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Indeterminacy and the analytic/synthetic distinction: a survey

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1 Introduction

It is often assumed that there is a close connection between Quine's criticism of the analytic/synthetic distinction, in 'Two dogmas of empiricism' and onwards, and his thesis of the indeterminacy of translation, in *Word and Object* and onwards. Sometimes this is just assumed, since both are criticisms of traditional or naive concepts of linguistic meaning. Sometimes there is an argument to support the view. An example is Paul Boghossian (1997):

Against the background of a conceptual role semantics, according to which the meaning of T's term C is determined precisely by a certain subset of the principles involving C that T accepts, indeterminacy in what the meaning-determining principles are will automatically lead to an indeterminacy in what the meaning is, in the full sense of chapter 2 of *Word and Object*. If a subset (not necessarily proper) of accepted principles is supposed to determine meaning; and if there is no fact of the matter as to which subset that is; then there is, to that extent, no fact of the matter as to what meaning has been determined. Since correct translation is supposed to preserve meaning, it follows that there can be no fact of the

matter as to what counts as correct translation (Boghossian 1997: 356).

This argument concerns the relation between analyticity and indeterminacy, since the so-called ‘meaning-determining principles’ are taken to be analytic in virtue of being implicit definitions (Boghossian 1997: 345-58). The problem with Boghossian’s view is that it requires a further premise for concluding that meaning varies sufficiently with variation in meaning-determining principles. Without any premise to that effect, it cannot even be excluded that meaning, as intuitively or traditionally understood, remains the same regardless of which set of principle is meaning-determining.¹ And even if there is some variation in meaning determined by different sets of principles, the question is whether the different meanings are different *enough* for making good the phrase ‘in the full sense of chapter 2 of *Word and Object*’. The reason, as we shall see shortly, is that for indeterminacy to obtain, in that sense, there must be two manuals of translation that are both correct and also mutually incompatible, in a sense specified by Quine. It is not enough that they concern the same languages and are different.²

My not so ambitious goal in this paper is to give a brief survey of the relations between indeterminacy and rejections of varieties of the analytic/synthetic distinction. I shall consider five different analytic/synthetic distinctions, and for each I shall try to answer the question whether a rejection of that distinction implies, or is implied by, the indeterminacy thesis. The conclusion will be negative: for each of these five distinctions, the statement of the rejection of the distinction and the indeterminacy thesis are mutually independent. I first list the distinctions.

¹As an analogy, take arithmetical equations with x as the only free variable. There are infinitely many equations that determine the same value of x .

²A similar criticism is directed by Gilbert Harman (1996: 397-98) against Boghossian 1996, a precursor to Boghossian 1997. Harman emphasizes that any indeterminacy involved in rejecting the analytic/synthetic distinction is distinct from Quine’s indeterminacy of translation, and that Boghossian does not keep them separate.

2 Five analytic/synthetic distinctions

As has been pointed out by several authors, including Burge (1992) and Boghossian (1997), there are different notions of analyticity at work in Two Dogmas. Quine starts out with one, quickly switches over to another, and eventually comes to consider a third. I shall consider these three, together with two variants of the third. First we have the ‘official’ version of the analytic/synthetic distinction, from the opening passage of Two Dogmas:³

Fact/meaning analyticity (FMA)

A sentence is analytically true iff it is true purely in virtue of meaning, independently of matters of fact.⁴

Second, we have the synonymy version, which Quine quickly turns to in Two Dogmas:

Synonym analyticity (SA)

A sentence is analytically true iff it is either a logical truth or can be turned into a logical truth by substituting terms for synonymous terms.⁵

The substitution intended is that of intersubstituting two synonymous expressions, not necessarily singular terms. This version is called ‘Frege analyticity’ by Boghossian (1997: 337).

Later on, when presenting his holistic view of science, and commenting on analyticity in that context, Quine refers to a third version:

Revision analyticity (RA)

A sentence is analytically true iff it is held true and is immune to revision from experience.

³I shall use ‘sentence’ throughout rather than ‘statement’, which Quine uses in Two Dogmas, but not in later writings

⁴Two dogmas, p 20.

⁵Two Dogmas p 23.

This formulation is extracted from the following Two Dogmas passage:

Furthermore it becomes folly to seek a boundary between synthetic statements, which hold contingently on experience, and analytic statements, which hold come what may. Any statement can be held true come what may, if we make drastic enough adjustments elsewhere in the system. Even a statement very close to the periphery can be held true in the face of recalcitrant experience by pleading hallucination or by amending certain statements of the kind called logical laws. Conversely, by the same token, no statement is immune to revision (Quine 1951: 43).

Although no other version can be found in Two Dogmas itself, it is reasonable to include also two variants on the third. We can distinguish between revisions that do change meaning of terms in sentences that are given up or adopted and revisions that don't.⁶ A natural idea is then to formulate an analytic/synthetic distinction in precisely these terms:

Meaning revision analyticity (MRA)

A sentence is analytically true iff it is held true and giving it up changes its meaning.

