose limitations to deriving the axioms of the minimal theory, since there are no relevant instances of QPE in either case. Further, for propositions expressible by both ambiguous and unambiguous sentences, the axioms derived for the ambiguous sentences warrant the ambiguity objection. Similarly, for propositions expressible both by sentences containing indexical terms as well as sentences not containing indexical terms, the axioms derived for the sentences containing indexical terms warrant the context sensitivity objection.

Like original disquotationalism, generalized disquotationalism, MT and GMT, FMT faces the meaninglessness objection. ' $\text{Everything I have said to Quine is true'}$ ' as uttered by me expresses a proposition, but it cannot be taken as instantiating ' $\langle x \text{ is true} \rangle$ ' since there is no proposition to assign as a value to ' x '; hence, there is no axiom of FMT for it.

Because FMT is finitely stateable, it can be drawn on for understanding the property, truth; that is, it is compatible with a characterization of the nature of truth. MT is not compatible with a characterization of the nature of truth, since it is not finitely stateable. The finite minimal theory makes no explicit claim about the nature of truth, or what the truth

predicate expresses.⁴⁷ If FMT is supplemented with the view that the truth predicate expresses a substantive property, then the finite minimal theory reneges on minimalism. FMT may instead be supplemented with the view that the truth predicate does not express a property. If the truth predicate has no semantic content whatsoever, then FMT collapses to an uninteresting tautology. If the truth predicate has semantic content, yet truth is not a property, then an account is owed to explain why the semantic content does not determine a property. For example, if the truth predicate has a sense, but does not express a property (i.e., if the truth predicate has a sense which does not determine a property), then an account is owed as to why the sense does not determine a property. The semantic content cannot simply be a conception commonly had by speakers of what truth is, for the question is not how people *do* think of truth, but how they *should* think of it. The semantic content cannot be a linguistic role for using the truth predicate, because the property of having a linguistic role is a property *had* by the truth predicate, it is not a property expressed by it. Nor can the semantic content be a conceptual role for truth, for such a conceptual role is to be *had* by truth, which requires positing the property, truth.⁴⁸ A much more plausible option is to supplement FMT with the view that truth is a simple, unanalyzable property.⁴⁹ Call this view 'S,' and call the finite minimal theory supplemented with S, 'FMT+S.'

47 Indeed, Sosa adopts additional principles giving necessary and sufficient conditions for the truth of an expression; see 'The Truth of Modest Realism,' 190.

48 For discussion of these and related candidates, see John O'Leary-Hawthorne and Graham Oppy, 'Minimalism and Truth,' *Noûs* 31 (1997) 170-96.

There is one further option for the finite minimal theory: FMT may be reformulated using the truth operator in lieu of the truth predicate, yielding the following schema: $x \leftrightarrow \langle \text{it is true that } x \rangle$. Accordingly, it may be claimed that 'it is true that' has semantic features similar to 'it is not the case that'; *sc.*, it operates on a sentence or proposition and returns a different sentence or proposition, though it does not express a property. Finally, it might be claimed that the truth predicate is a derivative form of the truth operator, such that the truth predicate, whether occurring as part of the truth operator or as a grammatical predicate, does not express a property.

Objections may be raised against the claim that 'is true' does not express a property. Although it is plausible to claim that operators do not express properties, 'is not the case' presumably does express a property. If so, it is implausible and counterintuitive to claim that 'is true' does not express a property. Also, since truth may be predicated of quoted sentences or other denoting expressions, while the truth operator is well-formed only for sentences, it is *prima facie* implausible to claim that the truth operator is primitive and the truth predicate derivative.

49 This is the option Sosa takes; see 'The Truth of Modest Realism,' 191 f.

FMT+S is committed to the claim that x and $\langle x \text{ is true} \rangle$ are distinct propositions. Assuming compositionality, $\langle x \text{ is true} \rangle$ has as proper parts x and the semantic content of the truth predicate. This means that the only difference between $\langle x \text{ is true} \rangle$ and x is the semantic content of the truth predicate, even where the truth predicate is coupled with a quantified noun expression, such as in 'Every proposition expressed by Tolstoy is true.' Therefore, FMT+S does not face the maximal conceptuality objection. For the same reasons, FMT+S is immune from the circularity objection. Further, since according to S the truth predicate expresses a simple, unanalyzable property, FMT+S avoids the syncategorematicity objection.

