Review: [Untitled]

Reviewed Work(s):

*Worlds, Times and Selves.* by A. N. Prior; Kit Fine
Peter van Inwagen


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At the time of his death in 1969, A. N. Prior was working on a book about the ontological underpinnings of modal and tense logic, and about the formal analogies that these two logics bear to each other and to egocentric logic. This book was to have been called Worlds, Times and Selves. Professor Fine, who is both the editor and a co-author of the book under review, describes the editorial component of his work as follows:

Unfortunately, only the first chapter [of the book Prior was writing] was completed. There were jottings for other chapters, but they were far from complete. However, it is clear that some of Prior's recently published papers would have been incorporated into the book, though probably in considerably modified form. So what I have tried to do is to collate the published and unpublished material in such a way that the result is as close as possible to the book he had in mind. (p. 7)

Prior's completed chapter, "The Parallel between Modal Logic and Quantification Theory," is the first chapter of Fine's collation. The remainder of the collation comprises Prior's previously published papers, "Worlds, Times and Selves," "Tensed Propositions as Predicates," "Egocentric Logic," and "Modal Logic and the Logic of Applicability." To the last two of these chapters, Fine has added supplements drawn from Prior's "jottings for other chapters."

Fine's collation inevitably falls far short of achieving the unity of a finished book by Arthur Prior. Fine attempts to remedy this by adding a "Postscript" of his own, a long (something over 15,000 words, that is, more than a quarter of the book) essay entitled "Prior on the Construction of Possible Worlds and Instants," to which is appended a highly technical "Technical Appendix," intended to provide certain of the procedures employed in the Postscript with a "firm technical footing."

In this study, I shall discuss only Fine's Postscript. The part of the book written by Prior is largely previously published, and, in any case, everything in Prior's essays about which I have anything to say also occurs in the Postscript. The Technical Appendix is beyond my competence to review critically; moreover, insofar as I can judge, everything in it that is of metaphysical interest can be found in the Postscript.

"Fundamental to Prior's conception of modality," Fine tells us, "were the following two theses:

The ordinary modal idioms (necessarily, possibly) are primitive; Only actual objects exist." (p. 116)
(Fine also mentions tense-logical analogues of these theses and discusses them briefly [pp. 153-161]. I shall discuss only his treatment of the modal theses.) Fine calls the first of these theses Modalism (or Priority) and the second Actualism. Their conjunction he calls Modal Actualism.

Fine does not discuss the meaning of Modalism or Actualism. I wish he had. I should like to know, for example, what “ordinary” means. Quantification over mere possibilities, or possible cases, or ways things could happen (e.g., ‘There are seven possible ways for a planet to acquire a massive satellite, only two of which have actually been known to occur’) seems to be a modal idiom and to be “ordinary” enough. I should also like to know what “actual” means. Consider, for example, states of affairs. The state of affairs, there being over four hundred kangaroos in Boston is in one sense not actual: it doesn’t obtain. But it is unlike the state of affairs involving kangaroos that Quine mentions on page one of *Word and Object*, which is in another sense not actual: it doesn’t exist. Now I think there are states of affairs that do not obtain, but none that do not exist. Am I an Actualist (as regards states of affairs)? I wish Fine had said something that would help me to decide this.

Fine’s purpose is not to argue for Modal Actualism (whatever, precisely, that thesis may be). He is concerned rather with the problem of how typical “possibilist” discourse should be understood from the point of view of the Modal Actualist. “Typical possibilist discourse” is the sort of discourse that typically serves as a metalanguage in contemporary investigations of quantified modal logic, though, of course, that is not the only use to which such language can be put. Consider as an example of possibilist discourse (this example is not Fine’s; he is very sparing with examples) the following sentence

\[(M) \forall x \forall y \forall w (x \text{ is a Martian at } w \land y \text{ is a Venerian at } w \rightarrow \neg x \text{ is a cousin of } y \text{ at } w).\]

(In this sentence and in the sequel, bold-face variables range over “possible individuals,” and ‘w’ ranges over “possible worlds.”) We might read (M) as saying that no possible Martian could possibly have been a cousin of any possible Venerian, though this reading is not wholly satisfactory, since our use of, e.g., ‘no possible Martian’ tends to obscure the fact that a given possible individual may be a Martian at some possible worlds and a non-Martian at others.

