Responses

Robert Stalnaker

I am grateful to Jeff King, Michael Nelson and Bill Lycan for their rich and stimulating discussions of the papers in my book, and to the editor, Tom Blackson, for arranging this symposium. Let me see if I can respond to some of their challenges.

To Jeffery King

Jeff King starts his paper by saying that he will resist the temptation to defend structured propositions against my coarse-grained conception of a proposition as a set of possible worlds, but as we will see, the main point that he makes turns on a closely related issue. His central argument is that my actualist account of possible worlds, which categorizes them as a kind of property, commits me to accepting impossible worlds, since there are things of the same kind (properties that might be ascribed to the whole universe) that no such universe could possibly exemplify. But if possible worlds are world-properties that might be exemplified, then I can have no good reason for withholding the label ''impossible world'' from the world-properties that could not be exemplified. His challenge to me is to explain why I follow the modal realist in rejecting impossible worlds. It is a good question, and my answer requires saying a little more about what I take properties to be, and what I take the significance to be of categorizing possible worlds as a kind of property.

On my way of understanding it, the possible worlds framework provides no kind of reduction of modal notions to notions of another kind, and the categorization of possible worlds as properties provides no kind of nonmodal explanation of what possible worlds are. I take the notion of a property to be itself a modal notion: one understands a property in terms of the way things would have to be for it to be exemplified or instantiated. The categorization of possible worlds (or world-states)

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as properties depends on just two minimal assumptions about the kind of thing that a property is. First, properties are things that are (or can be) exemplified, so they are the kind of thing for which there is a distinction to be made between existing and being exemplified. Anyone who talks about possible worlds needs to distinguish a sense in which it is being claimed that there are many possible worlds and the sense in which there is only one. The Lewisian modal realist says that the distinction is to be made in terms of the range of a potentially restricted quantifier. For Lewis, merely possible worlds are like the beer that exists in the store when, because we have run out at home, it is true to say that there is no beer. But for the actualist, there is only one concrete world, which includes everything that even an unrestricted quantifier can range over. For the actualist, the distinction is between a collection of properties and their exemplifications: there are many possible worlds in the sense that there are many such properties, but only one world that exemplifies one of these properties, and so only one of the properties that is exemplified.

The second point of categorizing possible states of the world as properties is to say that they are not representations, and so not linguistic or mental entities that depend for their existence on human activities or capacities. Since I have not always been consistent on this point, let me here emphatically retract a careless remark made in my early paper on possible worlds that King quotes and puzzles over: that the existence of possible worlds is ''abstracted from the activities of rational agents'', and that ''their existence is in some sense dependent on ... those activities.'' I do think that some abstract objects, including some properties, propositions and possible worlds, exist only contingently, but I think it is wrong that they depend for their existence on the kind of rational activities that we use them to help explain. Furthermore, I would not even want to say that the fact that rational agents engage in the activities they engage in provides ''a way for us to tell that there are possible worlds, and what worlds there are.'' While I think referring to possible worlds helps us to describe and explain rational activities and intentional states at an appropriate level of abstraction, it does not seem right to say that the activities and states provide *evidence* for the existence of the possibilities.

So if possible worlds are properties, why do I resist a commitment to impossible worlds—properties that no total universe could have? The issue here is elusive, since it is not in dispute that there are properties that no universe could have (such as the property of both containing and not containing a philosophizing cat). I have *categorized* possible world-states as a kind of property for the reasons sketched above, but that was not intended as anything close to a complete account of what a possible world, or state of the world, is. Is the issue then just terminological—whether the properties that no universe could have deserve the name, ''impossible world''? I think there is more to it than this, but to bring the issue out, I need to sketch the general picture of the possible worlds representation of content, and that will take us back to the issue that King avoided the temptation to discuss.[1]

We can all agree that propositions have truth conditions, that their truth conditions are essential to them, and that it is a primary function of the expression of propositions to distinguish the possible circumstances that satisfy the truth conditions from those that do not. A representation of a space of possible worlds is just a framework for representing truth conditions—the conditions that would have to be

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[1] Cf the sketch of these ideas by the character Louis in my dialogue on impossibilities, WWBB, pp. 63ff. He puts the point more clearly than I could.

realized for something that expresses a proposition to be true. The coarsegrained conception of a proposition *identifies* a proposition with its truth conditions; whether one buys the idea that this is all there is to a proposition, one should agree (if one is willing to talk of propositions at all) that this kind of abstract object captures one essential and important feature of propositional content.

