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How Broad Modal Fictionalism Can Survive Rosen's Challenge

Abstract

Gideon Rosen described the difficulties faced by those who claim that statements about possible worlds cannot be literally true. According to his argument, if the truth of modal sentences could be explained by referring to the hypothesis of the plurality of possible worlds, which is a sort of fiction for modal irrealists, the position would have antinomic consequence. I argue that the advocate of broad modal fictionalism can avoid such a devastating conclusion. To that end, her position should be given in meta-language describing the necessary and sufficient conditions of accepting modal sentences as true in terms of fiction of possible worlds. I show that there is a coherent way of reading 'it is accepted as true' that allows one to maintain that the disjunction of two mutually contradictory propositions can be accepted without accepting either of them.

Introduction

Do possible worlds exist? Those who answer affirmatively are modal realists; those who disagree can be called modal agnostics, sceptics or, in general, modal irrealists. The latter face the problem of how to understand modal statements such that a state of affairs is contingent, necessary, or possible. Modal realists are in a comfortable position for they can refer to possible worlds semantics to explain the truth of sentences of that sort; thus, they can adopt precise and extensional semantics for these kinds of claims. But this maneuver is not available for irrealists, as it would commit them to the existence of entities they reject. However, they can discard the assumption of the meaningfulness of modal discourse and yet propose an explanation of its apparent intelligibility by referring to possible worlds semantics and its ontology treated as merely a sort of fiction. Let us call those who see possible worlds theory as a kind of useful fiction *modal fictionalists* (MF). Is their position coherent and reasonable? In his paper, Gideon Rosen (1990) brilliantly described a serious challenge to such a stance. I will argue that Rosen's objections do not pose a serious obstacle that cannot be overcome by at least some modal fictionalists—there is a coherent and convincing way out of his trap.

Modal Fictionalism

According to Rosen, the modal fictionalist endorses the following biconditional (formulated in an object language, hence the prefix "o"):

(o-M)   M iff according to PW, M*,

where the variable M ranges over a set of modal statements (such as "It is possible that Berlin is the capital of Lithuania," or "It is necessary that if cows are mammals, then mammals are cows."): in general, simple or compound sentences, seemingly true or false, which contain, in one way or another, at least one modal expression (such as "it is possible that," "it is necessary that," etc.); M* ranges over their appropriate translations into the language of possible worlds semantics in line with the modal realist approach, that is, they explicitly refer to objects, real or abstract, or perhaps mental constructs that possible worlds are meant to be. The phrase "according to

the hypothesis of a plurality of worlds," "according to the hypothesis PW," or, alternatively, "according to possible-world fiction," is the operator used by the modal fictionalist to express and stress her distance towards the existence of possible worlds and an inventive way to avoid ontological commitment to them. MF can in that way exploit the benefits of the language of the possible worlds of Realists without ontological commitment to possible worlds other than the actual one. In other words, the equivalence (o-M) expresses how the modal sentences stated in an object language are to be comprehended in a language ontologically acceptable to the modal fictionalist, that is, in a way which enables her to explain certain modal facts without seriously or literally appealing to possible worlds and their ontology. The appropriate application of the phrase "according to (the fiction) PW" to a sentence referring to possible worlds results in a meta-fictional sentence—a statement that says something about a sentence that says something about how things are according to possible worlds theory, which is nothing more than a convenient fiction.

The biconditional (o-M) can be viewed as a consequence of two principles: one is endorsed by the modal realist, while the other is a general prescription proposed by MF as to how to interpret sentences about possible worlds (Rosen, 1990, p. 335). The first mentioned equivalence states

(MR)   M iff M*,

while the second states

(MF)   Interpret a sentence $\lceil M^* \rceil$ as: according to MR, M*.

The adoption of the method in (o-M) clearly shows that Rosen assumes that the modal fictionalist regards modal sentences (those over which the variable on the right-hand side of (o-M) ranges over) as meaningful and having exactly one of two logical values.

