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ANALYTICITY, CARNAP, QUINE, AND TRUTH

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Quine's paper "Two Dogmas of Empiricism" is famous for its attack on analyticity and the analytic/synthetic distinction. But there is an element of Quine's attack that should strike one as extremely puzzling, namely his objection to Carnap's account of analyticity. For it appears that, if this objection works, it will not only do away with analyticity, it will also do away with other semantic notions, notions that (or so one would have thought) Quine does not want to do away with, in particular, it will also do away with truth. I shall argue that there is, indeed, no way for Quine to protect truth against the type of argument he himself advanced in "Two Dogmas" against Carnap's notion of analyticity. If he wants to keep his argument, Quine has to discard truth along with analyticity. At the end of the paper I suggest an interpretation of Quine on which he can be seen as having done just that.

1. Carnap's final account of analyticity can be found in his paper "Meaning Postulates". The account is quite simple. A sentence of a specified formal language is analytic in that language just in case it is logically implied by the (conjunction of the) *meaning postulates* of the language. Of course, Carnap does not make use of the notion of a meaning postulate when defining analyticity. Instead, he uses the meaning postulates themselves. Let **P** be the conjunction of the meaning postulates of a certain formal language. Carnap defines a sentence of the language as analytic in that language just in case it is a logical consequence of **P** in that language. The meaning postulates are given simply by enumeration. For example, the specification of the language in question could contain the list of postulates

(P_1) $$(\forall x)(Bx \rightarrow \neg Mx),$$
(P_2) $$(\forall x)(Rx \rightarrow Blx).$$

To us these postulates will suggest that the sentences "All bachelors are unmarried" and "All ravens are black" count as analytic in the language under consideration. But strictly speaking, the postulates should not be regarded as fully interpreted formulas. The meaning postulates are part of the specification of the language in question and are laid down prior to the semantic interpretation of its non-logical constants. They merely stipulate the logical relations that obtain between some of the non-logical constants. In other words, the meaning postulates restrict the range of possible interpretations (the range of admissible models) for the language.

2. Quine's "Two Dogmas of Empiricism" antedates Carnap's "Meaning Postulates" by a year. Nevertheless, all concerned in the debate have taken the passages of "Two Dogmas" that contain Quine's criticism of Carnap's proposal (section 4) as directed against the strategy outlined in "Meaning Postulates", and rightly so. What is Quine's criticism? Quine observes that Carnap defines analyticity for one particular language with its particular list of meaning postulates. Let us call the language in question "L_0". Carnap merely defines the one-place predicate '*S* is analytic-in-L_0', which remains undefined for any sentence *S* that does not belong to L_0. But the notion that is in need of illumination, according to Quine, is the relational notion of analyticity, i.e., the two-place predicate '*S* is analytic in *L*', with variable 'S' and variable '*L*'. This relational notion remains unaccounted for.

Quine makes two additional remarks. First, he says that his criticism does not depend on the issue whether semantic notions can have a precise definition only in the realm of formal languages. Even granted the point—a point dear to Carnap but less dear to Quine—analyticity should be defined for variable formal languages: Carnap has not done that. Second, Quine suggests that Carnap's choice of terminology is slyly question begging. Carnap dubs his newly defined term 'analytic-in-L_0'. Less tendentiously, the term might better be written as 'K', says Quine, "so as not to seem to throw light on the interesting word 'analytic'"[1].

3. Prima facie it seems clear which feature of Carnap's definition gives rise to Quine's objection. It is the fact that the definition takes the form of a recursion based on the enumeration of some members of a particular language. The basic analytic sentences of the language, its meaning postulates, are simply enumerated. They serve as base clauses for a recursion that generates all other analytic sentences of the language by (possibly repeated) application of the relation of logical consequence. Such a recursion based on a list of members of a particular language cannot yield anything but a definition that is restricted to that particular language. Also, it seems clear that Quine's objection is not merely that Carnap did not in fact succeed in defining analyticity for variable languages. The objection must rather be that one cannot define analyticity for variable languages with the kind of strategy adopted by Carnap. Carnap could, of course, specify additional languages, say L_1, L_2, etc. and define additional terms, say, 'analytic-in-L_1', 'analytic-in-L_2', etc., where each definition would take the form of a recursion based on an enumeration of the meaning postulates for the respective languages. But that would not get him any closer to a definition of analyticity for variable languages. Call the notion expressed by the two-place predicate '*S* is analytic in *L*' (with variable '*S*' and variable '*L*') the *general* or *relational* notion of analyticity. Call the notions expressed by the one-place predicates '*S* is analytic-in-L_1', '*S* is analytic-in-L_2', etc., the *restricted* or *indexed* notions of analyticity. Quine's objection is simply that Carnap's

restricted, indexed notions fail (as a matter of principle) to shed any light on the general, relational notion of analyticity.