You can hold on to this version of analyticity without having to affirm that there are sentences that cannot be given up. You can claim that the analytically true sentence expresses a proposition that cannot be coherently denied, and not even coherently *not affirmed*. In this stronger sense, if the speaker has a sentence that expresses this proposition, then the speaker holds that sentence true. If not, the sentence means something else. This way, (MRA) is a version of the immunity-to-revision idea.

⁶I shall count a sentence as held true if it is either held true explicitly (by the speaker or speakers in question) or is a logical consequence of sentence held true by logical principles accepted. Thus, an accepted theory formulation is closed under logical consequence. If this were not required, it would not make much sense to speak of conflicts between theory and experience, for then the scientist could, with impunity, simply fail to hold true what follows from his axioms by his own logic when it conflicts with experience.

If we turn from revising to justifying, a natural alternative is the following:

Justification analyticity (JA)

A sentence is analytically true iff mere grasp of its meaning suffices for a speaker to be justified in holding it true.

This is Boghossian's own version of analyticity as consisting in the doxastic/epistemic relation between the speaker and the meaning of the sentence. Boghossian calls this 'the epistemological concept of analyticity' (1997: 334, I have changed the wording slightly for the sake of uniformity) .

These are the versions of the analytic/synthetic distinction that I shall be concerned with.

3 Indeterminacy of translation

The distinctions listed will be related to the indeterminacy thesis, stated by Quine both in *Word and Object* and in *Pursuit of Truth*:

The thesis is this: manuals for translating one language into another can be set up in divergent ways, all compatible with the totality of speech dispositions, yet incompatible with one another. In countless places they will diverge in giving, as their respective translations of a sentence of the one language, sentences of the other language which stand to each other in no plausible sort of equivalence however loose. [...] It is in this last form, as a principle of indeterminacy of translation, that I will try to make the point plausible in the course of this chapter (Quine 1960a: 27).

A manual of Jungle-to-English translation constitutes a recursive, or inductive, definition of a translation relation together with a claim that it correlates sentences compatibly with the behavior of all concerned. The thesis of indeterminacy of translation is that these claims on the part of

two manuals might both be true and yet the two translation relations might not be usable in alternation, from sentence to sentence, without issuing in incoherent sequences. Or, to put it another way, the English sentences prescribed as translation of a given Jungle sentence by two rival manuals might not be interchangeable in English contexts (Quine 1992: 48).

We can sum this up as:

Indeterminacy thesis (IT)

Between any two natural languages there are two manuals of translation that are both correct but mutually incompatible.

Quine's idea of correctness is behavioristic, but that is not a central concern in the present paper. I shall largely abstract from the behavioristic nature of the criteria of translational correctness. The reason is that it doesn't matter for indeterminacy issues whether a speaker is related to a sentence by being disposed to assent to it, or by holding it true. In the former case we have a behavioral disposition, in the latter a mental state, but in this context the difference is immaterial, since in either case the semantically relevant relation between speaker and sentence is positive, and that is what matters for evaluating a translation. Moreover, actual assent behavior gives evidence for the existence of the mental state as well as for the existence of the disposition.⁷ That we can be neutral here makes it easier to relate the behavioristic outlook of *Word and Object* with the non-behavioristic outlook of Two Dogmas.

Three questions are crucial: i) what the relation is between linguistic meaning and correctness of translation, ii) what the conditions of correctness (neutrally framed) are, and iii) what incompatibility between translations consists in.

⁷Note that deceitful behavior gives misleading evidence both as to mental state and as to semantically relevant assent disposition.

The answer to the first question is simple: two sentences s and s' of languages L_1 and L_2 have the same objectively grounded meaning iff there is a correct translation relation M between L_1 and L_2 such that $M(s, s')$.⁸

Correctness conditions for radical translation are presented as desiderata (Quine 1960a: 68-69)⁹:

1. Observation sentences are translated into observation sentences with the same stimulus meaning.
2. Truth function particles are translated according to their contributions to stimulus meanings, specified by Quine earlier in the chapter.
3. Stimulus-analytic sentences are translated into stimulus-analytic sentences, as far as possible, and similarly for stimulus-contradictory sentences.
4. Pairs of intrasubjective stimulus-synonymous sentences are translated into pairs of intrasubjective stimulus-synonymous sentences.

To meet these desiderata a manual should relate sentences permanently held true (stimulus analytic) by the native to sentences permanently held true by the translator, and likewise for those permanently held false (stimulus contradictory). Further, observation sentences held true in circumstances C by the native should be related to observation sentences held true in circumstances C by the

⁸It is natural to think of a translation manual as a set of rules for translating. I shall abstract from this idea, too, and (partly in accordance with the second quote above) think of a manual simply as a recursively specifiable relation $M(\dots)$ holding between two expressions iff they are correctly translatable into each other. At times it is natural to simplify and think of the relation as many-one or even one-one, and then one can treat the relation symbol as a function symbol.

