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Reassessing Referential Indeterminacy

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Abstract

Quine and Davidson employ proxy functions to demonstrate that the use of language (behaviouristically conceived) is compatible with indefinitely many radically different reference relations. They also believe that the use of language (behaviouristically conceived) is all that determines reference. From this they infer that reference is indeterminate, i.e. that there are no facts of the matter as to what singular terms designate and what predicates apply to. Yet referential indeterminacy yields rather dire consequences. One thus does wonder whether one can hold on to a Quine-Davidson stance in semantics-cum-metaphysics and still avoid embracing referential indeterminacy. I argue that one can. Anyone adhering to the behaviouristic account pivotal to the Quine-Davidson stance is bound to acknowledge certain facts about verbal behaviour – that some utterances are tied to situations, that some utterances are tied to segments in situations, that some predicates have non-contextualised conditions of application, and that use involves causal dependencies. The restrictions from these facts ensure that only reference relations generated by means of rather exceptional proxy functions are compatible with verbal behaviour. I conclude that this allows one to rebuff the Quine-Davidson argument for the indeterminacy of reference, as it were, from within. I moreover tentatively conclude that the line of thought laid out provides good reason for just about anyone to hold that there are facts about reference after all.

Reassessing Referential Indeterminacy

1. The Thesis Explored

Celebrated ideas often share the fate of human celebrities: they become shrouded in a haze of publicity, adoration, and rumour. This might very well be true of the claim that reference is indeterminate.¹ So let me begin with some clarifications. Firstly, the thesis concerns semantic reference, not speaker's reference.² It is a thesis about what singular terms as well as their utterances designate and what predicates as well as their utterances apply to. Secondly, the thesis is not an epistemological claim.³ What is claimed is rather that there are no facts of the matter as to what singular terms designate and what predicates apply to. Speaking of the 'inscrutability of reference' hence is misleading – as Quine acknowledges: "It is what I have called inscrutability of reference; 'indeterminacy of reference' would have been better"⁴. Thirdly, the thesis is neither to be confused with, nor grounded in, the claim that many terms are vague and/or ambiguous. Neither phenomenon plays any role in the arguments Quine and Davidson put forth. Indeterminacy of reference is thought to arise even if we idealize away vagueness and ambiguity. Fourthly, the indeterminacy of reference is independent of any indeterminacy of logical form. Quine and Davidson agree that even if one assumes a determinate logical form, reference still comes out indeterminate.⁵ Finally, the thesis is meant to cover all languages. Indeterminacy is not confined to distant primitive tongues. As the saying goes, indeterminacy begins at home.⁶

Anyone who holds that reference is indeterminate is hence committed to the claim that there are no facts of the matter as to what singular terms designate and what predicates apply to.⁷ To render this idea more lucid, let me define an *interpretation* of a language L to be a complete assignment of extensions to the singular terms and predicates of L .⁸ Let us furthermore agree to call some interpretation *correct* for some language L if and only if it is compatible with all the facts that determine the semantic properties of L .⁹ Employing this terminology, the thesis that reference is indeterminate – that there are no facts of the matter pertaining to reference – unfolds thus:

(IR) For every language L , there are indefinitely many fundamentally different yet equally correct interpretations.

This is precisely what Quine and Davidson, the avowed champions of indeterminacy, seek to establish. Please note that the claim they aim to prove is neutral with respect to their general approach in semantics-cum-metaphysics. The indeterminacy thesis is neither wedded to any specific stance in semantics, nor is it intrinsically linked to the scenario of radical translation or interpretation, respectively. Since Quine and Davidson often run the thesis together with what they take to be the argument to establish its truth, this is easy to miss.¹⁰

The indeterminacy thesis is not perfectly neutral, though. It comes with two rather sensible background assumptions. The one assumption is that semantic facts are dependent facts. What sentences mean – what their truth conditions are – and what words refer to is in the end fixed by non-semantic facts. Assuming otherwise would run counter to what Quine and Davidson believe.¹¹ It furthermore would turn at least some semantic facts into brute facts, and that is hardly appealing.¹² The other assumption is that reference is a substantial relation between words and things rather than a purely disquotational intra-linguistic relation. That again makes sense. For it is very hard to see how reference could possibly be indeterminate if all facts about reference were exhausted by trivialities such as “‘rabbit’ denotes rabbits”. Disquotational theories of reference do not so much solve the indeterminacy problem as sidestep it.¹³

The purported indeterminacy poses a serious threat to anyone’s understanding of the interrelation of mind, language, and the world. If (IR) is true, neither any singular term nor any predicate stands in any determinate relation to things in the world. Imagine you assert “Gene Kelly was the greatest dancer ever”. Your assertion will be about very many different objects – Mount Everest and Khrushchev’s shoe, say – and it will put these objects in very many different classes. That will be true in every single case. We hence cannot use our singular terms to pick out certain things rather than others, and we cannot use predicates to classify certain objects rather than others.¹⁴ The indeterminacy of reference thus dissolves reference. As Leeds puts it: “Let us take inscrutability of reference as having shown that there is no such relation as reference”¹⁵. Worse still, given that what you have said is just what you have thought, (IR) implies an indeterminacy of thought. The indeterminacy of reference thus dissolves intentionality, too.¹⁶ We consequently can rely neither on language nor on thought to relate to the going-ons in any specific region of the world. Yet it is very hard to envisage what else could allow us to do so. If reference is indeterminate, then, we are sort of losing the world. Not everyone will think that that is all too well.

In fact, not even everyone who subscribes to a Quine-Davidson stance in semantics-cum-metaphysics will think that this is all too well.¹⁷ The question thus is, can she do something about it? Imagine that you are a staunch adherent of the Quine-Davidson stance in semantics-cum-metaphysics. Can you hold on to these views and still escape (IR) and its dire consequences? Quine and Davidson think that you cannot. They argue that once you have endorsed their approach to semantics-cum-metaphysics, acknowledging that reference is indeterminate becomes inevitable. I beg to differ. I will argue that even a committed adherent of their general views can indeed avoid subscribing to (IR).¹⁸ More precisely, I will argue that a Quine-Davidson stance in semantics-cum-metaphysics provides all the means needed to undercut the inference from the principles of that stance to the indeterminacy of reference. I thus maintain that one can rebuff the indeterminacy thesis, as it were, *from within*. I will moreover argue – though somewhat tentatively – that anyone adherent the Quine-Davidson approach should rather reject the indeterminacy thesis. For I think that the failure of the general argument Quine and

Davidson rely on to infer (IR) provides good reasons to believe that reference isn't really indeterminate at all.