4. It does not take much reflection to realize that Quine's objection is rather puzzling. His case against Carnap is part of his over-all case against the notion of analyticity and the analytic/synthetic distinction as traditionally conceived. But how could Quine object to Carnap's treatment of analyticity on the grounds given in "Two Dogmas"? Quine's objection does not hinge on anything that is very special about Carnap's treatment of analyticity. The objection is rather general. If it is a good objection, it must work equally well against the treatments given to other semantic notions, including notions like logical consequence, logical truth, reference, satisfaction, and especially *truth*. No precise definitions are available that define any of these other notions for variable languages, not even for variable formal languages. The only precise definitions available are definitions by recursion based on enumeration. Like Carnap's definition of 'analytic-in-L_0', they define indexed predicates that are restricted to specific (formal) languages—the most prominent example being Tarski's definition of truth. Yet, Quine does not seem prepared to raise analogous objections against any of these other notions or against the distinctions that come along with them, e.g., the true/false distinction.

The initial reaction of the Carnap camp to "Two Dogmas" registers some measure of bewilderment along these lines.[2] Admittedly, so far the issue is largely *ad hominem* Quine. But a more serious issue looms in the background: Quine's line of attack constitutes a fundamental threat to the fruitfulness of the linguistic turn. Traditionally, some of the most basic philosophical notions—notions like truth, logical truth, necessity, logical consequence, analyticity—had been applied to psychological states (judgments, beliefs) or to metaphysical entities (propositions, Bolzano's *Sätze an sich*). The linguistic turn (Vienna-Circle style) proposed to shift the application of these basic notions to linguistic items, to sentences. The advantage of this shift was supposed to be twofold: first, the avoidance of psychologism and metaphysics; second, the increase in precision resulting from the fact that the basic philosophical notions, when applied to sentences, could be rigorously defined by bringing to bear the powerful tools of formal logic—philosophy would become as rigorous as science. Since Quine's objection to Carnap's linguistic version of analyticity is easily transferred to the linguistic versions of the other basic philosophical notions, his objection suggests that these alleged advantages are illusory; they are bought at the price of pointlessness. The linguistic movement was unable to come up with rigorous definitions of the basic philosophical notions for variable languages. All it was able to come up with were rigorously defined *ersatz* notions, restricted to particular languages, which fail to shed any light on the original notions they were supposed to clarify.

5. What did Quine think he was up to when he launched his criticism of Carnap? Why did he treat analyticity differently than other semantic notions? In particular, why did he treat analyticity differently than truth? It turns out that Quine and Carnap were able to reach some clarification on this point. However, it seems the clarification was achieved largely because Quine reinterpreted the original point of his own argument along lines suggested by Carnap.

It appears that Carnap put the matter to Quine in the following way.[3] Distinguish between the *explicandum*, the notion to be explicated, and the *explicans*, the precisely defined notion that is offered to explicate the explicandum. In the present case, the explicandum is the relational notion of analyticity. The explicans offered by Carnap is the indexed notion of analyticity-in-L_0. Surely, Quine's criticism is not directed against the explicans; this notion is rigorously defined. So, Quine's criticism must be directed against the explicandum, the relational notion of analyticity. Once Carnap has stated the issue in this way, he feels he can handle Quine's worries with relative ease. Quine is right in pointing out that the relational notion of analyticity is inexact, vague, and partly unclear. It is, after all, a notion of ordinary (philosopher's) English. But that is precisely why this notion is in need of explication. From Carnap's point of view, all Quine has done is to point out (once more) that the notion of analyticity has to be made more precise by way of explication. On this score, truth is no better off than analyticity. The ordinary (philosopher's) notion of truth is likewise inexact, vague, and partly unclear—even paradoxical. It, too, is in need of explication.