⁹In *Pursuit of Truth* Quine is more relaxed about standards of correctness:

A pioneer manual of translation has its utility as an aid to negotiation with the native community. Success in communication is judged by smoothness of conversation, by frequent predictability of verbal and non-verbal reactions, and by coherence and plausibility of native testimony. It is a matter of better or worse manuals rather than flatly right or wrong ones (Quine 1992: 43).

However, this looseness of correctness conditions makes the indeterminacy thesis both weaker and far less precise. I shall stick to earlier standards.

translator.¹⁰ No requirement is listed for occasion sentences that are not observational.

However, there are reasons for imposing *strict* standards of correctness: any sentence held true under circumstances C by the native is to be related to a sentence held true under circumstances C by the translator. The reasons are the following.

In real translation, radical or not, we cannot assume a perfect fit in beliefs between native and translator, and when there isn't, there will be no manual that meets the strict standards. Rather, we would have to opt for those manuals that approximate the strict standards most closely.¹¹ The possibility of such divergence introduces a new kind of indeterminacy, for it is possible that there are two best manuals, which approximate the strict standards equally well, but in different ways. They will locate the divergences at different sentences. So for some sentences of the native language, it will be indeterminate whether native and linguist agree.

It is important to note that Quine's thesis of the indeterminacy of translation does *not* depend on this possibility. On Quine's view there will be indeterminacy *even if* there is a manual that provides a perfect fit between native and linguist. A first reason reason for interpreting Quine that way is the following passage:

The indeterminacy I mean is more radical. It is that rival systems of analytical hypotheses can conform to all speech dispositions within each of the languages concerned and yet dictate, in countless cases, utterly disparate translations; not mere mutual paraphrases, but translations each of which would be excluded by the other system of translation (Quine 1960a: 73).

¹⁰It was clear to Quine from at the latest in Quine 1969a, presented in lecture form 1965, that there is a problem with intersubjective sameness of stimulus meaning, given that stimulations are proximal—they are stimulations of sensory receptors. This is not, however, a problem in the present setting, since the permutation version of the thesis works well with proximal stimulation. We may assume in the intersubjective case that distal stimuli are acceptable.

¹¹This would be to apply *the principle of charity* in Davidson's early sense. See e.g. Davidson 1973.

A second reason is that Quine first introduces the indeterminacy claim as a claim about *possible permutations* of the sentences of a single speaker:

Sense can be made of the point by recasting it as follows: the infinite totality of sentences of any given speaker's language can so permuted, or mapped onto itself, that (a) the totality of the speaker's disposition to verbal behavior remains invariant, and yet (b) the mapping is no mere correlation of sentences with *equivalent* sentences, in any plausible sense of equivalence however loose (Quine 1960a: 27).

This permutation version of the thesis has the requirement of a perfect fit built into it: the speaker is to have the same disposition with respect to a sentence as with respect to its correlate. Moreover, the same proximal stimuli are operative, so the sharing of stimulations is not a problem either. This, together with what comes below, gives a reason to think that only by selecting the strict standards of translational correctness do we have a proper statement of Quine's indeterminacy thesis.

The incompatibility comes in two versions. The second idea of incompatibility, according to the quote from *Pursuit of Truth*, is difficult of use. We would need an account of coherence of sequences of utterances, and it is very unclear what should go into such an account; how much psychological theory, and what psychological theory, what formal ideas of coherence. Because of this, I'll turn to the inequivalence account of the earlier quote.

According to the early version, two manuals are incompatible if they relate some sentence s of L_1 with sentences s_1 and s_2 of L_2 , respectively, and s_1 and s_2 'stand to each other in no plausible sort of equivalence however loose'. Since the loosest relevant sort of equivalence is material equivalence, the natural suggestion is to count two manuals as incompatible if there is at least one triple $\langle s, s_1, s_2 \rangle$ of sentences, with two correct manuals M_a and M_b , such that

$M_a(s, s_1)$, $M_b(s, s_2)$, and s_1 and s_2 are materially inequivalent in L_2 .

Something that speaks in favor of this suggestion is the contrast between the indeterminacy of reference (or inscrutability of reference, as it was first called in Quine 1969b) and the stronger thesis of indeterminacy of translation. Two manuals may differ in the translation of terms while remaining equivalent on the level of sentences. To borrow from Quine's most classic example, the translation of the term (as opposed to the observation sentence) 'gavagai' with either 'rabbit' (say, by M_a) or 'rabbit history' (by M_b), can be matched by a difference in translation of a predicate, say 'oolagong'. We can take it that M_a translates this as 'is white', and M_b as 'is a history of something white'. If both manuals translate 'ju' as an indefinite article, we will have two translations of the native sentence

(1) ju gavagai oolagong

namely

(2) a rabbit is white

and

(3) a rabbit history is a history of something white

by M_a and M_b , respectively. Now clearly, (2) is true if and only if (3) is true. They are bound to be materially equivalent (except in possible worlds where rabbits don't have unique histories). This example is generalizable by means of the device of proxy functions (Quine 1969b: 55-58), guaranteeing that two manuals will agree in the truth value assignments to sentences of the source language, despite differing substantially in their translation of terms and predicates. The thesis of indeterminacy of translation was intended by Quine to be stronger than this (Quine 1992: 50). The requirement that the two manuals should translate the same sentence into different sentences 'which stand to

each other in no plausible sort of equivalence however loose' indicate that it was meant to be much stronger.

