ON REHABILITATING REDUNDANT TRUTH

The classical redundancy theory is generally understood as an attempt to dissolve the philosophical problem of truth. It is also very often associated with a neutral position regarding the nature of truth bearers and it involves the assumption that all meta-linguistic statements containing a truth predicate are reducible to object language sentences. (Wittgenstein 1922, Ramsey 1927) Thus understood, it can hardly be maintained and even less ascribed to Tarski. But many philosophers have argued that Tarski's semantic concept of truth is "deflationist". (for instance, Carnap 1949, Ayer 1963a, Quine 1987; 213-215) I shall first and foremost be concerned to draw the general lines of a redundancy theory for the truth predicate in natural language and will then briefly indicate how these views are in harmony with Tarski's theory. (Tarski 1956a)

I

In what follows, I will take it for granted that truth is a predicate of sentences. Like Tarski I will suppose that it is a property of sentence-types and that it is disquotational. I will ignore the particular problems raised by the treatment of sentences containing indexicals and other context sensitive particles. The particular version of the redundancy theory that I want to defend can be labelled "the disquotational theory of truth".

The essential claim of a disquotational theory of truth is that a sentence like "s is true" means the same thing as s itself. It is crucial to clarify the sense of "means" here. If understood only in the sense of "linguistic meaning" or "character", it no longer involves an attempt to dissolve the philosophical problem of truth. Using David Kaplan's terminology, we could say that even if the character of the truth predicate is reducible to its disquotational function, it is not necessarily the case for its content. (Kaplan 1989) Full blooded philosophical accounts concerning the content of truth can still be developped in perfect accordance with such a disquotational theory. Hartry Field once made the observation that a correspondence theory, for instance, should not be understood necessarily as an alternative to deflationism and he made the suggestion that it must incorporate such an account into its explanation. (Field 1986; 59) I think that the same thing could be said for other philosophical accounts. In short, a deflationary theory is a necessary prolegomenon to full blooded philosophical explanations of truth and so it does not rule them out completely.

This might at first sight look like a capitulation on the part of the deflationist philosopher, but the following remarks should help to dispel the confusion. Let's suppose that the disquotational function of the truth predicate is all that there is to its linguistic meaning. Let's also grant that it is an empirically determinate feature. It can be empirically determined that speakers tend to assert that "p" is true when and only when they are inclined to assert that p. Let us also subscribe to the Quinean distinction between conceptual scheme and empirical content and defend the empiricist methodological principle according to which there is going to be a fact of the matter about meaning (in one important sense of the word "fact") if and only if it can be empirically determined. Now since in a theory of radical translation the full blooded accounts of truth belong to

the background conceptual schemes and are not empirically determined, it could be argued that in a sense there is no fact described by assertions ascribing truth to sentences and no cognitive role played by the truth predicate in our everyday lives apart from its disquotational function.

Now we certainly should not deny the meaningfulness of conceptual schemes, but the argument forces us to recognize their normative character. So in a sense there are no facts of the matter corresponding to conceptual schemes. I would like to claim that the same kind of remarks apply to full blooded philosophical theories of truth. They are stipulated as such and adopted by convention. It does not make sense to investigate the real world in order to establish which full blooded philosophical theory of truth is the right one. The deflationist can therefore be interpreted as saying that the only fact of the matter about truth concerns the linguistic meaning of the truth predicate and relates to its disquotational function. This of course does not exhaust the "content" of the predicate but only suggest that it is not factually determined and is rather established by stipulation. It is therefore an essentially normative notion.

Similar remarks could very well be made regarding Tarski. He is generally interpreted as a deflationist but he does not deny the possibility of developping in addition a philosophical account of truth. For many philosophers, this seems incoherent. Did Tarski try to "define" truth in a way similar to those who favour a redundancy theory or did he allow for the possibility of formulating an empirical theory of truth and used the predicate "true" as expressing a primitive and ultimately "undefinable" concept ?

These alternative interpretations crucially disagree on the epistemological status of T-sentences. Those who favour a deflationist interpretation of Tarski tend to read them as mere tautologies while the anti-deflationists like Davidson are inclined to treat them as empirical statements. (Davidson 1990) If I am right, none of these interpretations is entirely satisfactory. The Tarskian T-sentences implicitely show that Tarski accepts the idea that the linguistic meaning of the truth predicate is given simply by its disquotational function but, at the same time, he does not want to claim that he has in this way analysed or "defined" the concept of truth. This looks at first like a vindication of the anti-deflationist interpretation. But if we were to agree with Quine that conceptual schemes are empirically underdetermined, the claim that the only fact of the matter regarding the truth predicate reduces to its disquotational function, if not explicitely endorsed by Tarski, would be compatible with it. Convention-T presupposes the notion of translation but Tarski does not have much to say about it. I am suggesting that it is Quine's indeterminacy thesis that turns Tarski's theory into a disquotational theory of truth.