However, this is not an entirely legitimate assumption: modal fictionalism can also embrace a position that regards modal sentences as deprived of any truth value. A fictionalist of this kind assesses modal statements just as an irrealist with respect to literary discourse (hereinafter, a literary fictionalist) judges fictional sentences, that is, she rejects their being meaningful; perhaps Quine may be thought of as a prominent exponent of this stance (Føllesdal, 1968; Quine, 1947). Such a modal fictionalist will not only fail

to recognize modal claims (such as ⌜It is necessary that if P, then P⌝) as meaningful, but will also refrain from judging (MR) as such. However, a modal fictionalist of this type may accept modal discourse in the same way, and as much as literary fictionalists accept all sorts of interfictional statements about, say, Sherlock Holmes, not by evaluating them as meaningful and even true in appropriate circumstances, but as somehow comprehendible and important for some other reasons even if literally meaningless at the same time. Some may explain this phenomenon by pointing out that by uttering some fictional sentences, one can pragmatically implicate something true or false, thus giving an impression of making a true statement (Adams and Dietrich, 2004; Adams and Fuller, 2007; Puczyłowski, 2021), others may explain the apparent meaningfulness of simple fictional statements by insisting that their logical form contains the operator "in the fiction F," usually omitted in everyday usage (Currie, 1990). Similar strategies are viable for modal fictionalists.

Daniel Nolan (1997) calls modal fictionalism that denies simple modal sentences truth as *broad modal fictionalism*. Within this kind, two types can be distinguished further: one that assesses all simple modal claims as false, and one which denies such sentences any truth value. I will focus on the second one. Each variant of modal fictionalism meets problems of its own; however, as I will show, the second can avoid the conclusion which Rosen arrives at in his ingenious argument against fictionalism. Nevertheless, a modal fictionalist of the second kind faces a challenge specific to her approach: how to explain that some modal statements are accepted as true by modal realists or others that are not so scrupulous about philosophical subtleties. After all, they seem not only rational but also coherent and consequent in their judgements about modalities of various kinds, albeit they believe in creatures of fiction: possible worlds, necessity, possibility, and the like.

Literary Fictionalism

The observation that MF can go wild and radical is important for two main reasons. First, it will become apparent that Rosen's argument against such radical or broad fictionalism is not sound. Thus, it could encourage more moderate supporters of modal fictionalism to take up this more radical position.

Second, Rosen (1990, p. 331) explicitly invokes the position of fictionalism on the example of literary fiction but does not exploit the analogy between modal and literary fictionalisms to its full extent. According to some researchers, the sentence "Sherlock Holmes was a detective" is not true, although it clearly seems to be. How can a literary fictionalist explain this phenomenon? She may respond to the problem by arguing that the widespread acceptance of the truthfulness of "Sherlock Holmes was a detective" (at least among people familiar with Conan Doyle's prose) has its source in the fact that the sentence "According to Doyle, Sherlock Holmes was a detective" is true (at least in its *de dicto* reading). It should also be noted that, according to this kind of literary fictionalist, a simple sentence containing a fictional name is not false either—for instance, if it were false, the referent of the grammatical subject would not belong to the extension of the predicate "was a detective," which is not the case, since the subject has no referent. The literary fictionalist denies fictional sentences their truth value, although of course she is aware that it is her burden to explain their apparent truth or falsehood. This is the reason the literary fictionalist may propose the following

(m-L)   The sentence L' is accepted (as apparently true) iff the sentence $\lceil$ According to literary fiction F, L $\rceil$ is true,

where L ranges over sentences of literary fiction (i.e., containing fictional names or predicates), and L' is the name of the sentence that is represented by the variable L on the right-hand side of the equivalence. Alternatively, the principle of translating meaningless sentences into meaningful ones could be formulated as follows

The sentence L' is accepted iff according to literary fiction F, L.

However, let us remain with (m-L) as better reflecting the metalinguistic status of the principle adopted by the literary fictionalist.

Let us note and stress that she does not propose her principle in an object-language form

(o-L)   L iff According to literary fiction F, L,

nor does she use

L iff the sentence $\lceil$ According to literary fiction F, L $\rceil$ is true,

because on the left-hand side, after appropriate substitution for the variable L, we would have a sentence that the literary fictionalist does not consider meaningful. And, in consequence, since the left-hand of the equivalence would be nonsensical, (o-L) stated in an object language would be (in a Literary Fictionist's view) nonsense and hence unacceptable to her.

Rosen's Argument and the Modal Fictionalist

So let us return to the modal fictionalist and her (o-M), which is supposed, in Rosen's view, to express the position of fictionalism in a simple and understandable way. Even if it does, it does not capture these positions adequately. For a broad modal fictionalist, to continue the analogy begun by Rosen, considers modal sentences—taken in their most literal sense—as devoid of precise semantic meaning. Or, if not meaningless, then not precise enough to have a clear logical status. This is why she appeals to "fictions of possible worlds," because by referring to what they are according to the modal realist, she seeks a way to explain apparently widely accepted modal discourse. Such a fictionalist could not, of course, accept (o-M) as presented by Rosen. For she would recognize that its left-hand side may produce nonsense as a direct result of appropriate substitution for the variable. Hence, she should, like her counterpart on the question of the meaningfulness of literary fiction, give the principle for the reduction of modal claims an appropriate metalinguistic form

> (m-M)   A modal statement M' is accepted (as true) iff according to PW, M*

(M* is the translation of the modal statement M', which is formulated in terms of possible worlds semantics just as the modal realist would put it; M' is the name of the modal sentence whose translation is represented by M*).

