A note on impossible worlds semantics

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Last time Caleb mentioned the thought that some of the problems with possible worlds semantics can be avoided by defining meanings not as functions from possible worlds to extensions, but rather as functions from both possible and impossible worlds to extensions.

This is relevant to our discussion of the nature of the proposition because we were focusing on three views of propositions: (i) the view that they are sui generis abstract objects, (ii) the view that they are facts, and (iii) the view that they are properties. I set aside (iv) the view that they are sets of worlds (or functions from worlds to truth-values) because of the problems with possible worlds semantics. BUt maybe impossible worlds semantics is a better way to defend (iv).

1 Soames against propositions as sets of truth-supporting circumstances

Soames gives an argument against any view of type (iv) which relies on the assumption that some singular terms are directly referential. See Soames (1985, 1988) for details, but the basic idea is that if n, $n*$ are coreferential directly referring terms which refer to some object o, then someone can accept the sentence

$\ulcorner n$ is F and $n*$ is $G\urcorner$

and hence believe of o that it is F and believe of o that it is G, while rejecting the sentence

$\ulcorner$Something is both F and $G\urcorner$

It seems plausible that such a person does not believe that there is anything that 'is both F and G'. But this is a distinction in content which no view of propositions as truth-supporting circumstances can capture, since there is no circumstance in which o has two properties but there is nothing which has both properties.

One can block this sort of argument by denying that there are directly referring terms. Why this also involves denying that there can be a pair of terms which both rigidly designate the same object (where 'rigid designation' is defined as sameness of reference not only over all metaphysically possible worlds, but also over all of the impossible worlds used by the theory in question).

2 Some worries about the framework

Suppose, first, that we define meanings not just over possible worlds, but also over metaphysically impossible but epistemically possible worlds (where a world is epistemically possible iff it cannot be know a priori to not be actual). This does not help much with the standard problems for possible worlds semantics, since, while it allows some necessary truths to express distinct propositions, it makes all a priori and necessary truths — which are true with respect to every epistemically possible as well as every metaphysically possible world — express the same proposition. So we still get the problem about, e.g., '2+2=4' and 'Arithmetic is incomplete.' (The same worries arise if we allow worlds that are logically but not metaphysically possible – or in a different terminology, narrowly but not broadly logically possible.)

So it seems that we must let in at least some epistemically impossible worlds (worlds which can be known a priori not to obtain). But which ones?

Here we face a problem that I am not sure how to get around, which is best illustrated by example. Let's suppose that we allow in those metaphysically and epistemically impossible worlds which are such that it is not immediately obvious that they are not actual. Then for every formula S which is such that it is not immediately obvious that S is false, there is a world in the world set at which S is true.

The problem is that this sort of property of being immediately obvious is not transitive, in the sense that the first two material conditionals

$$p \rightarrow q$$
$$q \rightarrow r$$

could both be immediately obvious — and hence be true at every world in the world set — while the material conditional

$$p \rightarrow r$$

is not immediately obvious, and hence must be false at at least one world in the world set. But it is hard to see how this could work. The falsehood of the last conditional implies that the world w at which it is false must be such that p is true at that world and r is false at it. But is q true or false at that world? Whichever way we go, we have to reject one of our two initial suppositions.

(One might want to say: q is neither true nor false, and adopt rules for material conditionals according to which they are true if they have a true antecedent and neither true nor false consequent, or if they have a false consequent and neither true nor false antecedent. But this sort of logic would involve the rejection of modus ponens.)

The natural question about this argument is whether it is a general problem for impossible worlds semantics, or whether it rests upon 'being not immediately obviously false' as the criterion for inclusion in the world set. I'm inclined to think that it is a general problem, because it seems to me that any criterion weaker than epistemic possibility will involve a transitivity failure of the sort exemplified by the above. But I am not sure about this.

References

Scott Soames, 1985. Lost Innocence. *Linguistics and Philosophy* 8:1:59–72.

Scott Soames, 1988. Direct Reference, Propositional Attitudes, and Semantic Content. In *Propositions and Attitudes*, edited by Nathan Salmon and Scott Soames, 197–239. Oxford: Oxford University Press.