It is perhaps useful at this point to clarify what we mean by the notion of "definition". In a clear and straightforward sense, Tarski did show how to define truth for a given language. By "definition", we simply mean here "extensional definition". Tarski showed how to calculate the truth value of any sentence of a given language on the basis of the semantical rules for the primitive expressions and the recursive clauses for the logical connectives and quantifiers. We must also add however that such a definition

cannot be explicit, given that a successful extensional definition entails an infinite list of T-sentences. So if we were to require that any definition must be made explicit, it would be correct to say that Tarski did not provide an extensional "definition".

In another sense of the word, it would be true to say that Tarski has offered an intensional definition of truth in terms of the relation of satisfaction of a formula by sequences of objects. The latter notion has a broader application and permits an extensional definition for opened sentences as well as for closed sentences. Truth by contrast applies only to the limiting case of closed sentences.

Still yet in another sense, we could wonder whether Tarski has successfully "defined" truth if it is understood by that an elimination of the semantic predicate. The question could be raised whether Tarski has successfully eliminated the notion of satisfaction which serves in the present context as a substitute for truth. It could be claimed that he has only established extensional equivalences with formulas that do not contain such a predicate and that an enumerative list of such extensional equivalences cannot count as a true definition. Hartry Field, for instance, has suggested that Tarski failed in this respect and that the theory should be complemented by a physicalist explication of the notion of primitive denotation which is at the basis of the relation of satisfaction. (Field 1980)

It is arguably plausible to suggest that Tarski did intend to use his theory in this way and to make it suitable for a "scientifically" acceptable theory, on a par with the ideal of Unified Science. It is however doubtful to claim that such an intention can be read in the definition itself as formulated by Tarski, or to claim that Tarski himself saw in his own definition an expression of the physicalist program itself. (Haack 1978; 110-114) It is perhaps more plausible to suggest that Tarski only meant to provide a definition that would be compatible with such a physicalist program. But if Field is right, Tarski's theory considered on its own does not provide such a definition.

It is still possible to argue however that the T-sentences (or the "satisfaction sentences") presuppose a deflationist definition and to suggest that Tarski implicitely subscribed to such a definition. There is room to argue in both ways on this point and it is here that the deflationist and anti-deflationist interpretations find themselves opposed to each other.

The particular disquotational account that I offer can be seen as an attempt to steer a course between these alternative interpretations of Tarski's truth definition. It is the result of arguing for the thesis that the linguistic meaning of the truth predicate is exhausted by its disquotational character, together with the indeterminacy of translation thesis. In a way this is not surprising. A universal application of the deflationary theory of truth requires the notion of translation. It is at best only in the context of the home language that the equivalence thesis between the assertion that "p" is true and the assertion that p is made without an appeal to translation, but even there we should rather speak of an homophonic translation. Now if translation is relative to a manual and is a matter of convention, it follows that the philosophical notion of truth in the full blooded

sense appears to be a matter of convention. And this is the only claim that has to be made in order to preserve the spirit of the disquotational theory of truth.

II

The second feature of the disquotational theory that I want to discuss comes from the fact that "true" must be treated as a predicate of sentences occurring in the object language. In this way the disquotational theory does not look as an attempt to collapse meta-linguistic statements into the object language. As is well known, the best way to achieve this is to exploit the resources of a substitutional language. (Forbes 1986, Field 1986, Baldwin 1989)

There are at least three reasons for formulating a disquotational theory in a substitutional language. The first reason is fairly intuitive. When a sentence like "Einstein's law is true" is translated and the disquotational theory is applied to it, we have something like

(i) (∑p) [(Einstein's law = “p”) Ÿ (“p” is true iff p)]

where the quantified variable occurs within quotes in the first conjunct and occurs out of quotes on the right hand side of the equivalence in the second conjunct. We could not make sense of this unless the quantification was substitutional. (Belnap, Grover 1973) To take another example, it is hard to formulate a deflationist thesis for a sentence like "Everything Aristotle says is true" with an objectual reading of the quantifiers, for we get something like :

(ii) ("p) [((Aristotle says p) … (p is true)) Ÿ (p is true iff p)]

which is clearly ungrammatical given that the quantified variable occurs on its own in the consequent of the last formula. With substitutional quantifiers and variables, we have instead:

(iii) (’p) [((Aristotle says “p”) … (“p” is true)) Ÿ (“p” is true iff p)]

which is now perfectly grammatical, given that the substitutional variable occurring on its own can be replaced by whole sentences.