Still, there is a difficulty with the suggestion. The appeal to a difference in truth value between target sentences of two different manuals fits well for relating indeterminacy to fact/meaning analyticity (FMA), but not for relating it to revision analyticity (RA). In general, it does not fit Quine's positive views. The idea of sentences' being objectively true or false does not figure prominently in Quine's writings, neither early nor late. In the Two Dogmas framework we have the picture of a theorist or a scientific community that develops and adjusts a total theory of the world in response to experience. External reality does not figure in this picture as a determinant of truth and falsity. Rather, it is posited by the theorist, as the best way of systematizing and predicting experience. Within this framework we cannot speak of a sentence's being true over and above it's being implied by our total theory of the world, and we cannot speak of a sentence's being false over and above it's negation being implied by our total theory.¹² The natural alternative suggestion is then to require that two sentences s_1 and s_2 count as inequivalent just if the one, and the negation of the other, is implied by the total theory.

But this again seems too strong, since two sentences may well appear to be different enough even though none of them, and neither any of their negations, is implied by the total theory. We will never have a complete theory of the world, in the sense of containing, for every declarative sentence s , either s or its negation. If the theory isn't complete, then there are sentences to which we are agnostic. We might be agnostic to both s_1 and s_2 while denying the biconditional. We have the most obvious case if one is the negation of the other. If we are agnostic to s_2 but not to s_1 , then we are also agnostic to their biconditional $s_1 \leftrightarrow s_2$, and

¹²Again, I assume that the total theory is closed under logical consequence. We may be guilty of logical mistakes, in which case our total theory might even be inconsistent, but at present I shall abstract from this difficulty.

then neither this biconditional nor its negation will be part of our total theory. Since we rule out the possibility that the agnosticism is based on a mere logical mistake, we can count rejection of the biconditional $s_1 \Leftrightarrow s_2$ as sufficient for s_1 and s_2 to differ in meaning, by intuitive and traditional meaning distinctions. A weaker alternative is to count rejection of, or agnosticism to, the biconditional as sufficient.

A corresponding situation seems also to hold with respect to the *Word and Object* framework. The view of *Word and Object* and later works is somewhat more objectivist than that of Two Dogmas, since speakers/theorists are pictured as reacting to external (although proximal) stimuli. Accordingly, Quine restricted the holism of Two Dogmas, letting observation sentences (or their dated counterparts) enjoy a more privileged status (Quine 1960a: 13). Still, within a theory there is no such thing as a sentence's being false over and above implying observation sentences (or rather observation conditionals) that conflict with experience, and no such thing as a sentence's being true over and above being part of our theory (again closed under logical consequence) and not conflicting with possible experience.¹³

This suggests that we apply what is essentially the same idea: two sentences s_1 and s_2 count as inequivalent for a speaker just if he is disposed—without making a logical mistake—to dissent from the biconditional $s_1 \Leftrightarrow s_2$ (or the source language counterpart). A weaker alternative is that the speaker is either disposed to dissent or is agnostic.¹⁴

¹³This is in line with the claim that truth is immanent to theory (Quine 1981: 21-22). Further, there is the issue of how to regard alternative total theories that are empirically equivalent to one's own. On the sectarian view, they are false, since differing non-trivially from one's own, on the ecumenical view, they are true, since empirically as adequate. Quine eventually rejected the question itself (Quine 1992: 98-101), and I shall not take further account of it.

¹⁴Here it might be seen as a problem that the condition is stated in terms of an interpreted sign, the sign for the biconditional itself. The condition for incompatibility between manuals is then not stated in purely behavioristic terms. Indeed, Quine himself later thought that in this respect he had failed in *Word and Object*, because of relying on an intuitive notion of equivalence, and that he had succeeded in *Pursuit of Truth* (cf. Quine 2000: 421). However,

That this is close to how Quine thought about inequivalence is also made evident by an exchange between Quine and Michael Dummett. Dummett noted (1974: 367-68) an apparent tension in Quine's views on correctness and incompatibility. One requirement of correct manuals is that they relate stimulus analytic sentences of the source language to stimulus analytic sentences of the target language (Quine 1960a: 68). A stimulus analytic sentence, for a speaker, is a sentence the speaker is disposed to assent to after every stimulation (Quine 1960a: 55). Dummett noted that if incompatibility between two manuals M_a and M_b consists in the fact that M_a translates a sentence with a stimulus analytic sentence while M_b translates the same sentence with a stimulus contradictory one (a sentence dissented from after every stimulation), then not both translations will fit the linguistic dispositions of the speakers, and this will conflict with the requirements of correct manuals.¹⁵ So it might seem that we just cannot have two manuals that are both correct and incompatible.