2. The Argument for the Indeterminacy of Reference

Quine and Davidson argue that the totality of all relevant facts radically underdetermines the interpretation of any given language. From this they conclude that reference is indeterminate.¹⁹ Suitably expanded, the Quine-Davidson argument for the indeterminacy of reference is best captured by the following scheme:²⁰

- (a) Semantic properties are exclusively determined by *A* facts.
- (b) For any language *L*, the totality of *A* facts is compatible with indefinitely many radically different interpretations.

Hence:

- (IR) For any language *L*, there are indefinitely many radically different yet equally correct interpretations.

Quine and Davidson agree on which facts the *A* facts are. They both subscribe to same variety of the 'meaning is use' thesis: they hold that semantic properties are exclusively determined by facts about the linguistic behaviour of speakers.

It is well known that Quine endorses this claim. He has urged for a long time that in semantics, a behaviourist approach is mandatory – “In psychology one may or may not be a behaviourist, but in linguistics one has no choice”²¹ – and he has time and again expressed his conviction that the totality of actual and possible behaviour is what fixes semantic properties: “[W]e recognize that there are no meanings, nor likenesses nor distinctions of meaning, beyond what are implicit in people's dispositions to overt behavior”²². Quine's understanding of 'use' is consequently thoroughly anti-intentional. He takes the behaviour relevant to the determination of semantic properties to be exhausted by acts of assenting to, or dissenting from, posed queries, and he identifies these acts with bodily movements: “[L]et us adopt the term *surface assent* for the utterance or gesture itself. My behavioural approach does indeed permit me, then, only to appeal to surface assent; assent as I talk of it must be understood as surface assent”²³. Quine moreover acknowledges that use thus understood involves causal dependencies. Consequently, he is careful to point out that it is prompted assent rather than assent simpliciter that grounds semantic facts.²⁴

It is less widely appreciated that Davidson shares Quine's use account of semantic properties. Yet he does:

Perhaps the most important thing [Quine] taught me was that there can be no more to communicative content of words than is conveyed by verbal behavior. This seems obvious to many people: ‘meaning is use’, quoth Wittgenstein. (...) What wants emphasizing is not that use points the way to pre-existing meanings, *but that it creates, and so constitutes, meaning.*²⁵

Given the central role propositional attitudes play in Davidson’s picture, one would presume that he adheres to an intentional understanding of ‘use’.²⁶ However, Davidson makes it very clear that he agrees with Quine on the non-intentional nature of semantically constitutive behaviour: “[M]eaning is entirely determined by observable behaviour, even readily observable behaviour”²⁷. There is a reason to this. Davidson holds that semantic as well as intentional properties are in the end constituted by triangulation – i.e. by the causally mediated social process of reciprocal reaction in a ‘pre-linguistic, pre-cognitive situation’²⁸. According to Davidson, meaning and belief are hence grounded in mere behavioural reactions. He thus shares Quine’s non-intentional understanding of ‘verbal behaviour’ as well as Quine’s conviction that causal dependencies contribute to constituting semantic facts.

Their shared view on what determines semantic properties lies at the very heart of the Quine-Davidson approach to semantics. In fact, it snugly fits with the methodology of radical interpretation/translation so ubiquitous in the Quine-Davidson tradition. For given that semantic properties are constituted by verbal behaviour non-intentionally understood, it is easy to explain why an interpreter/translator working under the strictures notoriously labelled ‘radical’ can indeed uncover all semantic and intentional facts there are – just as Quine and Davidson think he can.²⁹ Hence, the outlined identification of the A facts and the corresponding reading of premise (a) of the argument sketched is non-negotiable for anyone embracing the Quine-Davidson approach to semantics-cum-metaphysics.

The question to be raised thus comes to this: Can an adherent of the Quine-Davidson stance who hence agrees that semantic properties are exclusively determined by facts about verbal behaviour avoid embracing the indeterminacy of reference? I will argue that she can indeed. More precisely, I will argue that the way Quine and Davidson spell out premise (a) of the argument sketched, if combined with other ideas prominent in Quine and Davidson, undercuts rather than supports their case for premise (b). Anyone sympathetic to the Quine-Davidson stance who nevertheless abhors the consequences of referential indeterminacy can thus draw on the resources of this very position to avoid embracing (IR). I will moreover argue that it is hard to see how, given a commitment to this stance, one can hold on to the idea that reference is indeterminate. Adherents of the Quine-Davidson picture hence can and should avoid embracing referential indeterminacy.

3. The Proxy Functions Procedure

Given that semantic properties are exclusively determined by facts about verbal behaviour, we still have to see that these facts are compatible with indefinitely many radically different interpretations before we can conclude that reference is indeterminate. Quine and Davidson think that this is easy to establish. In fact, they do hold that establishing the truth of premise (b) poses no problem at all. They believe that we possess a simple quasi-mechanical procedure allowing us to proliferate correct interpretations (almost) at will. More precisely, Quine and Davidson hold that we know how to generate from any interpretation I of a language L indefinitely many new interpretations I^* , I^{**} , I^{***} ... that all yield radically different assignments of extensions to terms, but that nevertheless all are correct for L , given that I is.³⁰

Quine and Davidson rely on a straightforward two-step procedure.³¹ Let us assume that I is a correct interpretation of some language L – say, and this is an assumption I will stick to throughout, I is our standard interpretation of English.³² We then first of all specify a function that assigns every object in the domain of our interpretation I one (and only one) other object – its proxy. To devise such a proxy function, we could in principle enumerate the pairs of objects and proxies for all those objects that do not go proxy for themselves. Yet it appears more appropriate to put forth a rule that governs the mapping in question, ensuring that it comes out one-one. We can for instance rule that our proxy function f maps every object onto its shadow, or that it maps every object onto its cosmic complement, i.e. the rest of the physical universe.³³ We could also take up Putnam's idea that f maps all cats on cherries, and vice versa, given there are just as many cats as cherries.³⁴ However, we could not map the rabbits on the undetached rabbit-parts, since such a mapping would not be one-one.

In a second step, we employ the proxy function to generate a new interpretation I^* from our interpretation I by the following stipulation:

- (S) Every singular term designates in I^* the proxy of the object it designates in I , and every predicate applies in I^* to the proxies of the objects it applies to in I .

For instance, if the proxy function used maps physical objects onto cosmic complements, 'George W. Bush' will designate in I^* the whole of the physical universe minus George W. Bush. Reinterpreting our language by means of interpretations generated in accordance with our stipulation might hence lead to dramatic changes in reference.