We have already mentioned a second reason for choosing to formulate the disquotational theory in a substitutional language. It is that we are in a position to express the theory within the object language itself. A substitutional language is one in which quotation marks, truth predicates and other semantical expressions occur within the object language itself. It is therefore not true to suggest that redundancy theories are attempts to collapse meta-linguistic statements into the object language. And nothing in a disquotational theory tells against allowing for a hierarchy of truth predicates each belonging to a specific meta-language in addition to the truth predicate in the object language.

One could be tempted to formulate an argument to the effect that a disquotational theory requires that we reject the distinction between language and meta-language. If there is no fact of the matter about truth, there is no fact of the matter about truth conditions either. And since the content of an expression lies in its contribution to the truth conditions of the sentence in which it occurs, we cannot make sense of a distinction between character and content. Now the main reason for making use of meta-languages is that we want to formulate the content of a given expression. If it were only for linguistic meaning, we could express it by intra-linguistic correlations made within the object language. Thus the conclusion is that a disquotational theory seems to go hand in hand with the rejection of meta-languages. It is at the very least a theory that seems to assert the vacuous character of meta-languages in general.

But the conclusion follows only if, from the fact that there is no fact of the matter about truth in the full blooded sense, we are right to infer that there is no sense to be made of a distinction between linguistic meaning and content. I have already tried to suggest that this inference is not valid. Even if there is no fact of the matter about the philosophical concept of truth, we can distinguish between character and content as long as we view the content as being essentially normative and the result of stipulations. The content could for instance be expressed by stipulating assertability conditions for the use of the expression.

The disquotational theory primarily applies to the truth predicate belonging to the object language. But since all the higher level meta-languages contain the object language within themselves, it also applies to those truth predicates which result from the incorporation of the object language. And finally, the theory also applies to the meta-linguistic predicates themselves as shown by all the instances of the equivalence schema. So it does not matter if, in addition to the truth predicate in the object language, we admit an infinite hierarchy of truth predicates in the meta-languages. The important thing is that the disquotational theory be confirmed in all those cases. Of course there would not be a need for meta-linguistic semantic predicates if we did not think that object language expressions had a content in addition to a linguistic meaning, including the truth predicate. But as I have tried to show, it is possible to distinguish between the linguistic meaning and the content of the truth predicate and admit a hierarchy of meta-languages while preserving the spirit of deflationism.

The third reason for making use of a substitutional notation is that we are able to avoid the risk of reintroducing paradoxes. In this respect it is very important to note that the semantic coherence of the substitutional quantifier very often requires that the substitutes be already meaningful (in the sense that they express truth conditions or verification procedures). Indeed the determination of the truth conditions or verification procedures for a given substitutional formula often depends upon the meaningful character of the substitutional instances and they, in turn, have their meaning determined by the substitutes. So in many cases a formula that appears in its own substitutional class will fail to express truth conditions or verification procedures. Of course many self-referential statements do express truth conditions. But paradoxical sentences are such that, precisely because they do involve this kind of self-reference, they fail to express

such truth conditions or verification procedures. Consider, for instance, a sentence saying of itself that it is a sentence:

(iv) The thing written at t and l is a sentence

where t and l indicate the time and location of (iv). Its substitutional transcription is

(v) (S p) ((“p” is written at t and l) Ÿ (“p” is a sentence))

Formula (v) says of itself that it is a sentence. It expresses truth conditions and says something true. But paradoxical sentences do not express truth conditions. For instance,

(vi) The thing written at t' and l' is false

where (vi) is the only thing written at t' and l'. Its substitutional rendition is

(vii) (Sp) ((“p” is written at t' and l') Ÿ (“p” is false))

For (vii) to express truth conditions each substitutional instances should have determinate truth conditions or verification procedures. But the substitutional instances can acquire determinate truth values only if the substitutes themselves have determinate truth values. Now one of those substitutes is precisely (vii) itself. Once again it can only acquire truth conditions if the substitutional instances and then the substitutes have determinate truth values. And so on ad infinitum. In short (vii) expresses no truth conditions or verification procedures.

In other cases, a representation into a substitutional language leaves us with an option. We can say that the sentence either lacks truth conditions or else has a substitutional class with definite orders. For instance,

(viii) Everything said by a Cretan is false

parsed as

(ix) (" x) (’ p) [((x is Cretan) Ÿ (x says “p”)) … (“p” is false)]

will only express truth conditions or verification procedures if the substitutional class does not contain (ix) itself.