Surprisingly, Quine seems to have agreed with Carnap's suggestion that their debate concerns merely the explicandum. We find the following remark in a letter from Quine to Carnap:

> The main illumination for me, in our joint performance at Chicago, was that your "analytic-in-L_0", and "analytic-in-L_1" etc., which I have represented as mutually irrelevant and irrelevant to "analytic-in-L" (for variable 'L'), do have a principle of unification precisely in the sameness of the explicandum. The issue therefore becomes: is it a reasonable explicandum?[4]

Apparently Quine now sees himself as arguing—contra Carnap—that the notion of analyticity is unclear to a degree that makes it unfit as a reasonable explicandum. This explains his differential treatment of truth, a notion which he regards as sufficiently clear to serve as a reasonable explicandum.

However, it should come as a surprise that Quine allowed Carnap to shift the debate in this direction. For when we look at the section of "Two Dogmas" in which Quine criticizes Carnap's account of analyiticity (section 4), it is evident that in this section he neither attacks Carnap's explicans (the indexed notion of analyticity-in-L_0) nor his explicandum (the relational notion of analyticity). Instead, Quine attacks

Carnap's claim that the one can serve as an adequate explication of the other. The following passages from "Two Dogmas" make this perfectly obvious:

> The notion of analyticity about which we are worrying is a purported relation between statements and languages: a statement is said to be *analytic for* a language *L*, and the problem is to make sense of this relation generally, that is, for variable '*S*' and '*L*'.
>
> By saying what statements are analytic in L_0 we explain 'analytic-for-L_0' but not 'analytic', not 'analytic for'. We do not begin to explain the idiom '*S* is analytic for *L*' with variable '*S*' and '*L*', even if we are content to limit the range of '*L*' to the realm of artificial languages.[5]

It is true that Quine's overall aim in "Two Dogmas" was to show that the traditional notion of analyticity, even in its linguistic version, is bankrupt because it cannot be made sufficiently clear. However, his criticism of Carnap's approach does not have this form at all. In the passages of "Two Dogmas" in which Quine criticizes Carnap, he commands his understanding of the notion of analyticity—however fragmentary—to point out that, however unclear the notion might be in other respects, we at least understand that much about it: it is a general, relational notion for variable '*S*' and variable '*L*'. And he argues that, since Carnap's indexed notions lack precisely this feature, they cannot serve as adequate explications of analyticity; they miss their target.

In the passage from the letter quoted above, Quine simply drops this point when he concedes that Carnap's indexed notions of analyticity "do have a principle of unification precisely in the sameness of the explicandum". But why does he make this concession? As far as one can see, the "principle of unification" alluded to consists merely in Carnap's intention to use his indexed notions to explicate the relational notion of analyticity. But this is hardly satisfactory. The suspicion arises that Quine conceded his own point to Carnap for bad reasons. If stressed, the point would threaten not only the notion of analyticity but various other semantic notions that Quine does not want to threaten, in particular, it would threaten the notion of truth. One suspects that Quine allowed Carnap to shift the discussion to the question whether analyticity is a reasonable explicandum merely because he felt that the ground was safer in this area, because he felt that he could discredit analyticity on this score without endangering the semantic notions against which he did not have an antecedent distaste.

6. There are, then, two sets of issues involved. The first issue could be called the issue of the *adequacy of the explicandum*: On what grounds does Quine say that analyticity is not a sufficiently clear explicandum? And what justifies his differential treatment of

analyticity as opposed to other semantic notions? In particular, why does Quine think that the notion of truth is a sufficiently clear explicandum? The second issue could be called the issue of *explicatory adequacy*. It concerns the relation between the explicandum and the proposed explicans: Can any indexed notion of analyticity be an adequate explication of the relational notion of analyticity? If not, what justifies differential treatment of an indexed notion of analyticity as opposed to other indexed semantic notions? In particular, why should we think that an indexed notion of truth offers an adequate explication of the relational notion of truth for variable languages?

7. Concerning the adequacy of analyticity as an explicandum, Carnap and Quine soon agreed to treat the issue in terms of empirical criteria: Will there be enough empirical evidence for a radical translator to decide which sentences of an alien language should be taken as analytic, which as true, etc.?[6] This is the road that leads to *Word and Object* and, as Richard Creath has pointed out, ultimately to an ironic standoff and to the discontinuation of the debate between Carnap and Quine.[7] While Quine apparently saw his thesis of the indeterminacy of translation as the final refutation of Carnap, Carnap could see it as Quine's final concession. For he could read *Word and Object* as having shown the following: Ordinary semantic notions are vague and inexact, which is why they are in need of precise explications in formal languages. Which explication to choose is only partly a question of empirical evidence; to a large part it is a question of pragmatic convenience. Moreover, on this score, there is no important difference between notions of extensional semantics (truth, reference, satisfaction) and notions of intensional semantics (analyticity, synonymy, meaning).

