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ANALYSIS

semantics of which imports no commitment at odds with anti-realism about possible worlds. But if there is, then there is no evident reason why it should not be employed in giving the truth-conditions of modal statements quite generally. This would not preclude the employment of possible world semantics for modal logics, but there would remain no reason whatever for viewing this style of semantics as somehow capturing the real meaning of modal claims, or for regarding it as anything more than a merely algebraic device entirely devoid of philosophical significance. There would thus be no more call for a fictionalist account of it than there is for a fictionalist account of other kinds of algebraic semantics for modal logic.[6]

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[4] Peter Menzies and Philip Pettit, 'In defence of fictionalism about possible worlds', *Analysis* 54 (1994) 27–36.
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Modal fictionalism fixed

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1. Talk of possible worlds in the discussion of modality is clearly illuminating; and yet for many of us it is also palpably a matter of make-believe. Modal fictionalism [7] was an effort to reconcile these two thoughts. The idea was to understand talk of possible worlds not as talk about what in fact exists, but rather as talk about the content of a fiction. Where the modal realist proposes to analyse a modal statement P by means of a non-

modal statement about possible worlds, P*, the modal fictionalist proposes the parasitic paraphrase: 'According to the hypothesis of a plurality of worlds (PW), P*'. On this view, the claim that blue swans are possible does not depend on the real existence of a world containing blue swans, but only on the incontestable fact that according to PW, such a world exists. The hope was that this modest insight could be extended to provide a completely general and ontologically innocent construal of the possible worlds idiom in its various uses.

Brock [1] and Rosen [8] spotted a bug in the original proposal. The fictionalist translations of certain uncontroversial modal claims involving iterated modal operators imply the fictionalist paraphrase of the statement 'Necessarily, there are many possible worlds'. The fictionalist is thus a realist *malgré lui*, and the whole point of his enterprise is undermined. Fortunately, Harold Noonan [6] has recently shown that the problem can be dodged by taking the modal realist's paraphrase P* of the modal statement P to be the paraphrase generated by the translation scheme of David Lewis's 1968 paper 'Counterpart theory and quantified modal logic' [4]. Noonan is wrong to represent this observation as a defence of the *letter* of modal fictionalism, since the original fictionalist proposal took it for granted that 'the modal realist's paraphrase' of an arbitrary modal claim was the translation implied by Lewis's later discussions, especially [5]; and given *this* assumption the Rosen-Brock objection is cogent. Still, Noonan is right to point out that a *modified* fictionalism which proceeds exclusively in terms of Lewis's 1968 translation scheme is not vulnerable to the objection. The fictionalist should therefore accept Noonan's proposal as a friendly amendment.[1]

Now Bob Hale [2] has proposed what purports to be a more fundamental difficulty for the fictionalist strategy, a dilemma 'as simple as it is lethal'. The problem concerns the modal status on the fictionalist's view of the modal realist's ontological hypothesis, PW. The fictionalist of course rejects

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[1] The difference between the two approaches to the translation of modal statements is well brought out by the degenerate case. According to the scheme of [4], quantifiers in non-modal statements are all to be interpreted as restricted in their domain to inhabitants of the actual world. The statement 'There are many worlds' is thus to understood as claiming that *in the actual world* there are many worlds; which is clearly false. Since Lewis nonetheless wishes to assert that there are many worlds, and indeed that this is necessarily the case, he cannot hold to this scheme come what may. In [5] (see also [4], postscript A) Lewis takes the view that the restriction of quantifiers effected by the modal operators is a contextual affair, and that sometimes – for example in discussions of modal metaphysics – the restriction is null. On this understanding, the sentences 'There are many worlds' and 'Necessarily there are many worlds' are both true (by his lights). In [7] I assumed that this more flexible scheme gave the modal realist's official translation.

PW. He may assert its falsity; he may remain agnostic. But in any case he means to leave it open as a serious (epistemic) possibility that the PW is not true. Hale then asks what the fictionalist has to say about the modal status of this alleged falsehood. If PW is false, is it necessarily false, or only contingently so? Either way, says Hale, the fictionalist is in trouble.

Hale is most concerned to raise problems for the view that PW is contingently false. However, given the forgoing concession to Noonan, this horn is a clear non-starter. The fictionalist who accepts Noonan's amendment has no choice but to regard the hypothesis of many possible worlds as a *necessary* falsehood. For given the translation scheme of [4], the statement

(1) Possibly, there is more than one world,

is to be analysed as follows:

(2) $(\exists w)(\exists x)(\exists y)(Ww \ \& \ Wx \ \& \ Wy \ \& \ Iwx \ \& \ Iwy \ \& \ x \neq y)$

This says that there exists a world such that two distinct worlds are in it. But since this realist never countenances worlds within worlds, it follows that this statement is *false* according to PW; and this means that for the fictionalist the modal statement of which it is a paraphrase must also be false.[2]

What is Hale's difficulty for this horn of the dilemma? Just this. It was noted in [7] that one suggestive gloss on the idiom 'According to PW, P*' is given by the subjunctive conditional 'If PW were true, then P* would be true'. Taking this gloss as his starting point, Hale writes:

> if [the fictionalist supposes PW to be a necessary falsehood], then he runs into trouble immediately: whatever modal statement P is, his replacement for its possible worlds translation is going to be vacuously true, simply by virtue of the [necessary] falsity of its antecedent.

