SEMANTIC INDETERMINACY

Semantic Determinacy
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SI It is indeterminate whether 'Tabitha' refers to Tabitha or the whole cosmos
minus Tabitha instead.
(Quine 1990: 33-4)
Correlatively: It is indeterminate whether 'cat' applies to the cats or the cosmic
complements of the cats instead; indeterminate whether 'whiskered' applies to the
whiskered or the cosmic complements of the whiskered instead; indeterminate whether
'weighs x pounds' applies to the things weighing x pounds or the cosmic complements of
those things instead; etc.
Motivating thought: truth conditions for sentences can remain fixed while reference for
subsentential expressions can vary as radically as we like. Vagueness need not play a role
here.
SI $_{epistemic}$ It is unknowable whether 'Tabitha' refers to Tabitha or the whole
cosmos minus Tabitha instead.
SI $_{metaphysical}$ There is no fact of the matter as to whether 'Tabitha' refers to Tabitha
or the whole cosmos minus Tabitha instead.
Our focus throughout is on the stronger reading SI $_{metaphysical}$.
SI: rebuttals (1)
That 'Tabitha' refers to Tabitha is trivially true, so the claim that 'Tabitha' refers to Tabitha's
cosmic complement instead is trivially false insofar as it implies that 'Tabitha' doesn't refer
to Tabitha. (Cf. Christensen 1993.)
But the triviality is at the level of type:
'Tabitha' refers to Tabitha.
There is no triviality at the level of tokens. (Compare: 'I am here now'.) SI can be recast as:
SI $_{token}$ There is no fact of the matter as to whether a given token $\langle$ of 'Tabitha'
refers to Tabitha or the whole cosmos minus Tabitha instead.
→   SI $_{token}$ remains untouched by this rebuttal.
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SI: rebuttals (2)
NR Whatever $\langle$ refers to, it refers to necessarily by dint of what makes $\langle$ the
very item that it is. (Cf. Simchen 2012.)
Given SI $_{token}$, it is indeterminate whether $\langle$ refers to Tabitha necessarily or to Tabitha's
cosmic complement necessarily.
NR derives from an essentialist principle of Referential Token Identity:
RTI A referential token's referent determines what the token itself *is* (the token's
identity).
From RTI and SI $_{token}$: It is indeterminate with respect to $\langle$ in particular (*de re*) whether $\langle$ is
one thing (o_1) or another (o_2). But this seems wrong:

The *de re* indeterminacy claim entails that $\langle$ is neither determinately identical with o_1 nor determinately identical with o_2, i.e. $\lfloor x[\leftarrow D(x=o_1)]\langle \ni \lfloor x[\leftarrow D(x=o_2)]\langle$. Assuming that identity for $\langle$ boils down to o_1 or o_2, i.e. $x(x=\langle \square(x=o_1 (x=o_2))$, from the above claim we get that $\lfloor x[\leftarrow D(x=o_1)]o_1 \ni \lfloor x[\leftarrow D(x=o_2)]o_1 (\lfloor x[\leftarrow D(x=o_1)]o_2 \ni \lfloor x[\leftarrow D(x=o_2)]o_2$, from which it follows that $\lfloor x[\leftarrow D(x=o_1)]o_1 (\lfloor x[\leftarrow D(x=o_2)]o_2$, from which it follows that $\leftarrow D(o_1=o_1) (\leftarrow D(o_2=o_2)$, which contradicts the determinateness of self-identity for o_1 and o_2, $D(o_1=o_1) \ni D(o_2=o_2)$.

→ Assuming RTI, SI _{token} is false.

But RTI is a controversial essentialist thesis in the metaphysics of tokens. Could we counter SI more modestly, focusing directly on semantic issues?

SI: rebuttals (3)

The Lewisian antidote to SI (aka "reference magnetism"):

The interpretation that assigns the cats to 'cat', the whiskered to 'whiskered', etc., is objectively better than the alternative interpretation that assigns the cosmic complements of the cats to 'cat', the cosmic complements of the whiskered to 'whiskered', etc., because being a cat, being whiskered, etc., are more natural properties than being a cosmic complement of a cat, being a cosmic complement of a whiskered thing, etc. Naturalness of properties makes for differences of eligibility not only among the properties themselves, but also among things. Compare Bruce with the cat-shaped chunk of miscellaneous and ever-changing matter that follows him around, always a few steps behind. The former is a highly eligible referent, the latter is not…. This is because Bruce, unlike the cat-shaped chunk, has a boundary well demarcated by differences in highly natural properties. Where Bruce ends, there the density of matter, the relative abundance of the chemical elements,… abruptly change. Not so for the chunk. (Lewis 1983: 372)