This is surely a welcome result. It shows that a substitutional language can allow us to use a universal truth predicate in the object language without worrying about reintroducing semantic paradoxes. It affords a new way of dealing with paradoxes in the object language. Without imposing a reform into a hierarchy of languages and meta-languages or syntactically regimenting the language into an ideal notation in which the variables have subscripts indicating a definite order, we are in a position to block the

resurgence of paradoxes. (Kripke 1976; 368, 417)

According to this approach, substitutional formulas are "systematically ambiguous" and the quantifiers and truth predicates in them behave like indexical expressions. The substitutionalist solution to the paradoxes is because of that similar to the one proposed by Burge. (Burge 1979) Paradoxes are produced by empirical conditions and nothing is wrong in the very syntax of the language. The syntactic constraints imposed a priori by the ramified theory of types or by a Tarskian hierarchy of meta-languages appear to be artificial solutions to the problem of paradoxes in natural languages. By contrast the ramification into orders of the substitutional classes is no longer seen as a constraint imposed a priori on the syntax of language but is rather an empirical condition that must be satisfied if the sentences are to express truth conditions or verification procedures.

According to the approach under consideration, a sentence may have a linguistic meaning but fail to express truth conditions or verification procedures. A fairly harmless sentence like "What you say is true" may turn out to be paradoxical in a context in which the speaker refers to an utterance of "What you say is false" made simultaneously by the hearer. These examples reveal that the source of the paradoxes is empirical and that the solution should not require any modification in the syntax of natural languages.

It would be wrong however to interpret the suggestion of representing natural languages into a substitutional notation as providing an alternative solution for the paradoxes to the one proposed by Tarski. The introduction of a substitutional notation can and must be seen as complementary to a Tarskian truth theory. It is very well known that an application of a Tarskian theory to natural languages requires that we restrict the truth schema to sentences that express truth conditions (or, alternatively, verification procedures). An unrestricted application of the truth schema to paradoxical sentences would yield contradictions. But ruling out a priori a certain class of sentences seems to be an ad hoc procedure. So with the use of a substitutional notation to parse the object language sentences we shall be able to filter out the paradoxical cases. Those cases will now clearly appear as cases in which the sentences fail to express truth conditions or verification procedures. Far from constituting an alternative solution to the paradoxes, substitutional quantification provides us with a useful device that facilitates the application of a Tarskian truth theory to natural languages.

Conversely, when giving the truth conditions of substitutional formulas, it is going to be hard to avoid an ontological commitment to linguistic expressions and thus the Tarskian hierarchy can hardly be dispensed with. The usual truth conditions for a substitutional formula like "(Sxi) j " are given by the following clause:

(x) ($t) (j' is true where j' comes from j by replacing all free occurrences of xi by t) . (See for instance Kripke 1976; 330)

One must not confuse the substitutional quantifier with an objectual quantifier over expressions (as in Haack 1978; 131) but it remains true to say that the existence of

linguistic expressions is a condition that must obtain if the formula is to express truth conditions or verification procedures. Now (x) belongs to a meta-language and cannot as such be reduced to an object language formula. The occurrence of the truth predicate is therefore also meta-linguistic and language relative. The truth conditions of sentences belonging to such a meta-language will belong to a meta-meta-language. This requirement is indeed a necessary constraint to prevent the resurgence of paradoxes.

In other words, a substitutional notation serves to eliminate paradoxical sentences in the object language but is of no help in trying to avoid paradoxes from reoccurring in the language of the truth theory. This is because it is always possible to introduction a new name (say “S”) referring to the sentence in which it occurs and this would yield paradoxical results for sentences asserting of themselves that they are false. The conclusion is that substitutional quantification and Tarski's theory should not be interpreted as alternative approaches to one and the same problem but rather as complementary. The first one is indeed necessary for an application of a truth theory to natural languages and the second one is required for the formulation of a coherent truth theory for a substitutional language.

III

On the basis of the previous discussion, it appears that some of the arguments put forward by Dummett against the redundancy theory can now receive straightforward answers. (Dummett 1959)

For Dummett, a statement like

(xi) The actual king of France is bald

is neither true nor false. If the disquotational theory is correct, (xi) should be equivalent to

(xii) It is true that the actual king of France is bald

But still according to Dummett, if (xi) is neither true nor false, (xii) is false and so not equivalent to (xi). Of course, the argument presupposes that Russell's theory of descriptions is inadequate because if it were adequate (xi) would be false and we would preserve the equivalence. But I shall assume for the sake of argument that Dummett is right in suggesting that (xi) is neither true nor false. The correct reply is that if we interpret (xii) substitutionally, it becomes