Quine's reply (Quine 1974: 399) was that one sentence s of the source language to which the native speaker is agnostic can be translated into sentences s_1 and s_2 of the target language, to both of which the translator is agnostic, but such that he assents to the biconditional formed by the one and the negation of the other (which of course is equivalent to assenting to the negation of their biconditional). Quine here chooses the stronger alternative over the weaker one, by which agnosticism to the biconditional is enough. Either way, the conflict between the conditions of correctness and the conditions of incompatibility is resolved.¹⁶

the complaint in this case is unjustified. As is noted by Quine, source language counterparts to conjunction and negation can be identified as operations on the stimulus meaning of observation sentences (Quine 1960a: 57-58), and nothing more than this is needed.

¹⁵Dummett actually makes the point with respect to the permutation format of the indeterminacy thesis.

¹⁶This reply is nearly anticipated by Quine in 1960a: 73-74: 'Two such translations might even be patently contradictory in truth value, provided there is no stimulation that would encourage assent to either'.

In line with this, I shall say that a triple $\langle s, s_1, s_2 \rangle$ of sentences, with two manuals M_a and M_b , between L_1 and L_2 , such that $M_a(s, s_1)$, $M_b(s, s_2)$, and s_1 and s_2 are materially inequivalent in L_2 , is an *incompatibility triple*. Two manuals are incompatible just if there is at least one incompatibility triple between them. In fact, it is reasonable to think that if there is one, then there will be many, and Quine indeed speaks of divergence in countless places.¹⁷

Two inequivalent sentences of an incompatibility triple cannot count as having the same meaning, by even the weakest pre-theoretic or traditional notion of linguistic meaning. Then if there are incompatibility triples, the application of pre-theoretic and traditional concepts of meaning is *not always objectively grounded*. A putative meaning m of an expression e is objectively grounded just if having m coincides with being inter-translatable with e by correct manuals.¹⁸ Conditions of correctness of translation manuals are supposed to be objectively grounded. Quine argued that the proper way to make them objectively grounded was behavioristic.¹⁹

4 The survey

I'll proceed as follows. For each version of the analytic/synthetic distinction, I shall consider the question whether the rejection of the distinction implies the indeterminacy thesis, and *vice versa*. I shall prefix the negation sign ' $\neg$ ' to the analytic/synthetic distinction abbreviations (' $\neg(\text{FMA})$ ' etc.), as shorthand for the statement of the rejection of the distinction in question, not as literally indicating the negation of the definition of analyticity. Exactly what the rejection

¹⁷The present view on correctness and incompatibility conditions is in agreement that of Harman 1968-69: 25 and Harman 1996: 397. Føllesdal (1973: 297) criticizes Harman for setting out that view in the earlier paper. On Føllesdal's view, assent preservation is required only for certain kinds of sentences. Føllesdal's paper was, however, published the year before Quine's reply to Dummett, where Quine implicitly supports Harman's interpretation.

¹⁸There is more to say about intralinguistic synonymy. See below.

¹⁹See Pagin 2000 for Quine's arguments for linguistic behaviorism.

of the distinction amounts to will vary between the different versions, but it will be made clear in each case.

4.1 $\neg(\text{FMA}) \Rightarrow (\text{IT})?$

No. The rejection of (FMA) might be taken to consist in the claim that no sentence is analytic in the (FMA) sense, or that the concepts involved in stating the distinction are unclear. Clearly, neither interpretation implies that there be two acceptable but incompatible manuals of translation between any two natural languages.²⁰ A third alternative is that the rejection consist in the claim that for at least some sentences, it is *indeterminate* whether they are true in virtue of meaning alone or in virtue of meaning together with other facts, and *no* sentence is determinately true independently of facts. This understanding is suggested by Quine's remarks about the linguistic and factual components in Quine 1951: 41-42 and his discussion in Quine 1960b. Under this interpretation, (IT) does not follow.

It may be that for at least some sentences, it is indeterminate whether they are true in virtue of meaning alone, or in virtue of meaning together with very general features of reality. For instance, it may be indeterminate whether '=' has a meaning according to which

$$(4) \forall x(x = x)$$

is analytically true, or a meaning according to which (4) is synthetic but still true because of the general fact that every object is self-identical (cf Quine 1960b:

²⁰In Two Dogmas Quine moves from (FMA) to (SA) for the official reason that the notion of *meaning* is unclear, because it seems to require meaning entities. He notes that we can settle for considering the synonymy relation and disregard the entities. However, (FMA) really turns on the condition of being true independently of facts; there is no need to add a positive claim about what makes such sentences true. So dropping the reference to meaning would not essentially alter the (FMA) distinction.

It is also possible to be dissatisfied with the concept of a fact, and Quine later rejected facts as superfluous posits (Quine 1992: 80). This is not a complaint made in Two Dogmas, however. Also, if the present argument is correct, even if the notion of a fact is made clear, (IT) and the rejection of (FMA) are independent.