So here we have a piece of possibilist discourse. What is the Actualist to make of it? He may say that all or almost all such talk is nonsense. Fine, however, is not willing to take this Draconian line. Instead, he attempts to show how possibilist discourse can be translated into terms acceptable to the Modal Actualist.

Fine offers four ways of translating possibilist into Actualist discourse, two “intensional” and two “extensional.” I shall discuss only his “intensional” translations. His first “intensional” translation is “syntactically conservative,” in that translations of this type have essentially the same logical structures as their possibilist originals. We proceed by defining world-propositions and individual essences. A world-proposition is a possibly true proposition such that, for every proposition \( p \), it either entails (strictly implies) \( p \) or else entails the denial of \( p \). The individual essence of an object is the property of being that object; an individual essence is a (perhaps unin-
stantiated) property that is possibly the individual essence of something. (These are not quite Fine's definitions, which are rather more elaborate. But given the principles of individuation he accepts—propositions are inden-
tical if necessarily equivalent in truth-value; properties are identical if neces-
sarily coextensive—they pick out the same objects.) Essences are, of course, intimately connected with individuals. Moreover, world-propositions are intimately connected with worlds: if there are possible worlds, then, for every world the proposition that that world is actual is a world-proposition, for worlds are correlated one-one with maximally consistent sets of propositions—the set of propositions true at a given world is maximally consistent—and so are world-propositions, since the set of all propositions entailed by a given world-proposition is maximally consistent.

There is no reason an Actualist, qua Actualist, cannot accept the existence of false world-propositions and uninstantiated essences. (Of course, an Actualist may also be a nominalist, or may have some difficulty with the ideas even of instantiated essences or true world-propositions.) If the Ac-
tualist does accept world-propositions and essences, and moreover believes that each of them exists necessarily (if he is willing to say that no matter how things might be, there would be just the same world-propositions and just the same essences, if he is willing to say that any rearrangement, augmentation, or diminution of the furniture of the world could affect only the truth-values of world-propositions and the "instantiation-values" of essences), then it is a fairly easy matter to translate possibilist discourse into terms acceptable to him. Here, for example, is an Actualist translation of (M):

(M1) \( \forall x \forall y \forall p (\text{necessarily, if } p \text{ is true then } x \text{ is had by a Martian } \& \text{necessarily, if } p \text{ is true then } y \text{ is had by a Venerian. } \rightarrow \neg \text{necessarly, if } p \text{ is true then what has } x \text{ is a cousin of what has } y) \). (M1)

(The variables 'x' and 'y' range over essences and 'p' ranges over world-
propositions.) Two comments on this translation are in order.

First, I employ "first-order" quantification, whereas Fine actually uses quantifiers that bind variables that occupy non-nominal positions. He says

In [the first intensional translation] there is apparently a gain in ontological simplicity. For the possible worlds and individuals are eliminated in favour of propositions and properties. But there is also a loss in logical simplicity. For the quantifiers over propositions and properties are both second-order and intensional. (p. 128)

This is true, but I don't see why Fine employs the sort of quantifiers he does. Why not avoid the intensionality problem by using first-order quantification supplemented by the introduction of the constants 'is had by' and 'is true'? Fine doesn't appear to believe (what is surely only so much whistle-talk) that one can avoid "ontological commitment" to propositions and properties by employing second-order quantification. And even if he does believe this, it seems clear that he also believes that there are such things as propositions and properties, so it's hard to see why he should want to avoid writing sentences that carry ontological commitment to them. Perhaps I should be able to resolve these puzzles if I understood better what Fine's occasional
references to propositions and properties as "intensional entities" meant. (I understand what intensional contexts and intensional logics are, but not what intensional entities are.) Perhaps intensional entities are entities that could serve as the intensions of something; if so, all intensional entities are also in an obvious sense extensional entities, since (as Fine observes on page 135) the proposition that Socrates is a philosopher is the extension of 'the proposition that Socrates is a philosopher'.