The outlined procedure nevertheless guarantees that core properties of the respective language L remain unaffected. Firstly, all syntactic features of L remain the same. Secondly, the ways the semantic properties of (open) sentences are determined by the semantic properties of their parts and their structure is not affected. Thirdly, the meanings of logical particles will not change. Taken together, these invariances imply that all logical relations will be unaffected. They also imply that Quine's famed apparatus of reference – 'the apparatus of pronouns, pluralization, identity, numerals, and so on'³⁵ –

will be precisely the same in I and in I^* . Fourthly, coreference is not affected by the envisaged reinterpretation. If a and b refer to the same object in I , they will do so in I^* ; the same holds for coreferential predicates.³⁶ – Let me mention in passing that none of this holds true of the rather different (and evidently non-mechanical) procedure Quine initially employed in chapter 2 of ‘Word on Object’. For instance, shifting extensions from rabbits to undetached rabbit-parts amounts to a one-many mapping that leads to changes in coreferentiality and that necessitates manually adjusting the apparatus of individuation on many reinterpretations of the native’s language. These facts have led to sophisticated objections to Quine’s argument.³⁷ Since neither criticism affects the proxy function procedure as outlined, it becomes comprehensible why Quine has all but dropped his initial line of thought in favour of the proxy function procedure.

The most important invariance, however, is yet another. For on any proxy function reinterpretation, the truth values of all sentences will remain the same. Any sentence true in I will be true in I^* ; the same holds for false sentences. As Quine stresses: “Proxy functions (...) leave the truth values of the sentences undisturbed”³⁸. That is hardly surprising. For (S) makes sure that the changes in the extensions of singular terms and predicates are *synchronised*: whenever our new interpretation assigns a predicate some new referent for an old one, it makes sure that the singular term that designated the old referent now designates the new one.

At first sight, then, it appears that Quine and Davidson are right. We apparently possess a quasi-mechanical procedure that allows us to proliferate correct interpretations (almost) at will. Hence, premise (b) of the argument outline above appears to be true. However, all we have seen so far is that given an interpretation I for a language L and a suitable proxy function, we can generate a new interpretation I^* that assigns all sentences of L the same truth-values as I . But that falls far short of what we have been promised. It should be obvious that simply assigning truth-values will not do. No semantics that is exhausted by effecting a single distribution of truth-values over the sentences of some language can possibly be adequate. Speakers sometimes assent to “It’s raining”, and sometimes they do not. Any adequate semantics has to respect the ensuing variation in truth-value. Any adequate semantics is hence bound to specify at least truth-conditions. It is hardly worth emphasizing that this idea lies at the heart of Davidson’s approach to semantics, and that it is explicitly endorsed by Quine who for instance proclaims: “We learn to understand and use and create declarative sentences only by learning conditions for the truth of such sentences”³⁹. Anyone sympathetic to the Quine-Davidson approach is thus compelled to insist that we cannot consider I^* to be a correct interpretation unless it assigns all sentences of L the same truth-conditions as I . Yet our proxy function procedure that supposedly proliferates correct interpretations is not even concerned with truth-conditions. Consequently, it cannot be taken to demonstrate that we can devise new as well as correct interpretations (almost) at will.

There are ways out of this predicament. We can either deny that there is a relevant difference between truth-values and truth-conditions.⁴⁰ This is evidently hopeless.⁴¹ Or we can try to construct a suitably generalised proxy function procedure. That is easy

enough to accomplish. We simply have to take up the popular idea that the truth-conditions of a sentence are its truth-values in all possible situations.⁴² This manoeuvre allows us to stick to the semantic framework used, provided that we relativize it in a suitable fashion. So let me redefine an *interpretation* of some language *L* to be a complete assignment of extensions to the singular terms and predicates of *L* in every situation. In short, an interpretation is a complete assignment of intensions. Let us moreover assume that a proxy function assigns every object in the domain of our interpretation in every situation a proxy. Given an interpretation *I* for our language *L* and a suitable proxy function, we can once again generate a new interpretation *I** by stipulation:

- (S*) Every singular term designates in every situation in *I** the proxy of the object it designates in that situation in *I*, and every predicate applies in every situation in *I** to the proxies of the objects it applies to in that situation in *I*.

*I** assigns all sentences of *L* in all situations the same truth-values as *I*. Hence, *I* and *I** yield the same truth-conditions for all sentence of *L*. But as before, the extensions (as well as the intensions) *I** and *I* assign to the terms of *L* might differ dramatically.⁴³

This strategy has been pursued by Putnam.⁴⁴ Given the outlined predicament, anyone sympathetic to the Quine-Davidson account is also compelled to adopt it – even more so since it appears to be the very strategy Quine and Davidson implicitly agree on. Since Davidson wants his semantics to be empirically applicable, he relativises its core notion – truth – to speakers and times.⁴⁵ He also takes the evidence for radical interpretation to consist in holding-trues by speakers at times.⁴⁶ Davidson finally stresses that his semantics is meant to apply to all actual and potential utterances, that is to say: to all utterances across all possible situations.⁴⁷ Very much the same is true for Quine. Quine famously maintains that what is relevant for semantics are dispositions to assent to (or dissent from) queries posed on receiving perceptual stimulations. He relativises evidence for translation as well as truth to stimulations.⁴⁸ Since Quine assumes that standards of perceptual similarity are stable across populations, we can understand him to hold that what counts are dispositions to assent to (or dissent from) queries posed with respect to certain scenes or in situations.⁴⁹ Hence, we can very well take Quine and Davidson to hold that a sentence's truth-conditions are its truth-values in all possible situations, and we can take them to agree on a suitably generalised proxy function procedure. This is the view charity forces upon us anyway. Quine and Davidson explicitly avow that a reinterpretation leaves the truth-conditions of all sentences unaffected.⁵⁰ But this is true on the generalised version of the proxy function procedure only.

Given this charitable reconstrual, it turns out that Quine and Davidson are right. From an interpretation *I* for a language *L* and a suitable proxy function, we can indeed generate a new interpretation *I** that assigns all sentences of *L* the same truth-conditions as *I*. This goes a long way towards demonstrating the indeterminacy of reference. Yet it might not go all the way. For even though our new interpretation *I** assigns the same

truth-conditions as I , it still might not be compatible with the total verbal behaviour speakers of L exhibit. That is to say, use might after all *not* boil down to a distribution of truth-values over situations. This is a thought anyone sympathetic to the Quine-Davidson stance yet wary of referential indeterminacy should explore.

4. Use, Truth and the Proliferation of Interpretations

In one respect, all differences between proxy functions are immaterial: any interpretation I^* generated from an interpretation I by means of any proxy function will yield the same truth-conditions as I . In another respect, the differences between proxy functions might prove crucial. For the type of proxy function employed determines, as it were, how much the extensions assigned by I and I^* differ. A proxy function that maps George W. Bush onto his nose, say, and every other object onto itself will yield a fairly moderate change in reference. A proxy function that maps all physical things onto sequences of real numbers will effect a sweeping change in reference and a radical shift to an all-out Pythagorean ontology. So let me distinguish three kinds of proxy functions.⁵¹ First, call those proxy functions that map every object o onto one and only one proxy o^* that necessarily appears in just those situations o appears in *close-in*. Given some obvious idealisations, a function that maps every object onto its shadow falls into this class. Second, call a proxy function *spot-on* given that it is close-in and that it guarantees that an object o and its proxy o^* always co-appear in the same location. That is to say, o must be in the space-time-expanse of o^* , or o^* must be in the space-time-expanse of o . A proxy function that maps objects onto their surfaces will be of this kind. Third, call a proxy function *free-wheeling* if it is neither close-in nor spot-on. The Quinean proxy function that maps objects onto their cosmic complements is free-wheeling. For the cosmic complement of some object o never is in the same situation as o . It hence is not close-in. *A fortiori*, it is not spot-on either.