113). In either case, (4) is true. Even if there is a variation in meaning, the sentences of the target language that differ in meaning, depending on whether they are true by meaning alone or true by meaning together with general facts, are guaranteed to remain materially equivalent. This degree of indeterminacy in meaning is then too weak to imply the indeterminacy thesis. This fact is overlooked in the quote from Boghossian.

And clearly, the idea that every sentence depends on facts for its truth or falsity does not imply any indeterminacy whatsoever. We can well have a determinate interpretation of a language where truth consists in correspondence to facts for all sentences.

4.2 (IT) $\Rightarrow$ $\neg$ (FMA)?

No. If the rejection of (FMA) is the claim that for every true sentence s , the truth of s either determinately does depend on facts, or it is indeterminate whether the truth of s depends or does not depend on facts,²¹ then the *negation* of the rejection is the claim that for some sentence s , the truth of s determinately does *not* depend on facts. If this negation of the rejection is compatible with (IT), then the rejection claim itself does not follow from (IT).

And so it is. The assumption that some sentences are (determinately) true in virtue of meaning alone does not conflict with indeterminacy. The indeterminacy thesis is indeed incompatible with some traditional or intuitive ideas about meaning, since it implies that two sentences can have the same objectively grounded meaning (in the same context, if there is context dependence), even though they differ in truth value. Clearly, a member of such a pair cannot be fact/meaning analytic. For, if a sentence s_1 has the same meaning as a sentence s_2 that is false, it cannot be that s_1 is true in virtue of meaning alone. However, (IT) does not imply that *every* sentence will belong to such a pair. Two manuals

²¹That is, not counting facts about what it means.

M_a and M_b are incompatible if there are incompatibility triples between them, but it is not required that every sentence is member of one. In fact, the correctness requirement that stimulus analytic sentences should be translated with stimulus analytic sentences implies that whatever is true or taken to be true, should be treated as a truth by acceptable translation manuals. So, if the idea of truth in virtue of meaning is acceptable in the first place, it is also compatible with (IT).²²

4.3 $\neg(\text{SA}) \Rightarrow (\text{IT})?$

No. Same as in subsection (4.1). It may be indeterminate whether some expressions, like ‘bachelor’ and ‘unmarried man’ are synonymous or merely (necessarily, if you will) coextensive. Still, any sentence resulting from a logical truth by substituting ‘bachelor’ for ‘unmarried man’ will remain a truth (a sentence held true) and this does not suffice for the indeterminacy thesis.²³

²²According to Dagfinn Føllesdal (1973: 290-91), Quine’s basic point in Two Dogmas is also what the indeterminacy thesis amounts to, viz. that sentences do not have meaning one by one, which (according to Føllesdal) is to say that meaning and information, language and theory, cannot be separated. Since this inseparability thesis (on my view) is equivalent with rejection of the (FMA) analytic/synthetic distinction, Føllesdal’s understanding of indeterminacy makes the rejection of (FMA) equivalent with the indeterminacy thesis.

However, since the present understanding of indeterminacy, stated in (IT), is quite close to Quine’s own statements of indeterminacy, and since (IT) and the rejection of (FMA) are mutually independent, there is good reason to be skeptical about Føllesdal’s interpretation. It has changed somewhat, e.g. in Føllesdal 1994 and Føllesdal 1995, even if it is not completely clear how much of the earlier understanding is given up.

²³Jerrold Katz (1990: 184-85) presents an argument from the rejection of synonymy to indeterminacy: Because there is no universal synonymy relation, there are no identity conditions for intensional objects, and *a fortiori* no intensional objects. Hence the underdetermination of translational correctness by behavioral data amounts to indeterminacy.

However, even if one were to accept Katz’s version of what Quine’s criticism of synonymy in Two Dogmas amounts to, the absence of intensional objects is beside the point. The reason is that we need a sufficiently strong *underdetermination* to begin with, i.e. an underdetermination of translational correctness by behavioral data that accepts two manuals with incompatibility triples between them. That there is such underdetermination in the first place, let alone indeterminacy, does not follow from the rejection of synonymy.

4.4 (IT) $\Rightarrow$ $\neg$ (SA)?

No. Two expressions e_1 and e_2 of language L should count as intralinguistically synonymous iff it holds for any admissible translation manual M and any expression e that $M(e_1, e)$ iff $M(e_2, e)$. This can hold even if these expressions are members of incompatibility triples, i.e. there is a language L_1 , manuals M_a and M_b between L and L_1 , such that $M_a(e_1, s_1)$, $M_a(e_2, s_1)$, $M_b(e_1, s_2)$, $M_b(e_2, s_2)$ and s_1 and s_2 differ in truth value in L_1 . What matters for intralinguistic synonymy is that e_1 and e_2 are translated the same as one another by each manual (see (cf Pagin 2003)).²⁴ ²⁵ Then, granted that intralinguistic synonymy is compatible with indeterminacy (and that logical truth is not affected), so is synonymy analyticity.²⁶

²⁴Intralinguistic synonymy, defined this way, is a narrower relation than the restriction to a language of (objectively grounded) meaning identity. If two sentences have the same meaning, then whatever the one can be translated into, the other can be translated into as well, but maybe only by another translation manual. This can hold even if no single manual translates both sentences the same way. This conception of intralinguistic synonymy does make it objectively grounded as well, but not as a relation of meaning sameness.