Now, let us turn to Rosen's argument against fictionalism. In the main part of his argument, Rosen points out a difficulty for a modal fictionalist accepting (o-M). However, I will show that a fictionalist who prefers to express her position with (m-M) rather than (o-M) should not be troubled. Rosen constructs a modal sentence, let us represent it as Q, which

appears true or false; however, as he shows, this sentence is not decidable on the grounds of MR theory: it cannot be decided whether it is true or false according to this conception. Thus, we have the following situation

(1*) The sentence "According to PW, Q*" is false.

Or, in the object language

It is not the case that, according to PW, Q*.

In that case, applying (o-M), we obtain

(E) It is not true that Q.

Then, Rosen notes, at the same time we obtain (since Q* is not decidable) the following on the grounds of PW

(2*) The sentence "According to PW, it is not true that Q*" is false.

And then, by virtue of (o-M)

(2) It is not true that not-Q.

We obtain a contradiction between (1) and (2) (on the assumption that exactly one of the two, Q or not-Q, is true). Thus, in the end, one can conclude that the modal fictionalist's analysis of modal discourse captured in (o-M) is wrong and antinomial.

However, Rosen's proposed reduction of modal discourse into a language free of ontological commitment to possible worlds, as already pointed out, should rather take the metalinguistic form (m-M), not only to convey the position of broad fictionalism, not only for the sake of making the analogy with literary accurate, complete and not merely superficial, but also to convey the essential difference that (o-M) fails to capture. For it is useful to distinguish between two situations. The first indicates that according to some theory, conception, fiction or similar, call it X, it is not the case that P* (P* ranges over sentences of the language of the theory, conception, or fiction X). The second is when it is not the case that, according to X, P* (though it is also not necessarily the case that according to X it is not the case that P*).

The two situations are clearly different. It is not the same as saying

(E)   It is not the case that, according to X, P*

and

(B)   According to X, it is not the case that P*.

However, by applying a schema formulated in an object language to (A) and (B), one would arrive at the same conclusion

Not-P.

The equivalence given in an object language cannot yield the difference between (A) and (B), and that is another important reason why the object language formulation should be abandoned. The metalinguistic form, on the other hand, allows us to neatly differentiate between these situations. The first, (A), gives us the following

The sentence P is not accepted (as true),

the second (B) leads to

The sentence "not P" is accepted (as true),

So, if we adopt not (o-M) but its metalinguistic counterpart, (m-M), then, having (1*) and (2*), in consequence we get

(m-1)   The sentence Q is not accepted (as true);

(m-2)   The sentence "it is not true that Q" is not accepted (as true).

Now, note that sentences (m-1) and (m-2) are not contradictory. To see the difference between (A) and (B), the metalinguistic form is necessary.

Acceptance and Modal Statements

However, one can also legitimately ask about the meaning of the predicate "is accepted (as true)." Although this question confronts us with a difficult task, especially since the phrase seems to be modal in some sense, it is not

impossible to stipulate some principles that govern it. We are in a position to put forward a certain list of meaning postulates that intelligible usage of the phrase should satisfy (proposed perhaps for the first time by Marciszewski, 1972, 1973). Let AxP be an abbreviation for "The sentence P is accepted (as true) by x." We then have

(A1)   If AxP, then $\sim Ax\sim P$;

(A2)   If Ax (if P, Q), then if AxP, then AxQ;

(A3)   If P is a classical logic theorem, then AxP;[1]

(A4) $\sim \forall x \forall P$ (if AxP, then P is true);

(A5) $\sim \forall x \forall P$ (if $\sim AxP$, then $Ax\sim P$).

Arguably, the list is not exhaustive and could be refined further. For example, it seems possible and reasonable to augment it with, for example,

$\sim \forall x \forall P$ (if P is true, then AxP)

$\forall x \exists P \sim Ax(P \land \sim P)$

It is worth noting here that the notion of acceptance does not apply exclusively to sentences in the sense adopted in classical logic—one can accept (as true) sentences which are only apparently such, that is, which are declarative sentences but at the same time lack truth values. However, as indicated above, according to the proposed analysis of Rosen's case (and to Rosen himself), the modal fictionalist is forced to endorse

(m-3)   The sentence "Q or it is not the case that Q" is accepted (symbolically: $Ax(Q \lor \sim Q)$)

since according to PW, Q or it is not the case that Q.