If a new as well as correct interpretation I^* just has to mimic the truth-conditions of I , we can employ any proxy function to generate it. However, if the total use a community makes of its tongue – i.e., on the Quine-Davidson reading: the actual and potential verbal behaviour the speakers exhibit – cannot be accounted for by a distribution of truth-values over situations alone, it might very well be that only a new interpretation generated by means of a certain type of proxy function can aspire to be correct. This is precisely what I am going to maintain. More to the point, what I will argue is this: there are aspects of verbal behaviour that any adherent of the Quine-Davidson stance in semantics-cum-metaphysics had better acknowledge, yet that are not accounted for just by any proxy function reinterpretation designed to respect the distribution of truth-values over situations. This will provide the dissenting disciple of the Quine-Davidson stance with all the reason she needs to reject (IR).

4.1 Use and Situations

Situations are small environments speakers find themselves in. More precisely, situations are complex arrangements of things (the word taken in its most liberal sense) that are spatially connected and temporally extended. Their boundaries are moreover not fixed once and for all but rather are determined by the perceptual – or, more general, epistemic – capacities of the respective speaker involved in it. All this is far from precise, but I guess that it will do for our purposes.⁵² Given this explication, it seems obvious that every utterance of a sentence is made *in* a situation, but not every utterance is *tied to* the situation it is made in. Focussing on assertions, my assertion “It’s raining” is apparently tied to the situation I am presently in, whilst my assertion “Tigers are carnivores” evidently is not. What is important now is that the intuitive difference just professed can be cashed in in behavioural terms. For a specific change in the situation will lead me to stop asserting the first sentence. But no such specific change will stop me from asserting the second. Yet if that is so, there apparently are, for at least some utterances, observable facts about verbal behaviour as to whether these utterances are or are not tied to the situation they are made in.

Anyone adhering to the Quine-Davidson approach in semantics is bound to acknowledge the distinction just made. Firstly, it merely echoes the Quinean insight that not every assent is prompted by the situation it occurs in.⁵³ Secondly, the role Quine assigns to dispositions is hardly compatible with the opposite idea. For modelling the linguistic competence by way of dispositions just is to build the ability to detect specific differences into the very account of language mastery. What is more, anyone sympathetic to the Quine-Davidson account is bound to acknowledge that at least for some of my utterances, there are behavioural facts of the matter as to whether they are tied to the situation they are uttered in or not. Quine and Davidson presume that the radical interpreter/translator can and does correlate utterances (or rather: assents or holding-trues, respectively) and situations, which he couldn’t do unless he had available the respective behavioural facts. Yet on the non-intentional account of use shared by Quine and Davidson, what is captured by dispositions and ascertained by radical procedures just *is* verbal behaviour or use.

On Quine-Davidson premises, it hence turns out that it sometimes is a fact about use whether an utterance is tied to the situation it is made in. Now think of a language *L* whose use is such that some of its utterances are tied to the situations they are made in, and some are not. Think, say, of ordinary English. Imagine that we employ a proxy function that maps all physical objects onto sequences of real numbers to generate a new interpretation *I** for *L*. This new interpretation will assign all sentences of *L* their ordinary truth-conditions. Yet *I** will not be compatible with the use speakers make of *L*. For in *I**, no utterance will be tied to the situation it is made in – and that does not accord with the use of *L*. From this it follows that not just any proxy function can accomplish a correct reinterpretation. A proxy function is suited to generate a new as well as correct interpretation only if it is close-in; free-wheeling proxy function simply will not do. Only if things and their proxies necessarily co-appear in the same situations can

we be sure that the reinterpretation might be compatible with the total use speakers make of their language.

This has far-reaching ramifications. We can generate indefinitely many new interpretations only if there are indefinitely many suitable proxy functions. The assumption that there are appears innocuous enough as long as we are simply concerned with truth-conditions. For on that premise, any function will do. Yet we have just seen that only fairly special functions are suited to generate interpretations that are not only new but also potentially correct. If these functions are to be specified by a rule rather than by an enumeration of things and proxies, they are moreover not that easy to come by. The argument so far hence already limits the scope of a possible indeterminacy. Correct interpretations cannot differ as radically as Quine and Davidson propound. The reference of the English expression ‘cat’ might still be indeterminate; but ‘cat’ for sure neither refers to cherries nor to cosmic complements of cats. By narrowing its scope, the argument also limits the extent of a possible indeterminacy. There are not as many correct interpretations as Quine and Davidson think. Maybe we can proliferate interpretations. But given the layout of the Quine-Davidson stance, we cannot proliferate interpretations at will. There still is hope for the dissenting disciple.

4.2 Use and Segments of Situations

Some utterances are tied to the situation they are made in, and some are not. That is a fact about use. However, use plausibly is even more specific. Certain utterances are tied to certain subregions of the situation they are made in rather than to the situation as a whole. Some of these subregions might not change their positions within the situation over time. Some might very well do – think for instance of the subregion cut out by a tiger that slowly moves towards you. Let me call any such subregion a *segment* of the situation. Anyone adhering to a Quine-Davidson stance in semantics-cum-metaphysics must take it to be a fact about use that the utterance of some sentences are tied to certain segments rather than to whole situations – or so I will argue.

To begin with, the relation between situations and speakers is mediated by observation: speakers observe the going-ons they are confronted with. Their verbal behaviour will be sensitive to the observations they make. That is, which sentences they assent to will depend on which observations they make. This relation between observations and use must of course be unaffected by any correct reinterpretation. As Quine puts it:

The gross bodies themselves, charter members of our ontology, could thus be superseded by proxies and not be missed. The primordial visual patches would still prevail in all their salience and integrity, and the same old observation sentences would be keyed to them as before.⁵⁴

Observation, however, is usually not sensitive to whole situations (or features distributed over whole situations) but to segments of them. If our tiger moves towards you

from behind, you are unlikely to assent to “A tiger?”. Observations hence quite often are tied to segments of situations. The same holds for use. That again merely echoes a Quinean insight. Quine construes use in terms of queries on perceptual stimulations. He does so to make sure that use is keyed to segments of situations rather than to situations as wholes. This allows him to claim that, on reinterpretation, “verbal behavior proceeds undisturbed, warranted by the same observations as before and elicited by the same observations”⁵⁵. Hence, on Quinean premises, it is a fact about use that utterances are sometimes tied to specific segments of situations rather than to situations as wholes.