(xiii) “The actual king of France is bald” is true

where quotation marks behave as a quotation function taking a sentence in use as "argument". In (xiii) quotation marks do not serve to denote a sequence of symbols, a pure verbal form, as in an objectual quantificational language. A quoted sentence is like any other substitutional instance. The sentence quoted is a substitute and as such must often already be meaningful if the substitutional instances in which it finds itself are

meaningful. (An exception to this would be the sentence " “The actual king of France is bald” is grammatical ".) In particular, the substitute must have truth conditions if the substitutional instance itself is to express truth conditions. (This remark must be qualified for the case of belief sentences with an intentional reading, where the substitutional instances express truth conditions as long as their substitutes have linguistic meaning, whether or not they do in addition express truth conditions; for example, a statement like " John believes “the king of France is bald” " expresses truth conditions even though the sentence believed does not). In the case of (xiii), the quoted sentence does not express truth conditions and so neither does (xiii) itself. (xii) and (xiii) are therefore equivalent.

Similar remarks apply to Tarski. According to my interpretation, he would have claims to make only concerning the linguistic meaning of the word "true" and would reduce it to its disquotational function. (Tarski 1943-44; 360) This is why he explicitely endorses Convention-T. Does the objection raised by Dummett affect Convention-T ? If a statement containing an expression with no denotation has a truth value gap, shouldn't we say that the meta-linguistic statement saying that it is true is itself false ? Once again in order to be false the statement must have truth conditions. Does it have truth conditions ? Of course we cannot argue as we did in the case of (xiii) that the quoted sentence has to be interpreted as a sentence in use simultaneously serving as argument for the quotation function. In a Tarskian T-sentence, quotation marks or structural descriptions of sentences are meta-linguistic devices that serve to denote a pure verbal form. We cannot then use the same argument as before in trying to show that the Tarskian rendition of (xii), namely,

(xiv) T-h-e- -a-c-t-u-a-l- -k-i-n-g- -o-f- -F-r-a-n-c-e- -i-s- -b-a-l-d is true

is neither true nor false. But as it was already pointed out, those who want to apply a Tarskian theory to natural languages or to any language containing its own truth predicate will sooner or later have to restrict the application of the truth schema to a subset of sentences in the language. Now we have already established that sentences like (xiii) do not have truth conditions. If we adopt the policy of restricting the application of the truth schema to sentences expressing truth conditions, then (xiv) has no application and is neither true nor false. Once again we preserve the equivalence.

Another criticism of Dummett is that the redundancy theory is incompatible with a truth conditional analysis of the connectives. Dummett goes as far as to say that it is incompatible with truth conditional semantics in general. But let us confine ourselves to the claim concerning the logical connectives. The criticism is supposed to be that if the redundancy theory is correct, the statement "“p” is false" amounts to no more than the denegation of “p”, i.e. the statement "ÿ p", just as the statement that “p” is true reduces to the assertion that p. But how could we simultaneously analyse falsity in terms of negation and then negation in terms of truth tables as we do in truth conditional semantics ? This is not a problem for the account sketched above. Under the present approach, the redundancy theory can be made compatible with a truth conditional analysis of the connectives. This is so because deflationism now implies only the claim that the

linguistic meaning of the truth predicate is given by nothing more than its disquotational function. Falsity is analysed as "not true" and if the truth predicate is disquotational, "“p” is not true" is equivalent to "not p", i.e. "ÿp". Now saying that the linguistic meaning of " “p” is false " reduces to "ÿp " is perfectly compatible with the idea that the content of the negation sign is to be captured by its truth functional nature.

Tarski's theory is also compatible with a truth conditional theory of meaning in general as shown by Davidson. (Davidson 1967) Tarski did think that the theory of truth presupposed the theory of meaning. The dependence of the theory of truth on the theory of meaning is registered in Convention-T where the sentence on the right hand side of the equivalence has to be a good translation for the sentence described on the left hand side of the equivalence. But Davidson argued that the a priori constraint of good translation could be lifted and replaced by empirical constraints that do not presuppose the notions of translation or meaning and that, if good enough, will enable us to arrive a posteriori at good translations. I do not wish to discuss whether this is a viable program. I simply want to attract the attention to the fact that Tarski's theory is, at least in principle, compatible with truth conditional semantics.

Is Tarski's theory compatible with a truth conditional account of the connectives in the sense in which Dummett suggests that deflationary theories
are not ? Is there a circularity in the explanation of concepts ? The remarks made before concerning the linguistic meaning of a sentence like " “p” is false", namely that it is analysed as "not p", apply equally well in the case of Tarski and are perfectly compatible with a truth functional analysis of negation.