Second, (M1) does not have quite the same syntax that Fine's method of translation would yield, even leaving aside questions about higher-order quantification. I have made (M1) look as syntactically similar to (M) as is possible in order to emphasize the possibilities for "syntactical conservatism" afforded by the proposition-essence approach to the problem of Actualist translation of Possibilist language. But Possibilist-Actualist translations in the style of (M1) will "work" only for Possibilist sentences that contain only predicates that are satisfied by a pair of objects at a world only if those objects exist at that world. (In giving (M1) as a translation of (M), I am assuming that a pair of objects can be cousins at a world only if they both exist at that world. I suppose there are philosophers who would deny this.) Fine's first "intensional" translation, which would yield a translation for (M) that is more complex than (M1), is designed to transcend this limitation.

It is interesting to note that the language in which (M1) is stated is remarkably like the language Plantinga uses in The Nature of Necessity. Plantinga, it is true, talks of "possible worlds," but his possible worlds are very like Fine's world-propositions; for Plantinga, a non-actual world is a state of affairs that exists but does not obtain, and a state of affairs that exists but does not obtain is very like a proposition that exists but isn't true. (If Chisholm is right and propositions are certain states of affairs, then Plantinga's language and the language of (M1) are virtually identical.) Plantinga's definition of 'possible world' is structurally similar to Fine's definition of 'world-proposition', and his definition of 'essence' is equivalent to Fine's. Plantinga thinks that any given object may have many numerically distinct essences, but his divergence from Fine on this matter is due not to their giving different definitions of 'essence', but to their accepting different principles of individuation for properties. (Fine, I think, would agree with this assessment, since, in his review of The Nature of Necessity, he describes Plantinga as an Actualist.)

Having described this method of translating possibilist sentences into Actualist sentences, Fine immediately rejects it. His reason is extremely interesting. The proposition-essence method, as we remarked earlier, presupposes the necessary existence of essences and world-propositions. This is because, in standard Possibilist discourse, the domain of individuals and worlds does not change from world to world. Thus, if the behavior of world-propositions and individual essences is to mirror the behavior of possible worlds and possible individuals, the domain of world-propositions and essences must be constant. That is, there must be a set (or, perhaps, a proper class) of world-propositions $W$ and a set (or proper class) of essences $E$ such that every world-proposition entails both the proposition that $W$ is the set of all world-propositions and the proposition that $E$ is the set of all essences. Fine rejects the proposition-essence method of translation because he is inclined to think that the property of being a given object exists only if that object exists. And from this it follows—given that there are contingently
existing objects—that essences do not, in general, exist necessarily. It also follows that there are no unexemplified essences. (These assertions must be qualified. Fine does think there are certain unexemplified essences; there is for example the property being an axe made by joining that blade and that handle, where the ostensively indicated blade and handle are never in fact joined. But such unexemplified essences as this will not save the proposition-essence method, since their existence is—on Fine’s view—contingent on the existence of contingent objects.)

Now if some essences are contingent objects, so are some world-propositions. Consider, for example, the true world-proposition. Let us give it the proper name ‘P’. We cannot consistently say that the essence of (say) Socrates fails to exist and that P exists. For suppose P does exist. Let S be some “purely general” or “qualitative” property that, in actuality, belongs only to Socrates. “Purely general” properties, Fine thinks, exist necessarily. Therefore, given our supposition that P exists, the property being an x such that, necessarily, if P is true, then x has S exists. And this property is just the essence of Socrates. Thus, if Fine is right, world-propositions and essences do not exist necessarily, and the proposition-essence method of translation (his first “intensional” translation) must be rejected.