It is a familiar feature of the standard semantical treatment of counterfactuals that such a conditional is automatically true when its antecedent is necessarily false. The fictionalist who accepts this treatment and accepts the counterfactual gloss of his official analysans is therefore committed to the absurd conclusion that every modal statement is vacuously true.

The point is sound, as far as it goes. The trouble is that it's not an objection to modal fictionalism, since the fictionalist is not committed to either of the assumptions which generate the problem. In the first place, the feature of the standard semantics for counterfactuals which Hale's objection exploits is plausibly regarded as a *defect* in that analysis. As Hartry Field has observed in another context, we do seem to be able to make discriminating use of counterfactuals whose antecedents we suppose to

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2 It is easily verified that the fictionalist's paraphrases 'There is only one world' and 'Necessarily there is only one world' are both true on the modified proposal.

express necessary falsehoods ([3], pp. 237–8): if arithmetic were inconsistent, set theory would be inconsistent; if the God of the philosophers (i.e., a perfect, necessary being) existed, the righteous would have nothing to fear; if the Queen were your mother, Diana would be your sister-in-law. There may be no good systematic semantics for counterfactuals of this sort. But this does not mean that they don't make sense, or that a philosopher may not avail himself of them in trying to explain his view. The significant feature of these examples is that the alleged impossibilities supposed in the antecedents are not logical impossibilities. They are substantive impossibilities, metaphysical or mathematical; and while there may be insuperable obstacles to making sense of counter-*logical* conditionals, conditionals whose antecedents are impossibilities of these substantive sorts seem much better behaved – as indeed we all tend to acknowledge whenever we explore the consequences of a metaphysical or mathematical view we in fact reject (and so, presumably, regard as impossible) by saying such things as 'If that were true, then this would be true; but this is absurd; so that must be false.'

More importantly, the explanation of the fictionalist's story-prefix in terms of a counterfactual was never part of the fictionalist's official view. Rather it was rejected as inadequate for precisely these reasons. Officially, the prefix is primitive. And whatever one's view about the possibility of non-trivial counterfactuals with impossible antecedents, any philosopher who thinks he can discuss the content of another philosopher's grand metaphysical view would seem obliged to accept the existence of non-trivial facts about what is true or false according to a metaphysically impossible hypothesis. I myself think that Leibniz's modal metaphysics, with its possible worlds vying for reality in the mind of God, could not possibly have been true. I suppose Hale does too. But I am not at all inclined to conclude on this basis that all claims of the form 'According to Leibniz's metaphysics, P' are vacuously true; and neither, I assume, is Hale. The modal fictionalist takes the same view of Lewis's ontology: it is an intelligible story and we can talk sensibly about what it says; and yet it could not have been true. Nothing in Hale's note leads me to doubt the coherence of this stance.

2. If the modal fictionalist accepts Noonan's amendment he is compelled to grasp the first horn of Hale's dilemma and say that PW is necessarily false. If the forgoing is correct, this is a defensible stance; and yet it must be confessed that there is something unsatisfying about it. Remember, talk of possible worlds in this context is really talk of universes. Following Lewis, the modal fictionalist defines a possible world to be a maximal connected spatiotemporal system. The analysis then implies that not only

is there in fact only one of these things: as a matter of strictest necessity, there could not have been more. And the trouble is that this seems wrong. Surely the number of 'island universes' ought to be a contingent matter. Indeed one good reason for taking fictionalism seriously in the first place was the thought that armchair metaphysics should not pronounce on the number and nature of such things.[3] (Perhaps nothing should.) Lewis's view violates this precept in a particularly striking way; but so does the fictionalist's on the present construal, and this would seem to be grounds for finding them both objectionable.

There is a way to skirt this difficulty, and in view of the forgoing discussion it has certain attractions. At one point in [5], Lewis expresses reservations about his conception of a world as a unified spatiotemporal system. Do we want to rule out a priori the possibility of non-spatiotemporal worlds? If we don't, what can we say about what it is that makes their inhabitants residents of a single world? Lewis settles on the view that anything that deserves to be called a single world must be unified by a system of external relations that at least bears some suitable analogy with the spatiotemporal relations that unify the actual world. But as Lewis notes, another possibility is simply to take the world-mate relation as a further primitive of the system.[4] This move would permit the modal realist to admit the possibility of a single world containing any number of island universes, and also the possibility of a non-spatiotemporal world. In both cases the worlds in question would be unified simply by virtue of the fact that their residents were all worldmates. In the end Lewis rejects the view, settling instead for the proposal in terms of external relations and acknowledging that his view thereby flouts our (admittedly rather recherché) modal intuition to the effect that island universes are genuinely possible (see [5], sect. 1.6 for discussion).