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So assuming that 'cat' applies to the cats, 'whiskered' to the whiskered, etc., if 'Tabitha' refers to Tabitha's cosmic complement instead of Tabitha, we get the wrong truth conditions:

↓ 'Tabitha is a cat' is true iff Tabitha's cosmic complement is a cat

↓ 'Tabitha is whiskered' is true iff Tabitha's cosmic complement is whiskered

etc.

→ SI is false.

And yet… let **Int** be an interpretation of the language that assigns individuals to constants, sets of n-tuples to n-place predicates, etc.

μ-Truth: Sentential truth is understood in the usual way except that for permutation μ on the domain, atomic sentences $\rangle(c_1,…, c_n)$ are true iff $<\mu(\mathbf{Int}(c_1)),…, \mu(\mathbf{Int}(c_n))> \quad \mathbf{Int}(\rangle)$ (as opposed to the standard $<\mathbf{Int}(c_1),…, \mathbf{Int}(c_n)> \quad \mathbf{Int}(\rangle)$). We can extend this to atomic formulas and then show that for any sentence S, S is μ-true relative to **Int** iff S is (standardly) true relative to **Int***, where **Int*** agrees with **Int** except that for the constants c_i, $\mathbf{Int}_*(c_i)=\mu(\mathbf{Int}(c_i))$. (Standard truth becomes the limit case of μ-truth where μ is identity.) Assume with Lewis that 'cat' applies to the cats, 'whiskered' to the whiskered, etc., as before, and now suppose that 'Tabitha' really refers to Tabitha's cosmic complement instead of Tabitha.

If sentential truth is relativized to a permutation that maps every physical thing onto its cosmic complement and everything else onto itself – i.e. sentential truth is modeled by μ-truth where μ is the permutation in question – we get the following (μ-)truth conditions:

↓ 'Tabitha is a cat' is true iff Tabitha's cosmic complement's cosmic complement is a cat

↓ 'Tabitha is whiskered' is true iff Tabitha's cosmic complement's cosmic complement is whiskered

etc.

This reduces to:

↓ 'Tabitha is a cat' is true iff Tabitha is a cat

↓ 'Tabitha is whiskered' is true iff Tabitha is whiskered

etc.

→ SI vindicated!

Responses: μ-truth is unnatural (in Lewis's sense); μ-truth renders reference irrelevant for truth; μ-truth violates some cherished formal requirements (from abstract model theory). None of these responses is effective.

And yet μ-truth is surely unsuitable for semantics... why?

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SI: rebuttals (4)

We don't need the concept of reference; neither do we need reference itself, whatever that may be. For if there is one way of assigning entities to expressions (a way of characterizing 'satisfaction') that yields acceptable results with respect to the truth conditions of sentences, there will be endless other ways that do as well. There is no reason, then, to call any one of these semantic relations 'reference' or 'satisfaction'. (Davidson 1977: 256)

This wrongly assumes that semantics only cares about delivering truth conditions for whole sentences in any which compositional way. *But semantics also requires truth to abide by an intuitive locality-per-reference requirement.*

Locality-per-reference: Truth for sentences depends directly on reference for subsentential expressions.

μ-truth clearly violates this requirement.

That truth should be local-per-reference means that reference is to be settled prior to truth and not be truth-derivative. Semantics is committed to metasemantic antiinterpretationism! What made SI seem initially plausible is that the difference between rival interpretations doesn't show up in the truth conditions for whole sentences. But reference isn't just a matter of generating the right truth conditions: Reference is determined prior to sentential truth. Consider, e.g. the Kripke-Geach idea of a historical chain of communication linking contemporary uses of a name with its referent:

[I]t is not our knowledge of this chain that validates our use, but the existence of such a chain; just as according to Catholic doctrine a man is a true bishop if there is in fact a chain of consecrations going back to the Apostles, not if we know that there is. (Geach 1969: 289)

Whether it was Tabitha or its cosmic complement that was initially dubbed 'Tabitha', there is a fact of the matter as to whether 'Tabitha' refers to Tabitha or to the cosmic complement instead. (And it's *very* implausible that it was the cosmic complement.)

→ SI is false!

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