Speakers do not simply observe. They react to the going-ons that confront them as well as to one another. It is evident that these reactions will often be tied to segments of situations rather than to whole situations. Since the reactions in question might very well be verbal, use will quite often be tied to segments rather than to situations as wholes. This idea is central to the account of triangulation so vital to Davidson’s stance:

The basic situation is one that involves two or more creatures simultaneously in interaction with each other and with the world they share; it is what I call *triangulation*. It is the result of a *threefold* interaction, an interaction which is *twofold* from the point of view of each of the two agents: each is interacting simultaneously with the world and with the other agent. To put this in a slightly different way, each creature learns to correlate the reactions of the other with changes or objects in the world to which it also reacts.⁵⁶

Davidson assumes that the reactions of the agents described are fine-grained enough to be tied to specific changes or objects as well as the reactions of another creature to this changes or objects. But the scenario sketched is Davidson’s model of the very pre-linguistic as well as pre-cognitive (verbal) behaviour that gives rise to thought and language. It is, in short, his model of semantically constitutive verbal behaviour or use. Hence, Davidson has to agree that it is a fact about use that utterances are tied to specific segments of situations rather than to situations as wholes.

There is yet another aspect of use that makes it safe to assume that utterances sometimes are tied to segments of situations: speakers interact with segments of situations, and these interactions are mirrored by their utterances. Speakers put on shoes, pack backpacks, gesture towards mountains, and occasionally run from tigers. These are interactions with segments of situations. These interactions will affect the verbal behaviour of the speakers in question. Imagine our fleeing hiker to shout “A tiger! A tiger!”. The interaction he is engaged in is an interaction with a certain segment that is cut out by a tiger. Since this interaction is what guides his use – since this segment is what prompts his verbal reactions – we can conclude that his utterance is tied to that very segment. Still, we cannot infer that his utterance refers to a tiger. For the segment cut out by a tiger contains many things. It for instance contains the tiger’s surface, its centre of gravity, and its texture. To assume that our speaker focuses on the tiger rather than

on, say, its centre of gravity just is to assume that he shares our referential apparatus – and that might be a contentious assumption.

Anyone adhering to a Quine-Davidson stance in semantics-cum-metaphysics must hence take it to be a fact about use that some utterance are tied to segments rather than to whole situations. Hence, only a reinterpretation that guarantees that things and their proxies occur in the *same segments* of situations can be compatible with all facts about use. Yet if that is so, close-in proxy functions will not do. What Quine and Davidson need in order to generate a new as well as correct interpretation rather is a spot-on proxy function. This fact further narrows the scope as well as the extent of a possibly indeterminacy. Proliferating interpretations might after all be a far harder business than it seemed. The dissenting disciple of the Quine-Davidson stance might hence still avoid embracing the idea that reference is indeterminate.

4.3 Use and Homogeneity

An interpretation assigns each predicate for each situation an extension. So does any interpretation I^* generated from it by means of a proxy function. If the proxy function is spot-on, as I will assume it is, any object will be in the same segments as its proxy. For instance, the things ‘tiger’ applies to in I^* will be in the space-time-expanse of the things ‘tiger’ applies to in I . The extensions thus determined might nevertheless be fairly different. The one might be a set of tigers, whilst the other is a set of surfaces of tigers. Worse still, the one might be a set of tigers whilst the other might be an assortment of things that appear in the expanses of tigers. It might contain a left whisker of a tiger, the tip of the nose of a tiger, and a tiger’s centre of gravity. The first two sets are homogeneous, i.e. they contain only things that are of the same kind. The third is heterogeneous. Yet by the standards so far defended, this set might very well be a correct extension for the predicate ‘tiger’. That is hard to believe. So let us see whether the semantics and metaphysics of the Quine-Davidson stance does provide the dissenting disciple with enough resources to defend the following constraint: any correct reinterpretation has to respect the homogeneity of extensions. If I assigns to some (observation) predicate a homogeneous extension, I^* must do the same.

Let me present two considerations to support this idea. Quine and Davidson hold that semantic properties are exclusively determined by facts about the non-intentional use of language. This assumption implies that there cannot be a difference in meaning if there is no difference in use. This principle covers sentences. Hence, if p and q are used in the same way, they have the same semantic properties. Yet it also applies to utterances. Hence, if two utterances of the sentence p are basically alike, they have the same semantic properties. Admittedly, both ideas are as vague as the principle they rest on. They still support the proposed constraint. For they lend plausibility to the claim that *if* a speaker is concerned with qualitatively very similar segments s and s^* of a situation, *if* his observations are by and large the same, and *if* his verbal behaviour is basically unchanged, we have good reasons to assume that the predicate ‘tiger’ he employs picks

out things of the same kind on both occasions. In other words, if the verbal behaviour of our speaker is not merely an outward sign of unobservable yet semantically fundamental mental activity – a view Davidson and Quine alike reject⁵⁷ – then we are concerned with two utterances that are alike in all semantically relevant respects. To rehearse Davidson’s claim: “What wants emphasizing is not that use points the way to preexisting meanings, but that *it creates, and so constitutes, meaning*”⁵⁸. That should give us sufficient reason to believe that our speaker is concerned with qualitatively very similar items on the two occasions. Assuming otherwise just is to propose an indiscernible variation between these instances, which in turn amounts to upholding the mentalistic picture of introspective semantics so alien to the Quine-Davidson view.

The second line of reasoning draws on quite different resources. Languages are learned. According to Quine, we learn our languages “by observing other people’s verbal behavior and having [our] own faltering verbal behavior observed and reinforced or corrected by others”⁵⁹. According to Davidson, languages are learned by asymmetric triangulation from an already competent speaker.⁶⁰ Both accounts take for granted that speakers are capable of generalising from their learning situations. According to Quine, we possess a ‘pre-linguistic quality space’⁶¹ that guides our generalisations, and Davidson designs triangulation as a social situation since he believes that only social interaction can constitute similarity and hence ground generalisations. On these accounts, we have no reason at all to suppose that the generalisations in question lead to a heterogeneous extension for ‘tiger’. There is nothing in these behaviouristic learning situations that warrants the idea that someone will learn to apply ‘tiger’ to noses of tigers on one occasion and, say, centres of gravity of tigers on another. In fact, if we take up Davidson’s assumption that a cycle of reciprocal observations and reactions gets language learning off the ground, the idea that the ensuing extension might contain assortments of rather different items loses all plausibility.

Let us nevertheless for the moment suppose that the predicate ‘tiger’ as used by our speaker does have context-dependent conditions of application. For instance, let us assume that he applies ‘tiger’ to noses of tigers on one occasion, and to whole tigers on another. If that is so, the speaker’s ability to apply the predicate without hesitation is also likely to vary with the context. Whether this is so, however, is an empirically ascertainable fact about his verbal behaviour. Significant as well as systematic differences in verbal behaviour across actual and potential situations – or rather the lack thereof – do thus give us good reason to discard inhomogeneous extensions in reinterpretation.