Recall that the circularity objection arises in the course of disquotationalism justifying its claim that the truth predicate is a redundant expression. It is fair to inquire in turn as to whether and how FMT is justified. S is not invoked to justify FMT, and FMT is not controversial. In fact, FMT is justified by the strong intuitive appeal of the claim it symbolizes: that every proposition mutually logically entails the *de re* proposition that it is true. Hence, no objection arises for FMT regarding its justification.

Although FMT is not committed to S, it is the most plausible view on the nature of truth with which to supplement FMT. The claim that truth is a simple, unanalyzable property enjoys *prima facie* plausibility, and has become somewhat popular recently. In addition to Sosa, it is endorsed by Donald Davidson, Julian Dodd, and Colin McGinn.⁵⁰ However, despite its plausibility and recent popularity, the view that truth is a simple, unanalyzable property is difficult to justify. Call this 'the nature of truth objection.'

To reveal the strength of this objection, compare FMT+S with another simple, unanalyzable property, *sc.*, an haecceity. Let HX be the conjunctive hypothesis that every individual has an haecceity, and that an haecceity is a simple, unanalyzable property both necessary and sufficient for its bearer to be itself.⁵¹ Then the following mutual logical entailment holds, where 'B(a,b)' symbolizes ' a bears b ' and 'h(a)' symbolizes 'the haecceity of a ':

50 Donald Davidson, 'The Folly of Trying to Define Truth,' *The Journal of Philosophy* 93 (1996) 263-78; Colin McGinn, *Logical Properties* (Oxford: Clarendon Press 2000) ch. 5; and Julian Dodd, *An Identity Theory of Truth* (London: Macmillan 2000). It has also been endorsed by Hilary Putnam, 'Reference and Understanding,' in *Meaning and Use*, Avishai Margalit, ed. (Dordrecht, Holland: D. Reidel 1979) 199-217 at 209 f.

51 This is not a definition of an haecceity; rather, it describes a property had by haecceities.

HXE $(x)[B(x,h(x)) \leftrightarrow x = x]$

While HXE is justified by HX, HX is controversial. Without convincing independent arguments for the existence and nature of haecceities, both HX and HXE are unjustified, and should not be accepted.

Similarly, S should not be accepted without a convincing independent argument supporting it.⁵² There is the response that Moore would have given while he held the view that truth is a simple, unanalyzable property,⁵³ namely, that truth just is a simple, unanalyzable property, for which no further account is needed. Although this response accords with the primitive nature many philosophers are willing to grant of truth, it is inadequate. Comparing this response with a very similar theory will expose its inadequacy.

Recall that FMT is used together with QPE to derive the axioms of the minimal theory of truth. Suppose that a theory rivaling FMT is proposed consisting of the following two principles which are used together with QPE to derive the axioms of the minimal theory:

FMT-U $(x) [x \leftrightarrow \langle x \text{ is uggish} \rangle]$

MEUT $(x) [x \text{ is uggish} \leftrightarrow x \text{ is true}]$

In words, every proposition logically entails and is logically entailed by the proposition that it is uggish. Also, it is claimed that uggishness is a simple, unanalyzable property which correlates with truth; hence, material equivalence holds between uggishness and truth (MEUT). Truth may be characterized as any one of a variety of properties. Together with QPE, FMT-U and MEUT capture the infinity of axioms of the minimal theory. However, without an account of uggishness, neither FMT-U nor MEUT should be accepted, since neither is justified. If the response is given that uggishness is a simple, unanalyzable property for which no further account can be given, then so much the worse for the rival theory. By parity of reasoning, the claim that truth is a simple, unanalyzable property for which no further account can be given is not justified. Without such an account, neither S nor FMT+S should be accepted.

Although the conclusion is the weak claim that FMT+S should not be accepted, because S is unjustified, FMT is in a difficult position with

52 The *prima facie* plausibility enjoyed by S is not sufficient support. Note that HX also has some *prima facie* plausibility, and might even be true; yet its plausibility is not sufficient to justify it.