I shall return to the question whether world-propositions and essences exist necessarily and to the question whether there are uninstantiated essences. In the meantime, let us look at Fine’s second “intensional” method of translating possibilist into actualist discourse. This second method of translation does not assume that propositions or properties exist necessarily. Unlike its predecessor, it is syntactically radical: it does not preserve anything like the logical form of the possibilist sentences to which it applies. The translation proceeds as follows. (I shall follow Fine in neglecting niceties of use and mention.) The general problem of translation is that of transforming a sentence of the form

$$\phi Rxyw$$

(where R is an appropriate three-place “possibilist” predicate—the extension of the present method to n-adic predicates, n ≠ 3, is trivial—and φ is a string of quantifier-phrases), into a sentence acceptable to the Actualist.

I shall examine only the special case in which R is a rigid condition on possible individuals and possible worlds. A rigid condition is one satisfied by the same (sequences of) individuals and worlds at all worlds. A typical rigid condition is ‘X is a teacher of y at w’; a non-rigid condition would be, say, ‘w is actual and X is a teacher of y at w’. Loosely speaking, a condition of the form ‘Rxyw’ will be rigid if its instances tell how certain individuals are related to each other at a certain world without telling us whether those individuals and that world are actual. The translation proceeds as follows:

$$\Box(p \rightarrow Rxy)$$ translates $$Rxyw$$

$$\Box\forall x$$ translates $$\forall x$$

$$\Box\forall p$$ translates $$\forall w$$

Here ‘p’ ranges over world-propositions (the definition of ‘world-proposition’ has been modified to allow for a subtle difficulty that arises from the fact that we are no longer allowed to assume that propositions exist necessarily; this subtlety need not detain us) and ‘Rxy’ is the result of
applying an obvious operation to ‘Rxyw’: the operation that, e.g., when applied to ‘X teaches Y at w’, yields ‘x teaches y’. If we apply this method of translation to sentence (M), we obtain:

(M2) \[ \Box x \forall y \forall p [ \Box (p \rightarrow (x \text{ is a Martian } \& y \text{ is a Venerian. } \rightarrow \neg x \text{ is a cousin of } y))] \]

I have no objection to Fine's second intensional translation, except perhaps that it yields results that are rather hard to get an intuitive grip on. (There is one thing I find puzzling. Fine tells us [p. 135], that in setting forth the second intensional translation he will employ only first-order quantification over propositions. But his translation-scheme requires the variable ‘p’ to appear in sentential positions.) But I should like to put in a good word for his first intensional translation, the Plantinga-style translation that depends on the necessary existence of essences and world-propositions.

Why should anyone deny that essences and world-propositions (or, in general, all properties and propositions) exist necessarily? Fine points out, correctly, that one cannot claim that propositions and properties exist necessarily simply because they are abstract objects, for the set whose sole member is Socrates is an abstract object whose existence is contingent. But I should have thought that this was just what marked the distinction between the ontological status of sets and properties. A set's existence is contingent upon the existence of its members, while a property (I should have thought) exists at all possible worlds, typically having at some worlds non-empty sets and at some worlds the empty set as its extension. The essence of Socrates, I should have thought, is just that property (assuming with Fine that properties are identical if necessarily coextensive) that has \{Socrates\} as its extension if that set exists and the empty set otherwise. (Fine concedes necessary existence to the empty set and all other "pure" sets.)