Consequently, it might appear sensible to uphold the homogeneity constraint. For it might very well be that an otherwise impeccable reinterpretation for a language *L* that does not respect homogeneity leads to an interpretation that is not compatible with the use speakers make of *L*. In fact, most reinterpretations Quine and Davidson propose do respect this constraint. Since they proceed via rules rather than by explicitly pairing objects and proxies, most proxy functions Quine and Davidson employ ensure that the homogeneity of extensions remains unaffected in reinterpreting; just think of their mappings of things onto shadows or onto space-time coordinates. Given their general

stance in semantics-cum-metaphysics, there appears to be reason to it – as we have just seen. The Quine-Davidson approach to semantics-cum-metaphysics thus does indeed provide the resources to defend the homogeneity constraint on reinterpretation.

This is good news for the dissenting disciple. For the homogeneity constraint further limits the extent of indeterminacy. It might do so even more effectively than one thinks. For the argument carries over from extensions to intensions. If there is reason to think that homogeneity *within* situations must be respected, there also is reason to think that homogeneity *across* situations must be respected. Again, most reinterpretations Quine and Davidson propose do satisfy even this stricter constraint. Yet it rules out that we can generate a correct interpretation from a given one Putnam-style by swapping the extensions of ‘cat’ and ‘cherry’ in some possible situation.⁶² For the reinterpretation does not respect the homogeneity of intensions.

4.4 Use and Causal Connections

It is widely assumed that causation plays an important part in determining reference.⁶³ This assumption is compatible with the idea that use determines all semantic facts. For causal relations are very likely to be an ingredient in the complex interplay between utterances and going-ons in the world that constitute the use of language. That anyway is what Quine and Davidson believe. Quine’s account of verbal behaviour pivots on causal dependencies between observed situations and responses. Central to his account is the behaviour prompted by situations and the assent or dissent elicited by the prompting situation plus a query such as “Tiger?”.⁶⁴ Davidson also holds that causation is essential to the determination of meaning and belief. In his account of triangulation, he combines the idea that semantic properties are determined socially with his conviction that “the stimuli that cause our most basic verbal responses also determine what those verbal responses mean, and the content of the beliefs that accompany them”⁶⁵. A Quine-Davidson stance in semantics-cum-metaphysics hence compels one to endorse the following causal constraint on admissible reinterpretation: no new interpretation I^* can be correct unless it can account for the causal relations that are relevant to use.

Before I assess the causal constraint, let me mention that there is an obvious although modest role for causation to play. Invoking causation allows us to further elucidate those aspects of use we have drawn on earlier. It is very plausible to assume that observation, reaction, and interaction have a causal dimension; for all we know, these relations are causally mediated. This might explain why observation, reaction, and interaction are tied to segments rather than to whole situation, since causal relations connect them to those.⁶⁶ Invoking causation thus lends further credibility to the case made above.

The causal constraint is quite often assumed to be all one needs to establish that reference is perfectly determinate.⁶⁷ That is to say, it is often assumed that causation will single out a *unique* correct interpretation for a language. There are reasons to be sceptical, though. To begin with, even if causation plays an eminent role in determining refer-

ence, this causal determination will plausibly be mediated by a number of other factors. This is nicely brought out in Glymour's sketch of a causal account:

[T]alk of intended interpretations should be replaced by talk of causally determined reference relations; roughly, our physical and social circumstances, and sometimes perhaps our beliefs as well, determine together a series of links connecting words and objects, and thus delimiting the admissible interpretations of our theories.⁶⁸

Yet if that is so, we cannot be sure that the mediating factors do not allow indeterminacy to come back in, as it were, through the backdoor. So let us concentrate on a simplified model and assume with Davidson that "in the simplest cases words and thoughts refer to what causes them"⁶⁹. Thus understood, the causal constraint does indeed rule out some reinterpretations. For instance, it rules out an interpretation that takes 'tiger' to apply to centres of gravity of tigers. A tiger is the right kind of entity to enter into causal relations. A centre of gravity, being a Reichenbachian *illatum*, will hardly qualify for this role. The causal constraint hence rules out reinterpretations by highlighting the fact that the proxy for a potentially causally efficacious item must be potentially causally efficacious as well.⁷⁰

So – does the causal constraint yield a unique interpretation? Well, whether or not the constraint allows us to discard, say, a reinterpretation that makes 'tiger' apply to surfaces of tigers depends on how finely causes are individuated. If tigers and their surfaces count as the same cause (or as aspects of the same cause), this interpretation is not ruled out. If on the other hand tigers and surfaces of tigers count as different causes (or as aspects of different causes), the envisaged reinterpretation will not be compatible with the actual causal relations. In other words, if causes are sliced finely, the causality constraint will pin down reference; yet if causes are sliced coarsely, it will not. Both stances mark entrenched positions in the theory of causation.⁷¹ However, there is hardly a choice here for anyone sympathetic to the Quine-Davidson stance in semantics-cum-metaphysics. For Quine and Davidson are explicit on this: causes and effects are to be individuated coarsely.⁷² Hence, if you are the dissenting disciple wary of referential indeterminacy, appealing to the causal constraint allows you to further limit the scope and extent of the threatening indeterminacy by ruling out reinterpretations from concrete objects to *illata*. Yet it won't give you referential uniqueness.

5. Wrapping Up: Reassessing Referential Indeterminacy

The idea that semantic properties are exclusively determined by facts about the behaviouristically conceived use of language lies at the very heart of the Quine-Davidson stance in semantics-cum-metaphysics. Given this account, the issue of the indeterminacy of reference boils down to a simple question: does verbal behaviour or 'use' radically underdetermine reference? Quine and Davidson proclaim that it does. They main-

tain that we possess a quasi-mechanical procedure that allows us to generate indefinitely many new yet radically different interpretations all of which are compatible with the total use speakers make of their language. For any language *L*, there hence are indefinitely many radically different yet equally correct interpretations. Reference, they conclude, is indeterminate. There are no facts of the matter as to what names designate and what predicates apply to.