IV

I shall now be dealing with objections that will require for an answer using the two theses previously discussed. It is very often maintained that the appropriate formulation of the disquotational theory of truth cannot be the one which makes use of substitutional quantification and the reason is that substitutional formulas in which the truth predicate has disappeared are themselves analysed into statements asserting that a certain (all) substitutional instance(s) is (are) true. (Horwich 1990; 27, Haack 1978; 131) The concept of truth is involved in the analysis of substitutional formulas and cannot therefore be analysed in terms of them.

This objection can very easily be discarded. When the disquotational theory is formulated in a substitutional notation, a connexion is established between the analysandum and the analysans that concerns their linguistic meaning and not their respective truth conditions. We are not suggesting that, because the truth predicate has disappeared in the analysans, the concept of truth itself has been fully analysed. Thus we only claim that it is not needed in the analysis of the linguistic meaning of the analysans. The linguistic meaning of a formula like " (Sx) j " is given by the (possibly infinite) disjunction of all its substitutional instances while the linguistic meaning of a formula like " (’ x) j " is given by their (possibly infinite) conjunction. In short the concept of truth is needed in the formulation of the truth conditions for substitutional formulas but not in the formulation of their linguistic meaning.

This solution which avoids the accusation of circularity in the analysis of concepts has been criticized by Forbes for the following reason. (Forbes 1986; 34-35) According to Forbes, just as we cannot treat an objectually quantified formula like "($ x)(j x)" as equivalent to a list of atomic sentences (viz. "ja ⁄jb ⁄jc ..." without the additional premise "("x) (x = a ⁄ x = b ⁄ x = c ...) ", so we cannot analyse a statement like

(xv) Everything that God believes is true

as

(xvi) 't Œ X (believes (God, t) Æ t)

after an application of the disquotational theory. The correct analysis is, according to Forbes,

(xvii) 't Œ X (believes (God, t) Æ t) Ÿ (("p) ($s Œ X)(s expresses p)) .

The additional premise involves an objectual quantification over the set of propositions which is then correlated with the set of sentences in the substitutional class. Each proposition has to be correlated with a sentence in the substitutional class if we want to prevent (xv) from being compatible with the fact that God believes a falsehood. Now the additional premise is clearly irreducibly meta-linguistic and brings in the whole hierarchy of meta-linguistic truth predicates. This would show once again that the substitutional version of the disquotational theory is false.

The dubious move in the argument here is to introduce propositions. One of the many reasons for preferring substitutional quantifiers over sentence or predicate letters is precisely to avoid reifying contents. We want to avoid an ontological commitment to intensional entities such as propositions, properties and the like. We certainly want to be able to distinguish between character and content, but this need not be, and indeed must not be, a distinction between intensional entities. The fact that it is not very easy, as Forbes remarks, to make sense of propositions within the framework of substitutional quantification is only a problem from the point of view of the propositionalist. The substitutionalist is at best committed to the existence of sentences and should not feel uneasy about not allowing entities like propositions. So it is wrong to draw an analogy between the generality involved in objectual quantification and the one involved in substitutional quantification, and to suggest on the basis of this analogy that particular and universal quantified formulas are not identical in linguistic meaning to the disjunction and conjunction of their substitutional instances.

It is perhaps altogether correct to interpret this answer as showing that the substitutionalist endorses the view according to which "the limits of the language are the limits of the world". According to this view, everything that is conceivable can and must be conceived into language. It will appear problematic only for those who think of languages as actual concrete linguistic practices. But the elements of substitutional classes need not be restricted to those of actual linguistic practices. These elements can instead be conceived as linguistic types or as belonging to possible extensions of actual

linguistic practices.

Forbes still want to argue that in any case a grasp of an infinite list of sentences should be mediated by a mastery of the concept of truth. The deep motivation for introducing a truth predicate in the first place is precisely to be able in this way to assert an infinite list of sentences. (Forbes 1986; 35)

It is unclear why a grasp of an infinite collection of sentences, whatever it may be, should presuppose a previous grasp of the concept of truth. But this objection raised by Forbes is connected with similar remarks made by Horwich. So I shall be dealing simultaneously with both. According to Horwich, substitutional quantification does not provide the appropriate formulation for the disquotational theory of truth. The reason is that, just like the traditional redundancy theory, it is eliminative. It involves, according to Horwich, an attempt to collapse meta-languages into the object language. Since he treats the truth predicate as irreducibly meta-linguistic, he interprets the substitutionalist as saying that truth itself can be dispensed with. (Horwich; 4, 26, 33)