I can find no very persuasive argument in Fine's essay for the merely contingent existence of essences and other non-general properties. (As I remarked earlier, Fine thinks that properties that are "purely general," like pure sets, enjoy necessary existence.) On the other hand, I do not see that this thesis has any demonstrably impossible consequences. It does, however, have certain paradoxical consequences. One of them, which Fine notes, is this:

The proposition that Socrates does not exist is true if and only if Socrates does not exist

is a merely contingent truth. For at worlds at which Socrates does not exist, the right-hand constituent of this biconditional is true; but, at at least some of these worlds, its left-hand constituent is false, since at those worlds the proposition that Socrates does not exist does not exist and hence is not true. (This argument depends upon our adopting the "falsehood convention," according to which an atomic sentence is assigned falsehood at a world if it contains a term that denotes nothing that exists at that world. Thus the atomic sentence ‘Socrates exists’ is false at worlds at which Socrates does not exist—as in ‘Socrates has non-existence’—while ‘It is not the case that Socrates exists’ and ‘It is not the case that Socrates has non-existence’ are true at such worlds. Fine also investigates the consequences of assigning no truth-
value to a sentence at worlds at which some term in that sentence fails to denote. This is the "gap convention." Fine prefers the falsehood convention; Prior preferred the gap convention, which he embodied in his modal system Q.) A second paradox, which Fine does not mention, is this:

(P) The possibility that Socrates exist exists if and only if it is possible that Socrates exist

is a merely contingent truth. Fine, in fact, does not talk about possibilities, as a class of entities, at all. But surely such entities are no more (and no less) dubious than propositions or properties: names for and (apparent) quantification over possibilities are as securely rooted in ordinary language as are names for and (apparent) quantification over propositions and properties, and a rigorous formal theory of possibilities would be no harder, and no easier, to construct than a rigorous formal theory of propositions and properties.

Now it seems highly counterintuitive to think of (P) as a contingent truth. But I think that Fine is committed to its being such. First, he thinks that the truth of 'Socrates exists' at the actual world is sufficient for the truth of 'it is possible that Socrates exist' at all worlds. Second, it must be admitted that the possibility that Socrates exist and the proposition that Socrates exists exist at just the same worlds. This may be shown as follows. Consider the proposition that the possibility that Socrates exist is realized. This proposition exists, by Fine's standards, if and only if what it is about—i.e., the possibility that Socrates exist—exists. But, at least given the principle for the identity of propositions that Fine accepts, the proposition that Socrates exists and the proposition that the possibility that Socrates exist is realized are one and the same proposition. Therefore, since on Fine's view the proposition that Socrates exists fails to exist at certain worlds (just those worlds at which Socrates' essence fails to exist, for the proposition that Socrates exists is the proposition that Socrates' essence is instantiated), the possibility that Socrates exist fails to exist at certain worlds, including some worlds at which it is possible that Socrates exist.

Well, what's wrong with this consequence? Perhaps nothing is wrong with it; at least, I doubt whether it can be shown to entail a formal contradiction or to be incompatible with some proposition that is generally agreed to be a known truth. But it seems implausible to me. I should think that if we can say truly of a certain world that it's possible at that world that Socrates exist (which should not, by the way, be confused with the very different proposition that it's possible that Socrates exist at that world), then we can say truly that there exists at that world the possibility that Socrates exist. I admit I have no argument for this. But then I am not so much trying to refute Fine's view of propositions and properties as to bring out the appeal of the alternative view.

A footnote to this discussion: it should be obvious that the essence of Socrates exists at just those worlds at which there exists the possibility that Socrates exist, since Socrates' essence is identical with the property being a concrete thing that exists at just those worlds at which the possibility that Socrates exist is realized, and this property and the possibility that Socrates exist exist at the same worlds.
I will finally give a brief argument for the conclusion that there actually exist unexemplified essences. In order to avoid irrelevant problems about counting "things," let us suppose that the actual world is composed of a finite number of Democritean atoms, each one incapable of undergoing generation or corruption and essentially without parts. We assume things essentially without parts in order to avoid the possibility of availing ourselves of the essence-describing device used in the axe-and-handle example. Call the (finite) number of atoms 'N'. Surely there might have existed all the atoms there actually are and one more besides. There is no magic necessity about N. Thus there are possible worlds at which there are N + 1 atoms and which are such that every atom that exists at α (let us use 'α' as a proper name for—a rigid designator of—the world that is, as a matter of contingent fact, actual) exists at these worlds. Call such worlds α-augmented. Then

\[ \forall x (x \text{ is an } \alpha\text{-augmented world } \rightarrow \exists y (y \text{ is the property of being a concrete thing that exists at } x \text{ and not at } \alpha) ) \]