I do not wish to follow up on this strand of the debate. Once the issue of the adequacy of the explicandum was recognized by Carnap and Quine, they largely lost sight of the issue of explicatory adequacy. With one noteworthy exception, the issue of explicatory adequacy tends to drop out in the writings that eventually lead to *Word and Object*. This is somewhat unfortunate. After all, it was the primary issue posed by Quine's criticism of Carnap in "Two Dogmas". Moreover, as I have indicated, it may well be the far more serious one. For it does not merely question the respectability of this or that semantic notion, it has the potential to threaten the whole point of the linguistic approach to philosophy.

8. There is one short paper by Quine in which both issues are still in evidence, his "Notes on the Theory of Reference". In this paper Quine attempts to show—mostly along lines inspired by Tarski's work on truth—that the theory of extensional semantics (truth, reference, satisfaction) is better off than the theory of intensional semantics (analyticity, synonymy, meaning). In effect, his attempt focusses on a comparison between truth and analyticity. First he addresses what I have called the issue of the adequacy of the explicandum.

Why does Quine think that truth is a reasonably clear explicandum while analyticity is not? Quine's answer is that 'true', or rather, as he writes it, 'true-in-*L*', possesses a "peculiar clarity" in view of the paradigm

(1) '_____' is true-in-*L* if and only if _____,

which holds when the same sentence is substituted twice for '_____'. This paradigm is supposed to show that 'true-in-*L*' compares favorably with 'analytic-in-*L*', for which—as Quine says—"we have no clue comparable in value" to (1)[8]. According to Quine, the paradigm demonstrates why truth is better off as an explicandum than analyticity.[9]

This is a curious demonstration. Notice that Quine should demonstrate that 'true in *L*' with variable '*L*' is fundamentally clearer than 'analytic in *L*' with variable '*L*'. But paradigm (1) does not do that. For, as Quine remarks himself, to make (1) come out right, the language indicated by '*L*' has to be the same as (or a fragment of) the language in which (1) itself is couched, which is English. Otherwise, an instance of (1) might come out as meaningless jumble after twofold substitution of a sentence that does not belong to English. More importantly, without the restriction we might even get false instances of (1). False instances will result if there is a string that counts at once as a sentence of English and as sentence of another language in which it has a different meaning and if this string is true in its English meaning and false in its other meaning, or vice versa. So the restriction that the language indicated by '*L*' has to be the same as (or a fragment of) the language in which (1) itself is couched (English) is indispensable.[10] But the restriction undermines the point of the demonstration. Given the restriction, (1) shows at best that 'true-in-English' (or 'true-in-fragment-E_1-of-English') possesses a peculiar clarity. Yet, truth-in-English is not the general, relational notion of truth. It is a restricted, indexed notion. 'True in *L*' with variable '*L*' is nowhere in sight.

At one point Quine remarks that paradigm (1) serves to endow what he calls "true-in-*L*" with "every bit as much clarity, in any particular application, as is enjoyed by the particular expressions of *L* to which we apply [it]".[11] Obviously, Quine's 'true-in-*L*' is truth-in-English and not the real notion of truth for variable languages. For the latter notion, in marked contrast to the one Quine is talking about, is nicely applicable even if the expressions to which we apply it belong to an alien language and enjoy no clarity at all.

Surely, the Quine of "Two Dogmas" should have appreciated the force of this point. Remember that Quine did not object on the grounds that Carnap had defined the wrong indexed notion of analyticity, 'analytic-in-L_0', instead of 'analytic-in-English'. Even if Carnap had somehow managed to define the indexed notion of analyticity-in-English, Quine's criticism would still apply. The English term 'analytic' is the general, relational term 'analytic in *L*', with variable '*L*', and not the restricted, indexed term

'analytic-in-English'. Accordingly, we should object to Quine's demonstration on the grounds that the English term 'true' is the general, relational term 'true in *L*', with variable '*L*', and not the restricted, indexed term 'true-in-English'. To paraphrase Quine, 'true-in-English' might better be written untendentiously as 'K' so as not to seem to throw light on the interesting term 'true'.[12]

9. Could Quine have used a different paradigm—one that would have avoided the awkward restriction? Remembering Tarski, one might think of the alternative paradigm

(2) *x* is true in *L* iff p,

which holds when '*x*' replaces a quotation name of a sentence of *L* and 'p' replaces the translation of that sentence from *L* into the language in which (2) is couched (English).