Horwich's argument may be reconstructed as follows. There are at least three sorts of motivations for introducing a truth predicate in the language. There are cases where we may only have a knowledge by description of the "proposition" we want to assert. We can then use the description and ascribe truth to its denotation (as in "Einstein's law is true"). In other cases, we want to refer to a fairly large number of sentences (as in "Everything believed by God is true"). Finally there is also the case where we want to refer to an infinite set of sentences (as in "Everything that may be said in french in the indicative mood is either true or false"). In these three cases, the introduction of the truth predicate goes hand in hand with the introduction of quantifiers. This is true even in the case where a description is used as long as we eliminate it à la Russell in terms of a quantified formula. These quantifiers must be interpreted as objectual and they range either over linguistic expressions or "propositions". Now the truth predicate cannot be eliminated in such sentences as it was previously shown. (See (ii) above) But when we choose instead to adopt a substitutional interpretation, the introduction of the truth predicate is no longer necessary. It can be eliminated just like it was claimed by the early proponents of the redundancy theory. It appears then that if a parsing into a substitutional notation were the correct way to represent sentences, we would be unable to explain why there is a truth predicate in natural language.

The correct reply to this is that the motivation for a truth predicate is not generality but rather ontological commitment to sentences. The examples provided by Horwich are good ones but it is not the generality of the quantifiers which is at the source of the explanation. It is rather the ontological commitment involved in the objectual quantifier. Quotation marks express no generality but serve to denote expressions and are also a motivation for the introduction of a truth predicate. Horwich himself comes close to acknowledge that it is the referential function to linguistic (or propositional) objects that explains and motivates the use of a truth predicate. (Horwich 1990; 4-5, footnote 1) If generality also happens to be a motivation, it is only because the quantifiers are objectual and they involve ontological commitment. But since a substitutional language

can account for general as well as for singular reference to linguistic expressions via the apparatus of quotation marks (as in "(’p) (“p” is true or false)", where an ambiguous reference takes place and the name behaves a bit like a "pro-sentence" in the sense of (Grover et al 1975), or as in " “Snow is white” is true " where the reference is determinate), we are immune to the charge that the substitutionalist is unable to explain the motivation for a truth predicate. Indeed quoted expressions like " “p” " or " “Snow is white” " are an essential part of the linguistic resources of a substitutional language and involve an ontological commitment to sentences. When we express this ontological commitment and want to assert of these things that they are true or false, we need to use predicates of truth and falsehood.

V

I will end my discussion by examining very briefly Putnam's objections to the various interpretations of Tarski's deflationism. In a recent book, he criticized Carnap's interpretation of Tarski's theory. (Putnam 1988) According to Carnap, Tarski's theory is deflationist and the T-sentences must be understood as mere tautologies. An immediate objection is that this cannot be so if the notion of language used in the fully explicit formulations of the T-sentences is understood as concrete linguistic practices. Carnap can of course reply that he understands languages as systems of semantical rules, but the difficulty mentioned by Putnam is that it is going to be hard to avoid making explicit these semantical rules without using a universal truth predicate, which happens to be precisely the thing that Tarski sought to avoid. (Putnam 1988; 64)

But as we have already seen, it seems very likely that Tarski was wrong in this respect. A substitutional language is such that it contains its own truth predicate and does not yield paradoxes. He was wrong too in thinking that paradoxes would reoccur as soon as we assimilate quotation marks with functional expressions. (Tarski 1956a; 162) In a quotation the quoted expression behaves like an argument for the quotation function and must therefore be meaningful if the quotation itself is to count as meaningful. This is so at least when the quotation occurs in the context of a semantic statement. Consider the sentence

(xviii) (’p) (c is identical with the sentence “p” … ÿp)

which amounts to the assertion that c is not true. Let's suppose that c is (xviii) and that if two sentences "p" and "q" are identical, then p if and only if q. By applying convention-T we could then conclude that c (sentence (xviii)) is true if and only if c is not true, since this is precisely what the assertion of (xviii) amounts to. However as we mentioned before, this T-sentence has application only if (xviii) is itself meaningful and expresses truth conditions and it will express truth conditions only if there are conditions under which it is true. The case to consider is the one in which (xviii) itself appears as a substitute for the substitutional variable. But then we find ourselves in an infinite regress and cannot specify determinate truth conditions for (xviii). It can then hardly be considered meaningful if by "meaningful", we understand "expressing a content". The truth schema cannot be applied to (xviii) and we are therefore unable to generate a

paradoxical T-sentence.

The other interpretation of Tarski's deflationism considered by Putnam is closer in spirit to the position actually taken by Tarski. If we were to consider T-sentences as mere tautologies and interpret Tarski as defining truth in the sense of deflationism, there would appear to be a circularity in the analysis of concepts. The Criterion of adequacy for any truth definition prescribes that "good translations" must appear on the right hand side. But as Putnam argues, the notion of translation presupposes the notion of reference. (Putnam 1988; 67-68)

This diagnosis seems to me to be correct and this is why I did not try to argue that Tarski's theory should all by itself be interpreted as deflationist. I have simply suggested that a more modest claim could be made concerning the linguistic meaning of the truth predicate. And since all of this is compatible with an additional claim concerning the indeterminacy of translation, it can be argued that Tarski's theory is compatible with a deflationist account of truth.