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[1] Adopting (A3) results in a form of logical omniscience. Therefore, in a refined version of the "logic of acceptance," it should be restricted to basic theorems of classical logic. Here, "basic theorem" can be defined as, for example, "a theorem inferable from classical logic axioms in a few steps."

At the same time, by taking into account (m-M), (1*) and (2*), the following hold as well:

> (m-1) The sentence Q is not accepted (symbolically: $\sim AxQ$);

> (m-2) The sentence "it is not the case that Q" is not accepted (symbolically: $\sim Ax\sim Q$).

Therefore, one may legitimately ask if the conjunction of (m-1)-(m-3) is consistent with (A1)-(A5).

In general, and informally speaking, such a scenario is easy enough to imagine—I can accept (as true) that John is bigger than Mary or he is not without accepting either that he is bigger than her or that it is she who is not smaller than he is—but the point is that the Fictionalist can maintain, in general, that a sentence that appears to be an instantiation of the law of the excluded middle should be accepted even if neither of its subordinate clauses is. It should be accepted (as true), for according to PW and the semantics it imposes, the law of excluded middle holds there.

The fact that, for a given P and x, $\sim AxP$, $\sim Ax\sim P$ and $Ax(P \vee \sim P)$ are not collectively exclusive with the list introduced as (A1)-(A5) can be shown by indicating a model in which all of them are jointly satisfied. To provide such a model, let X be the deductively closed subset of the set S of sentences that an agent x accepts. Let us assume that a model m is a function that assigns T or F to an element of the set S that follows a truth schema; also,

> if and only if $P \in X$, then $m(AxP) = T$.

Now assume that the deductively closed set of sentences accepted by x is defined by the coherent set

> $\{P \vee \sim P, Q\}$.

Combining this assumption with any function m such as $m(Q) = F$ results in the model sought. Since

> $P \notin \{P \vee \sim P, Q\}$,

then it is not the case that AxP at m; it is not the case that $Ax\sim P$ either, for

> $\sim P \notin \{P \vee \sim P, Q\}$.

Since

$$Q \in \{P \vee \sim P, Q\},$$

then in *m* it is true that A*x*Q but Q is false in the model; therefore, (A4) holds. (A1)-(A3) are satisfied in *m*, for X is deductively closed. (A5) is true in *m*, because $\sim Ax$P and $\sim Ax\sim$P are clearly jointly true in model *m*.

One may note, however, that the clause on the left-hand side of (m-M) says categorically that a statement is accepted (as true). Thus, the phrase "is accepted" seems to be an absolute term here; however, the proposed meaning postulates are designed for the binary (or relative) term "is accepted by." Therefore, this analysis misses the mark unless something is done. Either on the left-hand side of the equivalence (m-M) there is a sort of noun ellipsis (that is, "by *x*" is elided), so the omitted phrase needs to be recovered in (m-M), or the logic for "is accepted (as true)" is the same as before, except for the variable "*x*." I suppose both solutions are viable, though the first seems more natural for a fictionalist distancing herself from possible-worlds parlance and trying to explain why her opponent, a Modal Realist, accepts modal discourse. To that end, she refers to the fiction the realist created, that is, possible worlds. Therefore, it seems quite straightforward for the fictionalist to adopt a more precise variant of (m-M):

> (m-M*)   A modal sentence M' is accepted (as true) by MR iff, according to PW, M*,

or, to be more precise,

> (m-M*)   A modal sentence M' is accepted (as true) by MR iff ⌜according to PW, M*⌝ is true.

Needless to say that "something is accepted (as true) by MR" means here that it is accepted by those who consider modal sentences meaningful and truth-evaluable.[2]

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[2] Here, 'MR' refers not only to modal realists but to a broader group whose members share an intuition that modal sentences are meaningful and true. For the sake of simplicity, let us assume that they agree on some modal claims as analytically true, such as, it is necessary that, if P, then P.

To illustrate the merits of (m-M*), let us assume that the phrase ⌜according to X, P⌝ means that sentence ⌜P'⌝ is a consequence of the sentences and inference rules adopted in X (where ⌜P'⌝ is a name for ⌜P⌝).

On such a reading, isn't the principle (m-M*) trivial? Certainly, its practical and ontological consequences are not. Note that, from the perspective of the broad modal fictionalist, it only needs to serve as an explanation for the indisputable fact that modal sentences are used in modal discourse without assuming the existence of possible worlds. And (m-M*) actually avoids an ontological commitment to the existence of possible worlds—at best, it only commits to the existence of a certain theory, PW, and certain sentences accepted on its grounds (which the fictionalist does not have to consider true or meaningful). In addition, adopting (m-M*) allows one to explain analytic relationships between modal sentences (e.g., that ⌜It is necessary that P and Q⌝ entails ⌜It is necessary that P⌝) without necessitating the existence of possible worlds.