On the face of it, this looks to be better suited as a paradigm for the general notion of truth for variable languages. But it is dubious whether it could serve Quine's purpose. Paradigm (2) presupposes the notion of *translation* (or rather, correct translation) in order to elucidate truth. In "Notes to the Theory of Reference" Quine doesn't tell us explicitly whether he counts the notion of translation with the reputable notions of the theory of extensional semantics or with the disreputable notions of the theory of intensional semantics. However, one can venture the surmise that he did not regard the notion as particularly clear—not as sufficiently clear, in any case, to be of much use in a demonstration that truth is clearer than analyticity.

Moreover, even if it is supposed that the notion of translation is sufficiently clear to elucidate truth, this would not help demonstrate that truth is clearer than analyticity. (Notice that the supposition at hand might still leave room for the view that it is to some extent indeterminate what counts as a correct translation of a given sentence.) If the notion of translation were freely available, one could produce a paradigm for 'analytic in *L*', with variable '*L*', that would conform to the spirit of Carnap's approach and would have to be acceptable to Quine:

(3) *x* is analytic in *L* iff *y* is logically true in *L*,

which holds when $x=y$ or *x* is a translation of *y* from *L* into *L*. This tells us that a sentence of a language is analytic in that language just in case it is either a logical truth in that language or a (correct) translation of a sentence that is a logical truth in that language. If the notion of translation were available, (3) would clarify Carnap's notion of analyticity about as adequately as (2) would clarify truth (*modulo* the notion of logical truth, which Quine accepts along with truth as a reasonably clear explicandum).

10. When Quine addresses the second issue, explicatory adequacy, he refers to Tarski's technical definition. He says that Tarski has shown how 'true-in-*L*' (Quine's notation) is genuinely definable in a metalanguage *L′*, provided *L* and *L′* satisfy certain general requirements, and provided *L′* contains *L*:

> Now Tarski shows how to formulate within the notation of L′ a sentence '---x---' which fulfills:
>
> ---x--- if and only if ____
>
> whenever a statement of L is put for '____'and a name of that statement is put for 'x'. In short, he shows that 'true-in-L', in a sense conforming to [(1)], is definable in L′...[13]

If this demonstration is to succeed in showing that truth is better off than analyticity with regards to the issue of explicatory adequacy, it will have to show that the string definable through a Tarski-style truth definition can serve as an adequate explication of the general, relational notion of truth. But it is hard to see how Quine's demonstration can show that.

First of all, a Tarski-style definition of truth is a definition by recursion based on enumeration—although in this case the enumerated items are satisfaction clauses for the predicates of the language under consideration ("'horse' is satisfied by horses") and reference clauses for its singular terms ("'John' refers to John"). The truth predicate for the language is later defined recursively on the basis of these clauses. So a Tarskian truth predicate (indicated by Quine through the open sentence '---*x*---') is restricted to the specific language under consideration. In general, Tarski-style truth definitions define merely indexed predicates, say 'true-in-L_0', 'true-in-L_1', 'true-in-L_2', etc., and each such predicate requires its own definition. Quine is perfectly aware of this limitation and mentions it explicitly.[14]

So how does Quine's second demonstration show that a Tarskian truth predicate can serve as an adequate explication of the general notion of truth for variable languages? It does not. It does not even really attempt to do so. It merely attempts to show that a Tarskian truth predicate can serve as an explication of what Quine calls "true-in-*L*". And we know from above that by now Quine understands his term 'true-in-*L*' in the sense clarified by paradigm (1), which—contrary to first appearances—does not really clarify 'true in *L*' with variable '*L*', instead it clarifies the indexed predicate 'true-in-English'. The demonstration depends on the fact that Quine has reinterpreted the explicandum. 'True-in-*L*', as clarified by (1), is 'true-in-English' not 'true in *L*' with variable '*L*'. No reason has been given for thinking that one of the indexed predicates definable by Tarski's methods should count as an adequate explication of the general notion of truth.

It turns out, then, that both of Quine's demonstrations fail—at least by the standards set in "Two Dogmas". The first demonstration fails to reveal the peculiar clarity of the general notion of truth as an explicandum. The second demonstration fails to reveal why Tarski's technically defined notions should count as adequate explications for the general notion of truth. So far, truth (together with the other notions of extensional semantics) still seems no better off than analyticity. In other words, the more serious threat caused by the generalization of the type of argument advanced in "Two Dogmas" is still alive: the rigorous linguistic approach cannot solve the problem of explicatory adequacy for any of the interesting semantic notions (semantic notions applied to variable languages); it cannot make good on its promise to provide rigorous technical definitions of the most basic philosophical concepts.