I have argued that all this is hardly convincing even if adheres to the Quine-Davidson stance in semantics-cum-metaphysics. To begin with, the simple proxy function procedure Quine and Davidson employ cannot sustain their argument. Only an interpretation generated by means of Putnam's generalised proxy function procedure might be compatible with total use, for only such an interpretation effects the same truth-conditions, or rather: the same distribution of truth-values of situations, as the original interpretation. What is more, if you adhere to the Quine-Davidson understanding of use or verbal behaviour, you have to acknowledge that there are aspects of verbal behaviour that are not accounted for just by any proxy function reinterpretation designed to respect the distribution of truth-values over situations. You have to acknowledge that some utterances are tied to situations, that some utterances are tied to segments in situations, that some predicates have non-context-dependent conditions of application, and that use involves causal dependencies. From this it follows that only a new interpretation that has been generated by means of a spot-on proxy function that respects the homogeneity of extensions as well as of intensions and that guarantees that any proxy for a potentially causally efficacious item is potentially causally efficacious as well can possibly be compatible with total use. Consequently, the scope of any admissible reinterpretation is fairly limited. The extensions correct interpretations may assign simply cannot vary that much.

This are good news for the dissenting disciple. For he now can rebuff the indeterminacy thesis, as it were, from within. To begin with, contrary to what Quine and Davidson maintain, it has become obvious that the proxy function procedure is not a quasi-mechanical procedure. It is not a procedure that, as it were, automatically yields new as well as correct interpretations. It can do so only if we provide a very special proxy function. Mapping objects onto cosmic complements, shadows, numbers or centres of gravity simply will not do the trick; in fact, almost none of the mappings proposed by Quine and Davidson proves feasible. What the champion of referential indeterminacy needs is proxy function that is spot-on, that respects homogeneity, and that provides causally equivalent proxies. It should by now be obvious that these functions are fairly hard to come by. We can map things onto their surfaces or their textures. What else can we do to devise an adequate proxy function? Not that much, I am afraid. Consequently, the dissenting disciple can conclude that the extent of an admissible reinterpretation is seriously limited. There for sure are not as many correct interpretations as Quine and Davidson think.

Yet if that is so, the argument propounded by Quine and Davidson fails. It simply does not establish that there are indefinitely many radically different interpretations all

of which are compatible with total use. It does not even show that there are many of those. Anyone drawn to the Quine-Davidson position yet wary of referential indeterminacy hence need not hold that reference is indeterminate. It can even be argued that anyone sympathetic to the Quine-Davidson stance should not hold this. We have seen that use – even use behaviouristically construed and equated with verbal behaviour – cuts finer than distributions of truth-values over situations. In fact, I have provided evidence that use so conceived cuts *very much finer* than the distribution mentioned. Hence, any adherent of the Quine-Davidson position will have to admit that there are facts about designation and application. At worst, these facts are *mildly disjunctive*: ‘tiger’ refers to tigers or to textures of tigers or to surfaces of tigers. At worst, then, reference is *blurred* or *vague*. That might still be embarrassing. But it falls far short of the indeterminacy notoriously claimed by Quine and Davidson; and it for sure dissolves neither reference nor intentionality. Consequently, any avowed adherent of the Quine-Davidson stance in semantics-cum-metaphysics can and should reject the claim that reference is indeterminate.

It is about time to drop the by now familiar caveat. Many philosophers reject the Quine-Davidson account of *A* facts. That is to say, they discard the idea that semantic properties are exclusively determined by facts about the (non-intentional) linguistic behaviour of speakers. However, most philosophers do hold that use is at least part of what determines semantic properties, and they admit that mere verbal behaviour is at least part of what the total use of a language consists in. Consequently, any dismissal of referential indeterminacy that makes do with a Quine-Davidson account of verbal behaviour can be sustained quite independently of their stance. We hence can and should reject the idea that reference is indeterminate.

Notes

¹ I will exclusively focus on referential indeterminacy and ignore the indeterminacy of translation. There is reason to this, see section 3 and especially footnote 38.

² See Davidson 1977, 216, Quine 1995, 59, Kripke 1977.

³ See Quine 1960, 73, Quine 1968, 47, Wilburn 1992, 281.

⁴ Quine 1992, 50, see Davidson 1996b, 169.

⁵ See Quine 1990, 7, Davidson 1979, 228.

⁶ See Quine 1968, 47.

⁷ See Field 1973, 462.

⁸ For simplicity's sake, I will ignore indexical expressions.

⁹ If not indicated otherwise, please take talk of 'properties' as an ontologically neutral (and hence Quine-Davidson compatible) *façon de parler*.

¹⁰ See Quine 1995, 72f, Davidson 1979, 227.

¹¹ See Quine 1968, 27, Davidson 1999, 81.

¹² See Schiffer 1987, 2.

¹³ This is how Quine can hold on to talk of 'reference' even though his indeterminacy-claim has dissolved systematic semantic word-object relations. Quine devises a two-pronged strategy in that he, firstly, understands inter-linguistic reference statements as manifesting our translational preferences rather than truth-evaluable claims about referential properties. He, secondly, urges us to understand inner-linguistic reference statements as disquotational. See Quine 1981b, 19f, Quine 1990, 6, Quine 1992, 52, Quine 1995, 75. For comments on Quine's disquotational account see Stroud 1995. – For a similar disquotational strategy to cope with referential indeterminacy see Putnam 1976, 136, Putnam 1981, 52. For an analysis of Putnam's ideas see Brown 1988, 153. For a fully developed disquotational theory of reference see Horwich 1998, ch. 5.

¹⁴ Quine appears to share this view on the consequences of referential indeterminacy. His endorsement of referential indeterminacy drives him to adopt a 'global structuralism', see Quine 1995, 74f. Quinean global structuralism pivots on the idea that the ontology, summarizing the interpretation of the names and predicates, is incidental to a language or theory; what matter are rather its structure and the meanings of its sentences. To adopt this view is to acknowledge the consequences of referential indeterminacy just outlined. – On Quine's global structuralism see Quine 1992b, 8f, Quine 1992, 31-36, Quine 1979b, 164f, Quine 1981b, 20 and Rosner 1996.

¹⁵ Leeds 1973, 491, see Devitt 1984, 173 and Wilburn 1992, 281.

¹⁶ On the converse claim the implication is more obvious still: If you believe with Quine and Davidson that what you think is what you (would) say, indeterminacy of reference evidently entails indeterminacy of intentionality.

¹⁷ To be sure, there is a lot of disagreement between Quine and Davidson. Yet for the purpose of assessing referential indeterminacy, I believe that we can safely ignore these differences and concentrate on what is shared between them.

¹⁸ I presume throughout that the indeterminacy thesis is not essential to a Quine-Davidson position.

¹⁹ See the references in footnote 31.

²⁰ See van Cleve 1992, 344.

²¹ See Quine 1992, 37f.

²² Quine 1968, 29. See also Quine 1960, ix, 29, Quine 1968, 26ff, Quine 1972, 444, Quine 1975, 87ff, Quine 1987 5, 10, Quine 1992, 37f.

²³ Quine 1975, 91. As Glock 1996, 155f argues, Quine himself does not stick to this radically non-intentional account of 'assent'. See also Glock 2003, 175ff. I will let this pass. – For the method of query and assent see Quine 1975, 88, Quine 1960, ch.2.