Consider, however, a version of modal fictionalism, modified so as to incorporate this alternative proposal. In the fictionalist's new fiction – call it PW* – a world will no longer be defined as a system of spatiotemporally related objects, but rather simply as a maximal system of worldmates. All references to 'universes' in the specification of the fictionalist's fiction are to be replaced by references to worlds in this sense. The rest of the view can remain unchanged.[5] It will then turn out that according to PW*, some

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[3] This rationale is stressed in unpublished work by Stuart Brock.

[4] We may characterize it to some extent by saying that it is an equivalence relation, and also that any two objects which are spatiotemporally related to one another are also worldmates. But of course this is falls short of a definition.

[5] The final clause of the principle of recombination (6e) ([7], p. 333) would require some modification.

worlds contain many universes. So given the fictionalist's new translation scheme, he can happily agree that there might have been many universes. But by the same token, since according to PW* some worlds contain only one universe, he can also allow that there might have been only one. How many spatiotemporal systems there are is thus a contingent matter on this sort of view, just as 'intuition' requires.

But of course (2) is still the relevant paraphrase of (1); and it remains the case that according to PW* there are no worlds within worlds. Hale may therefore object that the modal fictionalist is still in the embarrassing position of having to concede that an apparently intelligible ontological view (PW*) is nonetheless a metaphysical impossibility.

The first thing to say is that if he is so committed, this is not so bad. We are entitled to our intuitions about modal statements concerning universes, since the notion of a universe is not a technical one, and we were in a position to understand it before we considered this particular family of problems. The notion of a world, by contrast, is not an ordinary notion when it is expressly distinguished from that of a universe as this proposal demands. It is first introduced in the context of the present theory, and we should let the theory guide us in how it should be used. If the theory implies that there could only be one world, intuition is in no position to object.

The second thing to say, however, is that it is unclear whether the theory really does have this implication. For note that the worldmate relation as the fictionalist now conceives it is a fictional relation. Or more precisely, the predicate 'world-mate' is a word whose first meaningful employment occurs in a context of story telling. In this respect it resembles 'gimble' (as in 'the slithy toves did ... gimble'). And it is a plausible view concerning predicates of this sort that while they can meaningfully be used in true sentences about the contents of their home stories, unprefixed sentences in which they occur are to be counted as lacking a truth value. It may be perfectly true to say that in Lewis Carroll's poem, toves gimble, even though the unadorned sentence 'Bob Hale gimbles' is incapable of truth or falsity. The view is familiar from Frege as a theory about the meanings of fictional proper names; and if it is plausible there, there seems to be no reason not to extend it to predicates as well.

If such a view is accepted, then a further response to Hale is open to the fictionalist: Hale asks after the modal status of the fictionalist's fiction. Since the orthodox fictionalist held that PW was false, it made sense to ask him whether this falsity is necessary or contingent. But if the fiction is PW* instead, then the challenge need not make sense. PW* involves a 'fictional predicate' – 'world-mate'. So it may be said to lack a truth-value, and if this is the case, the question of its modal status cannot arise. It's like asking whether toves gimble essentially or not. Within the context of the poem the

question may have some remote sort of sense; outside that context it makes no sense at all.

Hale notes correctly that fictional operators as I wish them to be understood are such that 'prefixing them to a statement does not have the *implication* that the embedded statement is ... insulated from evaluation as true or false' (my emphasis). It may nonetheless be the case that the embedded statement sometimes does lack a truth-value, even though the prefixed statement as a whole possesses one. And if this is the case for claims about the plurality of *worlds*, Hale's dilemma cannot get a grip.[6]

This modified fictionalism has the sole advantage that it respects our 'intuitions' about the modal status of claims about the nature and number of island universes. As a side-effect it may serve to neutralize Hale's challenge. But as the challenge does not strike me as particularly lethal in the first place, I do not reckon this a further advantage. What are the defects of the proposal? I will not venture to say. A proper answer depends on a more careful review of the purposes the fictionalist 'account' of modality is supposed to serve, an issue that has so far received insufficient attention.

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[8] Gideon Rosen, 'A problem for fictionalism about possible worlds', *Analysis* 53 (1993) 71–81.

[6] There is of course a question about the coherence of this stance. The fictionalist maintains that 'According to PW*, some world contains many worlds' is false. But this sentence is the translation according to his view, of the modal statement 'Possibly there are many worlds'. Given all this, how can he deny that the modal sentence has a truth-value? One response is to insist that a filter for such nonsense be inserted into the view. Given a modal sentence, say 'Possibly P', one must first check to see that the non-modal matrix 'P' makes sense – whether it is apt for truth and falsity; only then should one apply the fictionalist analysis to provide a more explicit account of its truth-conditions. Admittedly, more might be said about the rationale for such a move.