REFERENCES

Almog Joseph et al (eds) (1989), Themes from Kaplan, Oxford, Oxford University Press

Ayer Alfred J. (1963a), "Truth", in Ayer Alfred J. (1963),162-187

Ayer Alfred J. (1963b), The Concept of a Person and Other Essays, London, Macmillan and Co.

Baldwin Thomas (1989), "Can There be a Substantive Account of Truth ?" in Coll. (1989), 99-118

Belnap Nuel D. Grover Dorothy L. (1973), "Quantifying in and out of quotes", in Leblanc Hughes (ed) (1973), 17-47

Burge Tyler (1979), "Semantical Paradox", Journal of Philosophy, 76, 169-98; reprinted in Martin Robert L. (ed) (1984), 83-117

Carnap Rudolf (1949), "Truth and Confirmation", in Feigl Herbert & Sellars Wilfrid (eds) (1949), 119-127

Davidson Donald (1967), "Truth and Meaning", Synthese, 17, 304-323; reprinted in Davidson Donald (1984), 17-36

Davidson Donald (1984), Inquiries into Truth and Interpretation, Oxford, Clarendon

Press

Davidson Donald (1990), "The Structure and Content of Truth", Journal of Philosophy, LXXXVII, no 6, 279-328

Dummett Michael (1959), "Truth", Proceedings of the Aristotelian Society, 59; reprinted in Dummett Michael (1978), 1-19

Dummett Michael (1978), Truth and Other Enigmas, London, Duckworth

Evans Gareth & McDowell John (eds) (1976), Truth and Meaning. Essays in Semantics, Oxford, Oxford University Press

Feigl Herbert & Sellars Wilfrid (eds) (1949), Readings in Philosophical Analysis, New York, Appleton-Century-Crofts

Field Hartry (1980), "Tarski's Theory of Truth", in Platts Mark (ed) (1980), 83-110

Field Hartry (1986), "The Deflationary Conception of Truth", in Macdonald Graham & Wright Crispin (eds) (1986), 55-117

Forbes Graeme (1986), "Truth, Correspondence and Redundancy", in Macdonald Graham & Wright Crispin (eds) (1986), 27-54

Grover D.L. et al (1975), "A Prosentential Theory of Truth", Philosophical Studies, 27

Haack Susan (1978), Philosophy of Logics, Cambridge, Cambridge University Press

Horwich Paul (1990), Truth, Oxford, Basil Blackwell

Kaplan David (1989), "Demonstratives", in Almog Joseph et al (eds), 481-563

Kripke Saul (1976), "Is There a Problem with Substitutional Quantification?", in Evans Gareth, McDowell John (eds) (1976), 325-419

Leblanc Hugues (ed) (1973), Truth, Syntax and Modality, Amsterdam, North Holland

Macdonald Graham & Wright Crispin (eds) (1986), Fact, Science and Morality, Oxford, Basil Blackwell

Martin Robert L. (ed) (1984), Recent Essays on Truth and the Liar Paradox, Oxford, Clarendon Press

Platts Mark (ed) (1980), Reference, Truth and Reality, London, Routledge and Kegan Paul

Putnam Hilary (1988), Representation and Reality, Cambridge, The MIT Press, A Bradford Book

Quine Willard Van Orman (1987), Quiddities, Cambridge, Harvard University Press

Ramsey Frank P. (1927), "Facts and Propositions", Proceedings of Aristotelian Society, Supplement 7; reprinted in Ramsey Frank P. (1990), 34-51

Ramsey Frank P. (1990), Philosophical Papers, (Edited by D. H. Mellor), Cambridge, Cambridge University Press

Tarski Alfred (1943-44), "The Semantic Conception of Truth", Philosophy and Phenomenological Research, 4, 341-375

Tarski Alfred (1956a), "The Concept of Truth in Formalized Languages", in Tarski Alfred (1956b), 152-178

Tarski Alfred (1956b), Logic, Semantics, Meta-Mathematics, Second Edition, John Corcoran (ed), Indianapolis, Hackett Pub. Co., 1983

Wittgenstein Ludwig (1922), Tractatus Logico-Philosophicus, London, Routledge and Kegan Paul

Coll. (1989), Recherches sur la philosophie et le langage, no. 10, Sémantique formelle et philosophie du langage, Grenoble, Cahier du groupe de recherches sur la philosophie et le langage, Département de philosophie, Université de Grenoble 2