Let us examine the following example to illustrate the advantages of (m-M*) from the broad fictionalism perspective. The following biconditional is a substitution of (m-M*):

> (E) ⌜Necessarily that if P and Q, then P⌝ is accepted (as true) by MR if and only if ⌜According to PW, in any possible world, if P and Q, then P⌝ is true.[3]

It is not a challenging task to validate that the sentence ⌜in any possible world, if P and Q, then P⌝ is derived from the axioms, definitions and rules of inference constitute PW-theory. Similarly, a broad modal fictionalist can explain why ⌜Necessary, P and not-P⌝ is not true (that is, not accepted as such). It only requires showing that ⌜According to PW, in all possible worlds, P and not-P⌝ is not true. And it is not true because ⌜In all possible worlds, P and not-P⌝ is not a consequence of PW-theory. Furthermore, she has all that is necessary to explain why proponents of MR who accept both ⌜It is necessary that if P, Q⌝ and ⌜It is possible that P⌝ are to accept ⌜It is possible that Q⌝; all without endorsing the existence of possible worlds.

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[3] To be precise, the right-side of (E) should be the following: ⌜According to PW, in any possible world w, "if P, P" is true at w⌝ is true. However, for the sake of clarity and simplicity, (E) is given in a simplified version.

Note that the right-hand side (E) does not imply the existence of any possible world. Thus, it maintains an ontologically neutral position concerning the existence of such abstract objects. A broad modal fictionalist can effectively communicate in object modal language with those who find modal discourse meaningful by interpreting their statements, like ⌈It is necessary that if P, P⌉, as a convenient shorthand for their metalinguistic counterparts, "⌈It is necessary that if P, P⌉ is accepted by MR." Then, by employing (m-M*) and utilizing her knowledge of PW-theory, the fictionalist can draw similar conclusions from such a statement as modal realists would. Notably, however, this approach eliminates the necessity of committing to the ontology of possible worlds and simultaneously allows to refrain from taking modal discourse semantically meaningful.

Similarly, a literary fictionalist might argue that the sentence "Sherlock Holmes was a detective" is true based on Conan Doyle's stories. She could reach this conclusion if the sentence can be derived from the sentences comprising those stories, along with possibly some other sentences and rules of inference accepted by those familiar with those literary works. Consequently, she avoids endorsing the statement "There exists such an x, x = Sherlock Holmes" as true and thus refrains from committing to the existence of Sherlock Holmes. She only acts as if she is referring to a fictional character when she accepts fictional sentences such as "Sherlock Holmes was a detective."

Finally, it should be noted that (m-M*) can be employed even by the modal fictionalist who endorses modal discourse as meaningful. It may not express her position narrowly enough to differentiate her from a broad modal fictionalist, but accepting (m-M*) has evident advantages. It seems more precise and yet general, that is, it better expresses the point of the modal fictionalist; moreover, and finally, it is more cautious and avoids Rosen's critique.

Conclusion

To sum up, Rosen's argument does not hold for a modal fictionalist who does not find modal discourse meaningful. And what is more, she can provide an intelligible answer to the question of why some modal sentences are apparently acceptable/accepted; her explanation appeals to the relevant paraphrase

captured in (m-M*). This means that she can follow the steps of her counterpart in the problem of the logical status of fictional discourse—one who rejects fictional sentences as truth evaluable and puts forward an explanation as per why some of them are widely accepted by postulating some principles of translation into a semantically intelligible language.

By adopting the specific metalinguistic paraphrase presented in (m-M*) for statements belonging to modal discourse, it is not necessary to abandon the principle of bivalence, which, as Rosen suggests, would be a possible yet costly response for the modal fictionalist to the objection in question. Thus, fictionalism should be expressed in meta-language and appeal to the notion of acceptance rather than to the truth of modal claims in order to avoid the challenges Rosen has brilliantly depicted. Of course, while it is possible for MF to avoid the conclusion of Rosen's argument, they still have to offer an explanation of what "according to PW," or more precisely "according to," means in terms free of commitment to possible worlds. Even if it is difficult to come across a full-blooded and overt advocate of broad fictionalism these days (Nolan, 2020), the above discussion may embolden some to come out of the philosophical closet, since this cautious position enjoys important advantages over that of its narrower version.

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