11. Quine's second demonstration brings to mind two questions that are relevant to our topic. First, does his second demonstration at least succeed in showing that an indexed notion of truth definable by Tarski's methods can serve as an adequate explication of truth-in-English? Second, could one devise an alternative demonstration to show that an indexed notion of truth definable by Tarski's methods can serve as an adequate explication of the general notion of truth for variable languages? I think the answers to these two questions are Yes and No respectively. Concerning the issue of explicatory adequacy, this means that it is possible to show that truth-in-English is better off than analyticity-in-English but not possible to show that the general notion of truth is better off than the general notion of analyticity.

Quine's second demonstration, quoted in the previous section, is evidently a somewhat simplified and importantly impoverished version of Tarski's condition of adequacy for definitions of truth, Convention T.[15] Remember, for his demonstration Quine has set up the *proviso* that the object-language, *L*, to which an indexed truth predicate, '---*x*---', definable by Tarski's methods will be restricted is to be contained in the metalanguage, *L′*, in which the definition is given; the metalanguage is assumed to be English. This *proviso* allows him to circumnavigate any mention of the notion of translation which was present in Tarski's original adequacy condition. At the same time, the *proviso* has the effect that Quine's condition is, at best, relevant to truth-in-English. Always assuming the metalanguage to be English, one could formulate Quine's condition of explicatory adequacy in the following way:

(I) A restricted truth predicate '---*x*---' definable by Tarski's methods counts as an adequate explicans of 'true-in-English' just in case its definition implies all instances of '---*x*--- iff p' that result whenever a name of a sentence belonging to some fragment of English is put for '*x*' and that same sentence is put for 'p'.

We know that Tarski-style truth definitions cannot do more than define indexed predicates whose indices restrict them to formalizable fragments of natural languages (or to artificially constructed formal languages which may count as limiting cases of the former). Moreover, to avoid the paradox of the liar, these formalizable fragments (or formal languages) must be essentially weaker in certain important respects than the metalanguage in which the indexed truth predicates are defined. Let 'E_1', 'E_2', etc. stand for such weakened, formalizable fragments of English. Now (I) simply amounts to the proposal to regard the indexed predicates 'true-in-E_1', 'true-in-E_2', etc. as adequate explications of 'true-in-English', provided they are defined by Tarskian methods. What is there to be said for this proposal? It turns out that Quine has more to offer in response to this question than the mere fact that the indexed predicates are indeed restricted to fragments of English. However, what he has to offer requires some reinterpretation in the light of what was argued above:

> In Tarski's technical constructions, moreover, we have an explicit general routine for defining truth-in-L for individual languages L [read: indexed truth predicates restricted to individual fragments of English] which conform to a certain standard pattern and are well specified in point of vocabulary. We have indeed no similar single definition of 'true-in-L' for variable 'L' [read: 'true-in-English']; but what we do have suffices to endow 'true-in-L' even for variable 'L' [read: 'true-in-English'] with a high enough degree of intelligibility so that we are not likely to be averse to using the idiom.[16]

Even though each of the indexed predicates 'true-in-E_1', 'true-in-E_2', etc. requires its particular Tarski-style definition, each such definition proceeds according to what can with some justification be called a "general routine". The crucial part of this routine is the construction of the base clauses from which the various indexed truth predicates are defined recursively. Strictly speaking, the base clauses will differ for different indexed predicates. The base clauses for 'true-in-E_1' will have the form

'___' is satisfied-in-E_1-by ___,
'___' refers-in-E_1-to ___,

for the predicates and singular terms of E_1 respectively. The base clauses for E_2 will differ accordingly. Nevertheless, in the case at hand, i.e., in the case in which all the different indices refer to different fragments of the same metalanguage (English), the construction of the base clauses proceeds relatively mechanically according to a routine that works just as well across fragments as it does within each fragment: "Always substitute the same expression (predicate, singular term) on both sides". Even someone who is unfamiliar with the expressions constituting the fragments could follow this

routine as long as the person knows to which grammatical category each expression belongs. There is, then, some reason for saying that 'true-in-E_1', 'true-in-E_2', etc. have a "principle of unification" in the systematic routine through which they are defined. Since they are, moreover, restricted to fragments of English, this may be taken as a reason for saying that they can serve as adequate explications of truth-in-English. If these admittedly somewhat sketchy considerations are accepted, one can concede to Quine that truth-in-English is in the clear with regards to the issue of explicatory adequacy.