And, of course,

\[ \forall x \forall y (x \text{ is an } \alpha\text{-augmented world } \& y \text{ is the property of being a concrete thing that exists at } x \text{ but not at } \alpha, \rightarrow y \text{ is an individual essence that is unexemplified at } \alpha) \]

Therefore, since there are α-augmented worlds, there are uninstantiated individual essences. If I had a name for some α-augmented world, I should have a name for an uninstantiated individual essence: if I were able to refer to some particular α-augmented world as 'Alice', I should be able to refer to a particular uninstantiated essence as 'the property of being a concrete thing that exists at Alice but not at α'. But, unfortunately, I can't refer to any non-actual world: they're all too complicated (being, as they are, worlds); any predicate anyone could construct that was satisfied only by non-actual worlds would be satisfied by many of them. But this fact would vitiate the above argument only on some crippling view of quantification—say, the "substitutional" view. If there were anything wrong with, e.g., the first of the sentences displayed above on that account, this defect would be shared by such sentences as

\[ \forall x (x \text{ is a well-ordering relation on the real numbers } \rightarrow \exists y (y \text{ is the set of all finite initial segments of } x) ) \]

After all, I can't refer to any particular one of the well-ordering relations on the real numbers; like non-actual worlds, they're too vast and complicated.

This, of course, is only an argument, and one or more of its premises could be rejected without formal contradiction. So I don't claim to have proved the existence of uninstantiated essences. Nevertheless, I think it is a plausible argument, and that it and the proceeding argument about possibilities lend aid and comfort to anyone attracted to Fine's first "intensional" translation.

There is a good deal in Fine's essay that I have not even mentioned. Though it is fairly short, it is so rich that no reviewer could do it justice. It is a first-rate piece of thinking about the philosophy of modal logic, one that
everyone interested in this subject—and that category ought to include everyone interested in metaphysics—must read. I very much hope that Fine will write a full-length book on Modal Actualism, a book in which the pace is more leisurely and the illustrative examples far more numerous.7

NOTE ADDED IN PROOF: An extremely important article on the question whether essences exist necessarily has recently appeared. See Alvin Plantigna's "De Essentia," Grazier Philosophische Studien 7/8(1979):101-121.

NOTES

1Amherst: The University of Massachusetts Press, 1977.
5Perhaps the sentential position of 'p' is just an oversight. In the Formal Appendix [p. 167], 'p'—Fine actually uses rho—appears at the corresponding point in the translation in nominal position, following a truth-predicate.
6A possible but irrelevant exception: for all I know, there is exactly one world at which there are no contingent objects.
7I should like to thank Kit Fine for his extensive and helpful comments on a draft of this study, which have saved me from several blunders. It is only fair to add that he finds most of my arguments unconvincing.


HUBERT L. DREYFUS
UNIVERSITY OF CALIFORNIA AT BERKELEY

It often takes several generations—sometimes even centuries—of exposition before an original philosopher is sufficiently understood for the work of appraisal to begin. Thus we have barely begun to put Frege, Wittgenstein, Merleau-Ponty and Heidegger into proper perspective for evaluation. Husserl scholarship, however, has been in a much more backward state. Already during Husserl's lifetime students and followers were tirelessly producing books, articles and anthologies approving and rejecting every aspect of his philosophy, as if the job of appropriating his central insights and taking over his technical vocabulary had already been accomplished. Husserl, however, felt that none of his students, from the most loyal1 to the most subversive2 had understood him, and, although the misunderstandings are largely his fault, Husserl was regrettably right. Until very recently no Husserl exegete had grasped the nature and significance of what Husserl considered his