It is a further matter whether synonymy is acceptable from a Two Dogmas perspective. I have argued elsewhere that the answer is yes, since a Quine acceptable synonymy relation can be defined in terms of the revisability ideas of Two Dogmas. See Pagin 2001, 2003.

²⁵Robert Kirk (2004: 155) claims that because of indeterminacy, synonymy between sentences of the same language is not a matter of fact, since between two speakers using the same sentences, one need not translate homophonically (= always map a sentence of the one speaker on the same sentence in the mouth of the other). But here Kirk simply confuses intralinguistic synonymy with translation relations between different speakers.

²⁶According to Roger Gibson (1988: 95), it is consequence of the indeterminacy of translation that no behavioristic characterization of the analytic/synthetic distinction can be given. However, if all that is needed is a behavioral basis for distinguishing between analytic and synthetic sentences, in some sense or other of ‘analytic’, then we can e.g. appeal to the definition of synonymy in terms of correct translation suggested above. Since correct translation can be behaviorally defined, so can synonymy. Together with behavioral definitions of the constants of sentential logic (Quine 1960a: 57-58), this gives us a behavioral definition of synonymy analyticity, which we can use to make a distinction between two kinds of stimulus analytic sentences, the “analytic” and the “synthetic” ones.

Christopher Hookway (1988: 139-41) gives a similarly general hint: it is a consequence of the indeterminacy thesis that intensional notions are illegitimate and should be rejected. Synonymy and analyticity are intensional notions, and hence they are illegitimate. However, as is clear from the present investigations, intensional notions *can* survive the indeterminacy thesis; they just cannot be as widely applied as if the thesis is false.

4.5 $\neg(\mathbf{RA}) \Rightarrow (\mathbf{IT})?$

No. The rejection of (RA) should be understood as the claim that we are free to change our holding true attitude to any sentence. Then (IT) does not follow. The fact that we are free to change our attitude to any sentence does not in itself imply anything about truth or meaning. As stressed in George 2000, Carnap was fully prepared to grant this, without giving up the analytic/synthetic distinction.

4.6 $(\mathbf{IT}) \Rightarrow \neg(\mathbf{RA})?$

No. Nothing is said about why a particular sentence is or is not immune to revision. If some sentences are immune to revision because they are synonym analytic, then if (SA) is compatible with indeterminacy, so is revision analyticity. As long as it is not specified what makes for immunity, the answer is negative.²⁷

4.7 $\neg(\mathbf{MRA}) \Rightarrow (\mathbf{IT})?$

No. Suppose we have a certain revision R of our attitudes to sentences of our language L . Suppose that because of R truth values are redistributed. A particular sentence s is held true before R and held false after. Suppose further that the meanings of all sentences are preserved across R . This can be seen as a consequence of rejecting (MRA): no sentence is such that revising our acceptance of it *must* change its meaning. We can then regard the identity mapping as a translation function, relating the language L before R to the language L after R , preserving the meaning of all sentences. Then, it seems, we get what the indeterminacy thesis claims: two sentences (s before and after the revision) with

²⁷According to De Rosa and Lepore (2004: 71-73), the indeterminacy thesis is equivalent with meaning holism in Two Dogmas, and meaning holism follows from confirmation holism in conjunction with the rejection of the analytic/synthetic distinction. I disagree entirely on interpretation, but since their views are so far from mine (and not only mine), arguing against them would require more space than the present context allows.

the same meaning but different truth values.²⁸

However, this is incorrect. What is implied by rejecting (MRA) is weaker than (IT). A translation relation defined in this way by a theory revision does not meet the condition of mapping stimulus analytic sentences on stimulus analytic sentences. The very idea of a revision is the opposite to that of preserving attitudes, or preserving assent and dissent dispositions. Hence, a revision-induced translation can count as correct only by more liberal standards of correctness than Quine actually employs for defining indeterminacy. More liberal standards of translational correctness define a more inclusive (less fine-grained) relation of meaning sameness. The claim that there are inequivalent sentences with the same meaning by a *less* inclusive relation of meaning sameness does imply the claim that there are inequivalent sentences with the same meaning by a *more* inclusive relation, but *not vice versa*. Because of this, the claim that meaning is preserved across a revision is weaker than the indeterminacy thesis itself.

This result does depend on the strict conditions of correctness, that what is held true must be translated into something held true. If this requirement were relaxed, some revisions could be seen as defining correct translations. But that would be to weaken the thesis.

4.8 (IT) $\Rightarrow$ $\neg$ (MRA)?