12. We have just seen that Quine's second demonstration can be taken to show that an indexed predicate restricted to a fragment of English and definable by Tarski's methods can be taken to serve as an adequate explication of truth-in-English. What about the general, relational notion of truth? Is there an alternative demonstration to show that a restricted, indexed notion of truth definable by Tarski's methods can serve as an adequate explication of the general notion of truth for variable languages?

I have presented Quine's demonstration as following along the lines of the Quinean adequacy condition (I). An attempt to get at the general notion of truth for variable languages would require an alternative condition, one that conforms a bit more to the spirit of Tarski's Convention T—at least in the sense that it does not avoid the notion of translation. Again I assume that the metalanguage is English:

(II) A restricted truth predicate '---*x*---' definable by Tarski's methods counts as an adequate explicans of 'true in *L*' with variable '*L*' just in case its definition implies all instances of '---*x*--- iff p' that result whenever the name of a sentence belonging to (some fragment of) the language that '---*x*---' is restricted to is put for '*x*' and a translation of that sentence into English is put for 'p'.

Notice that this alternative condition, containing the notion of translation, is geared towards paradigm (2) much like the Quinean condition (I) was geared towards paradigm (1). Let 'L_1', 'L_2', etc. stand for fragments of arbitrary languages—the fragments must be formalizable and they must be weak enough to avoid the liar paradox. Condition (II) amounts to the proposal to regard the indexed predicates 'true-in-L_1', 'true-in-L_2', etc. as adequate explications of 'true in *L*' for variable '*L*', provided they are defined by Tarskian methods. Is this an acceptable proposal?

The proposal must be problematic to Quine simply because it contains the notion of translation and is geared towards paradigm (2) which attempts to install 'true in *L*' with variable '*L*' as a reasonable explicandum *via* the notion of translation. But even if Quinean worries about translation are set aside, (II) is unacceptable. For, in the case at hand, the indices of the different restricted predicates defined by Tarskian methods do not restrict them to fragments of the metalanguage (English). Instead, they

refer to fragments of arbitrary languages. And this means that the Tarskian definitions of 'true-in-L_1', 'true-in-L_2', etc. will not proceed according to a general routine in the sense sketched above because the base clauses for the different definitions (i.e., the reference and satisfaction clauses for L_1, L_2, etc.) will not exhibit a pattern that can be completed mechanically in any acceptable sense of this term. E.g, the base clauses for 'true-in-L_1' will have the form

'-----' is satisfied-in-L_1-by ___,
'-----' refers-in-L_1-to ___,

for the predicates and singular terms of L_1 respectively. Completion of these patterns requires knowledge of the translations of the expressions of L_1 into English. Moreover, the ability to construct the base clauses for L_1 is not projectable: knowing how to construct the base clauses for L_1 does not in general help construct the base clauses for other languages. So for each of L_1, L_2, etc., constructing their base clauses will be "a project unto itself" to borrow a phrase from Quine. There is, then, no good reason for saying that 'true-in-L_1', 'true-in-L_2', etc. share a "principle of unification", hence no good reason for saying that they will serve as adequate explications of the general notion of truth.

13. I have argued that Quine failed in his attempt to show that 'analytic in *L*', with variable '*L*' is worse off than 'true in *L*' with variable '*L*'. He failed, because he did not find a way to protect 'true in *L*' against the type of argument he himself advanced in "Two Dogmas" against 'analytic in *L*'. What are we to make of this?

Maybe we can understand Quine's position along the following lines. Quine has indeed given in to his own argument and has drawn the consequences. He has given up on 'true in *L*' and on all other general, relational semantic notions for variable languages (intensional *and* extensional ones): all general semantic notions have to go. In view of later remarks by Quine concerning our practice of "acquiescing in the mother tongue"[17], this interpretation does not seem farfetched at all.

On this picture of Quine's position, the original issue concerning the general notion of analyticity for variable languages will simply drop out (for better or for worse) along with the general notion of truth for variable languages. All that remains to inquire about is analyticity-in-English. Is it any worse off than truth-in-English? More specifically: Is analyticity-in-English a less reasonable explicandum than truth-in-English? and Is there a reason for thinking that the restricted notions defined by Carnap are not adequate as explications of analyticity-in-English while the restricted notions defined by Tarski are adequate as explications of truth-in-English?