²⁴ Quine 1960, 30.

²⁵ Davidson 1999, 81, my emphasis.

²⁶ For the importance of propositional attitudes in Davidsonian semantics see e.g. Davidson 1974, 144, Davidson 1974b, 196, Davidson 1973, 127, Davidson 1990, 316, 318f.

²⁷ Davidson 1990, 314, see Davidson 1996b, 169.

²⁸ Davidson 1999c, 4, see e.g. Davidson 1991, 159f, Davidson 1996b, 165-167. For an analysis see Child 1994, 18-22, Talmage 1997 and Føllesdal 1999. It is very important to discern (i) asymmetric triangulation, where a already competent teacher instils competence on a pupil – see e.g. Davidson 1991, 159f – and (ii) symmetric triangulation, where all individuals involved are neither competent speakers nor, as it were, competent thinkers – see e.g. Davidson 1999c, 4f. Only the latter kind is of relevance here.

²⁹ See Quine 1990, 10, Davidson 1983, 315, see Davidson 1982, 476. – The argument might work both ways: given that a radical interpreter/translator must be able to uncover all the semantic-cum-intentional facts there are, we might want to conclude that only publicly observable behaviour is constitutive of semantic properties. – For an analysis of the interpretationism thus avowed see Child 1994, ch.1.

³⁰ See the references in the next footnote.

³¹ See Quine 1979b, 165, Quine 1981b, 16ff, Quine 1990, 6f, Quine 1992, 36f, Quine 1992b, 8f, Quine 1994b, 179-182, Quine 1995, 71ff. See Davidson 1977, 224, Davidson 1979, 229, Davidson 1997, 6f. See also Wallace 1977, Kirk 1986, 116ff and Reynolds 1995.

³² Or rather, a formalised fragment of English. I will not brood over the precise requirements here. See footnote 43.

³³ See Davidson 1979, 230, Quine 1995, 71f.

³⁴ See Putnam 1981, 32-35.

³⁵ Quine 1968, 35.

³⁶ See Quine 1995, 72.

³⁷ See Evans 1975, Fodor 1994, ch.3.

³⁸ Quine 1995, 72. – Quine draws on this feature of the proxy-function procedure to draw a line between referential and translational indeterminacy. The indeterminacy of

reference “(...) is the unsurprising reflection that divergent interpretations of words in a sentence can so offset one another as to sustain an identical translation of the sentence as a whole.”(Quine 1992, 50), whereas “[t]he serious and controversial thesis of indeterminacy of translation (...) is rather the holophrastic thesis (...) which (...) declares for divergences that remain unreconciled even at the level of the whole sentence, and are compensated for only by divergences in the translations of other whole sentences.”(ibid.). Consequently, the two thesis are in a key respect independent of one another: even if translation should prove determinate – even if our sentence prove to have determinate meanings – we do still have to worry about referential indeterminacy.

³⁹ Quine 1973, 78f. See Davidson 1967, Davidson 1984 *passim* and Quine 1973, 65f, Quine 1975, 87f, Quine 1979, 131f and Quine 1995, ch.7.

⁴⁰ See Wallace 1977, 155-160.

⁴¹ Given the way Quine oscillates between ‘truth-values’ and ‘truth-conditions’, one does wonder whether he believes that Wallace is right. Even though he stresses that “proxy functions (...) leave the truth values of the sentences undisturbed.” (Quine 1995, 72), he summarises his argument as follows: “[W]e saw that the application of a proxy function to a language leaves the truth conditions of sentences unaffected.” (Quine 1995, 75).

⁴² See e.g. Cresswell 1991, Lycan 1987.

⁴³ The generalised procedure has another virtue: It applies to richer (fragments of) languages. It even applies to languages containing second order quantification as well as modal operators; see Hale/Wright 1997, 451f. Accordingly, the claim that we do indeed establish a result for natural languages gains in credibility.

⁴⁴ See Putnam 1981, ch. 2 and appendix, see also Hallett 1994, 70-75, Hale/Wright 1997, esp. 448-452.

⁴⁵ See Davidson 1967, 32f.

⁴⁶ See Davidson 1973, 135f.

⁴⁷ See Davidson 1976, 174, Davidson 1967, 22.

⁴⁸ Quine 1975, 88. See Quine 1975, 88: “In what behavioural dispositions (...) does a man’s knowledge of the truth conditions of the sentence ‘This is red’ consist? (...) [I]t is the disposition to assent and dissent when asked in the presence or absence of red.”

⁴⁹ Quine 1995, 20. See *ibid.* for talk of ‘scenes’ and see Quine 1992, 39 for talk of ‘situations’. – Quine himself is not too fond of his notion of ‘stimulus meaning’ either, calling it a ‘physicalistic parody of the mentalistic notion of private meaning.’(Quine 1993, 114).

⁵⁰ See Quine 1995, 75, Davidson 1979, 229f.

⁵¹ For a similar idea see Rey 1997, 476.

⁵² The following argument is valid on any plausible account of situations. For instance, it makes no difference for the argument whether you hold that situations involve properties – as Barwise/Perry 1983, ch.1 do – or whether you agree with Quine and Davidson that there are no properties.

- ⁵³ See Quine 1960, 30.
- ⁵⁴ Quine 1990, 7, see Quine 1960, 72, 78
- ⁵⁵ Quine 1981b, 19.
- ⁵⁶ Davidson 1999c, 4.
- ⁵⁷ See Quine 1992, 37f, Davidson 1990, 315.
- ⁵⁸ Davidson 1999, 81, my emphasis.
- ⁵⁹ Quine 1992, 37f, see Quine 1973, ch.1-2.
- ⁶⁰ See Davidson 1992, 261ff, Davidson 1996b, 165f. – For the varieties of triangulation see footnote 28.
- ⁶¹ Quine 1960, 83.
- ⁶² See Putnam 1981, appendix.
- ⁶³ See e.g. Leeds 1978, 113, Harman 1982, 569, 573, Devitt 1984, 275, van Cleve 1992, 349, Blackburn 1994, 26.
- ⁶⁴ See Quine 1960, 28, 30.
- ⁶⁵ Davidson 1991, 160.
- ⁶⁶ See Kirk 1986, 12.
- ⁶⁷ See van Cleve 1992, 349.
- ⁶⁸ See Glymour 1982, 177.
- ⁶⁹ Davidson 1991b, 195.
- ⁷⁰ Putnam disagrees, arguing that ‘causation’ can be understood to mean ‘explanation’ (Putnam 1981b, 213) and that causal relation hence cannot possibly rule out any proxy function reinterpretation, see Putnam 1989, 359, Putnam 1986, 269.
- ⁷¹ See Dretske 1977, Mellor 1995, ch.9-11, Davidson 1967b.
- ⁷² See Quine 1985, Davidson 1967b, Davidson 1995.

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