No. In the permutation version of the indeterminacy thesis we can define a permutation P on a language L that preserves all relevant assent and dissent dispositions. P is a 1-1 mapping of L onto L , definable by translating to a language L_1 by a manual M_a and then back to L by another, incompatible manual M_b . That is (assuming a 1-1 translation relation), $P(s) = M_b^{-1}(M_a(s))$,

²⁸Strictly speaking, we get an incompatibility triple out of this only under two conditions: either $\neg s$ is *asserted* after the revision, or it is enough to form an incompatibility triple $\langle s, s_1, s_2 \rangle$ if the speaker is *agnostic* to the biconditional $s_1 \Leftrightarrow s_2$. We can, however, assume that either of these two conditions is met, since the failure of the argument does not depend on it.

where M_b^{-1} is the inverse of M_b . Now P can be regarded as defining a revision R , in that the truth value of a sentence s after R , is the same as the truth value of $P(s)$ before R . As a consequence of the indeterminacy thesis, there is a sentence s' such that the truth value of s' before R is different from the truth value of s' after R , even though the meaning is left unchanged.

However, since the permutation P must preserve all assent and dissent dispositions, the theorist must have been agnostic to s' both before and after R . So s' was not part of the theory formulation before R , and by the same token, neither was any other sentence whose truth value was changed by R . Hence R is not a revision strictly speaking, or at most a revision in a degenerate sense, since it leaves the theory intact. Therefore, the indeterminacy thesis leaves room for sentences that cannot be given up without change of meaning.

4.9 $\neg(\text{JA}) \Rightarrow (\text{IT})?$

No. In rejecting justification analyticity you deny either that there is a sentence s such that grasp of the meaning of s suffices for being justified in holding s true, or alternatively, that there is no objective difference between sentences satisfying and sentences not satisfying this condition.

Now, suppose the reason why a speaker S is justified in holding s true because of grasping its meaning is that S knows that s is true in virtue of meaning alone, independently of matters of fact. Then one reason for rejecting (JA) would be that one rejects (MFA): since no sentences are true in virtue of meaning alone one cannot know that they are, and hence not be justified in holding them true because of such knowledge. But since the denial of (MFA) does not imply (IT), neither does the denial of (JA), on this construal.

Moreover, this understanding of why a speaker would fail to be justified seems to be the best possible alternative. If there are other more *epistemic*

reasons, having to do with extra requirements on justification for knowledge of meaning, the failure of being justified need not have any consequences for meaning whatsoever.

4.10 (IT) $\Rightarrow$ $\neg$ (JA)?

No. In analogy to case (4.2), you can hardly be justified in holding a sentence s true because of grasp of the meaning of s , if s has the same meaning as a sentence s' that is false. At least, you cannot be justified in the sense of having conclusive evidence. But again, since the indeterminacy thesis only requires the existence of *some* incompatibility triple, there is room for sentences that are true and all of whose correct translations are true as well. Indeed, because of the correctness conditions, there must be such sentences. Those sentences may be true in virtue of meaning, and a speaker may be justified in holding them true because of grasp of their meaning.²⁹

5 Conclusion

The survey has resulted in ten straight negative answers. Hence, the conclusion is that the indeterminacy thesis and the rejection of the analytic/synthetic distinction, in any of the usual forms, are mutually independent.

There is reason to believe that Quine devised his thought experiment of

²⁹Dummett (1981: 612-14) takes Quine to be arguing against analyticity directly from linguistic behaviorism in Quine 1960a: 38-39. The idea is that the closest we come on behavioral grounds to an analytic sentence is a sentence assented to under all stimulations by all members of the speech community. And this is not enough to distinguish assent that depends on language alone from assent that depends on language together with shared collateral information. Hence there is no analytic/synthetic distinction to be had.

This argument is a bit beside the issue since it is the thesis of linguistic behaviorism rather than (IT) itself that is the premise. Even so, however, the argument is flawed, since if all that is needed is a behavioral basis for distinguishing between analytic and synthetic sentences, in some sense or other of 'analytic', this can be done (cf note 26).

It is true that Quine in *Word and Object* (1960a: 61-68) does criticize some attempts to give behavioral definitions of analyticity that go beyond stimulus analyticity, but this does not imply that it is impossible, nor that Quine thought so.

radical translation as a response to Carnap’s ‘Meaning and synonymy in natural language’ (Carnap 1955). There Carnap attempts to give empirical content to synonymy and analyticity claims by devising query tests for speakers, to be carried out by the linguist (Carnap 1955: 236-40).³⁰ If Quine really wanted to refute Carnap’s attempt, it is ironical that the indeterminacy thesis, even though it is in some ways a stronger criticism of traditional notions of meaning, does not after all force the rejection of the analytic/synthetic distinction.*

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³⁰Quine does not refer explicitly to this paper in chapter 2 of *Word and Object*, but he says in a letter to Carnap of 14 February 1959 that Carnap’s influence on the book as been strong, even when negative (cf Creath 1990: 446).

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