It appears that, once the discussion is allowed to shift in this manner from general semantic notions for variable languages to semantic notions restricted to

English, Quine gets the upper hand. One should admit that paradigm (1)—understood as clarifying the explicandum 'true-in-English'—is more successful than paradigm (3)—understood as clarifying the explicandum 'analytic-in-English'. After all, paradigm (1) does not require the difficult notion of translation. Moreover, with regards to the issue of explicatory adequacy truth-in-English also appears to be better off than analyticity-in-English. We have seen above that there is some ground for thinking that truth predicates restricted to fragments of English and definable by Tarski's methods serve as adequate explications of truth-in-English. The ground was found in the relatively general routine through which the definitions of such predicates can be constructed. There is no such routine when it comes to analyticity predicates restricted to fragments of English and defined by Carnap's methods. In this regard, Carnap's definitions of analyticity for individual fragments of English are much more like Tarski's definitions of truth for individual alien languages than Tarski's definitions of truth for individual fragments of English. The base clauses of Carnap's definitions of analyticity for fragments of English, his meaning postulates, fail to exhibit a discernible pattern that could be filled in mechanically; they lack this "principle of unification".[18]

Notes

1. "Two Dogmas of Empiricism", p. 33.
2. This is evident from Martin's "On 'Analytic'", from Carnap's recently published response to Quine, "Quine on Analyticity", p. 430, and from Carnap's reply to Quine's contribution to the Schilpp volume, "W. V. Quine on Logical Truth", p. 918.
3. Cf. Carnap, "Quine on Analyticity", pp. 430f., "W. V. Quine on Logical Truth", pp. 918ff, and "Meaning and Synonymy in Natural Languages", pp. 234f.
4. In Creath, ed., *Dear Carnap, Dear Van*, Quine to Carnap, 1951-3-29.
5. "Two Dogmas of Empiricism". p. 33f.
6. See Quine, "Carnap and Logical Truth", p. 403; Carnap, "W. V. Quine on Logical Truth", p. 919; and Carnap "Meaning and Synonymy in Natural Languages". The idea to approach the issue in operational terms was foreshadowed in "Two Dogmas", p. 36, where Quine makes a remark concerning the "behavioral factors" relevant to analyticity.
7. Cf. Creath, "Introduction", p. 41f.
8. "Notes on the Theory of Reference", p. 138. Paradigm (1) is the one numbered (7) by Quine; see p. 135 of his essay.
9. Whenever possible, I use distinguishing notations to avoid confusing the general notions of analyticity and truth with their restricted counterparts. My official notations

for the general, relational notions are not hyphenated and come with an italicized '*L*' to indicate a genuine (objectual) variable that can be quantified into (objectually). My official notations for the restricted, indexed notions are hyphenated and the 'L' is not italicized to indicate that it is not a genuine (objectual) variable and cannot be quantified into (objectually). Unfortunately, Quine's notations are not as uniform and sometimes even misleading, if not confused. For the purposes of exposition, I am forced to adopt Quine's notations temporarily at various points of my discussion, e.g, in the text to which this note belongs.

10. Strictly speaking, (1) comes out right provided *L* is restricted to my language as I understand it, i.e., to my idiolect, L_{MD}, as understood by me. So the notion clarified by (1) is, at best, 'true-in-L_{MD}'. However, it will simplify matters if we pretend that English is my idiolect.

11. "Notes on the Theory of Reference", p. 138.

12. A further remark on notation. It might have been slightly more perspicuous to use 'true-in-$L_{English}$' and 'analytic-in-$L_{English}$' instead of 'true-in-English' and 'analytic-in-English' to make entirely clear why I call these terms *indexed* as well as restricted. However, the notations would have been rather cumbersome, and I am confident that my simpler notations will not cause any confusions.

13. "Notes on the Theory of Reference", p. 137.

14. Cf. "Notes on the Theory Reference", p. 138.

15. Cf. Tarski, "The Concept of Truth in Formalized Languages", pp. 187f.

16. "Notes on the Theory of Reference", p. 138; my italics.

17. "Ontological Relativity", p. 49.

18. An early version of this paper was presented at a symposium on Austrian philosophy at the University of Arizona, November 1994. My thanks to Paddy Blanchette, Hannes Brandl, Rudolf Haller, Keith Lehrer, Gerhard Schramm, Gerhard Schurz, Peter Simons, and Leopold Stubenberg for comments and criticism.

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