53 G.E. Moore, *Some Main Problems of Philosophy* (New York: Macmillan 1953), 261

respect to characterizing truth. Again, FMT cannot be supplemented with the claim that the truth predicate has no semantic content, or the theory collapses. Nor can FMT be supplemented with any claim characterizing truth as a substantive, analyzable property, else it reneges on minimalism. Nor is it successful to argue that truth is a simple, unanalyzable property not in need of characterization. Views according to which the truth predicate has semantic content which does not determine a property owe an account as to why the semantic content does not determine a property, and so are not promising. The absence and difficulty of giving an account of the nature of truth to supplement FMT constitutes the nature of truth objection against FMT.

There is an additional danger stemming from FMT's use of the relation of logical entailment. Recall that logical entailment is the relation which a proposition, *A*, bears to a proposition, *B*, when every possible world where *A* holds is one where *B* holds. To define this relation, more needs to be said about what it is for a proposition to *hold*. If holding is characterized as a substantive notion, e.g., corresponding to what is actual with respect to that possible world, the finite minimalist has all but forsaken minimalism, since this is just the notion of truth a minimalist is trying to avoid, whether or not it is called 'truth.' For example, holding may be identified with truth, where truth is a simple, unanalyzable property. However, this is not a characterization of holding which gives a satisfactory account of what it is for a proposition to hold in a world; neither is the characterization of holding as the second-order property of bearing the simple, unanalyzable property, truth. It is likely that a satisfactory characterization of holding requires a substantive notion of truth, which means abandoning *S* and FMT+S.⁵⁴

In sum, FMT is immune to the isolation, infinitude, and versatility objections when it is supplemented with two principles of entailment, QPE and QPE2. In spite of adopting a universally quantified schema using a single objectual variable, FMT faces the meaningless, ambiguity, context sensitivity, and foreign intruders objections, because its supplementary principles use substitutional variables. When supplemented with the claim, *S*, that truth is a simple, unanalyzable property, FMT+S is immune to the circularity, syncategorematicity, and maximal conceptuality objections; however, it faces the nature of truth objection, raised against *S*.⁵⁵

54 There is no danger of circularity, since FMT is not a definition of the truth predicate.

55 Weakening FMT to a material biconditional yields M_1 , objected to above. It does not help to suppose that the relation between *x* and (*x* is true) is explanation, as Matthew

IV Conclusions

In section I, a number of known objections to disquotationalism are traced to the use of a single substitutional variable ranging over sentences. By using two substitutional variables, generalized disquotationalism avoids two of these objections to original disquotationalism. In addition, two new objections are raised against disquotationalism, the circularity objection and the meaninglessness objection. An examination of minimalism shows that it faces eight of the nine objections facing original disquotationalism, plus the infinitude objection. A generalized version of MT avoids the versatility objection: GMT faces the same seven objections as generalized disquotationalism. Minimalism's *prima facie* advantages over disquotationalism in adopting propositions as truth-bearers are found to be specious, as a result of using a schema with a single substitutional variable.

The finite minimal theory is more successful than these four theories. It avoids the isolation, infinitude, and versatility objections when QPE and QPE2 are adopted. Further, when supplemented by the claim that truth is a simple, unanalyzable property, FMT meets three objections facing all of the foregoing theories; *sc.*, the circularity, syncategorematicity, and maximal conceptuality objections. However, all five theories, including the finite minimal theory, face the meaningless, ambiguity, context sensitivity, and foreign intruders objections. In addition, the finite minimal theory faces the nature of truth objection, based on the supplementary claim that truth is a simple, unanalyzable property.⁵⁶

McGrath suggests in *Between Deflationism & Correspondence Theory*. Since explanation is in general not symmetric (even in McGrath's technical sense; see his 'Weak Deflationism,' 76), explanation cannot be used to derive the axioms of MT. Otherwise, McGrath's principle faces the same objections as M_1 .

56 I wish to thank Gary Gates, Matthew McGrath, and Ernest Sosa for helpful discussion and comments, as well as two anonymous referees.