A framework for the representation of truth conditions takes as its fundamental primitive notion a logical space of possibilities. The possible worlds are the points of the space.[2]

A proposition is metaphysically possibly true, on this account, just in case there are some conditions—some nonempty region of logical space—in which its truth conditions are satisfied. There may be cases where it is uncertain or controversial whether a statement is possibly true; these will be cases in which it is uncertain or controversial whether or not there are any circumstances at all that would satisfy the truth conditions.

On a contrasting picture that allows for metaphysically impossible worlds, the state space consists of an inner region (the metaphysically possible worlds) and an outer region (the impossible worlds). On this picture, a statement that is metaphysically impossible is not one that is true under no conditions, but rather one for which we can envision circumstances that would render it true, but they are circumstances that fail to meet some substantive metaphysical condition. I think this is the wrong picture. It is clearly right that one can be under the illusion that one has envisioned circumstances that would render a certain statement true. But the illusion is not that the circumstances one has envisioned fall on the wrong side of some mysterious line; the illusion is that one has succeeded in envisioning circumstances at all. One dispels the illusion either by showing that there is some hidden contradiction in the description of the alleged circumstances, or that the possible circumstances one has envisioned do not, on closer consideration, render the statement in question true after all.

The impossible worlds picture (with an inner and an outer domain of world-states) is perfectly appropriate for many notions of possibility, which are interpreted by a restricted quantifier over possible worlds governed by an accessibility relation on the whole domain of possible worlds. If what is possible is what is compatible with someone's capacities, knowledge or moral obligations, or with the laws of nature, then there are things that are in a sense impossible, even though they are, in another sense coherent possibilities. But there will remain a notion of possibility in the widest sense, and that is what I take metaphysical possibility to be. Whether one agrees with this or not, one should grant that at least some metaphysical impossibilities, including some for which it is uncertain or controversial whether they are impossibilities, will come by their impossibility by being true in no part of logical space at all. And one who thinks that metaphysical possibility is some kind of restricted possibility is obliged to explain the basis for the restriction. (Claims by me and my character Louis not to understand what it is for a world to be metaphysically impossible, cited by King, are based on our not knowing what the basis is for the restriction).

Of course the way we represent some allegedly possible circumstances—the way we represent a region of logical space—will normally be by using language with a

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[2] I would actually prefer to think of the ''worlds'', not as points but as partition cells of some suitably fine-grained partition of logical space, where ''suitably fine-grained'' means that makes all the distinctions between the possibilities that are relevant to the purposes at hand.

compositional structure, but the structure is located in the means used to represent the possible circumstances, and not in the possible circumstances (the world-states) themselves. So in categorizing possible world-states as properties, I am presupposing a coarse-grained conception of property that parallels the coarsegrained conception of proposition. We locate the compositional structure of a complex predicate in the means used to represent the property, and not in the property itself. It is clear that King is thinking of properties in a way that parallels his structured conception of a proposition: he describes the world-properties as big and complex, and as resulting from modes of combination such as conjunction and disjunction. They have other properties as parts, both other properties of a world a whole, and properties that things in the world would have. It is obviously right that one can determine properties as a function of other properties, and that such functions might in some cases yield a property that could apply to nothing. On a coarse-grained conception of property, where properties are individuated by what they might apply to, there will be a world-property that can apply to nothing, but there will be only one of them. I don't mind if one calls this the impossible world, so long as it is clear that it is not a point in logical space, but an empty set of points, but I don't think this will be what King has in mind.[3]

Let me conclude with a concessive remark. I am happy, at a shallow level of analysis, to apply the possible worlds framework to a description of an inquiry or a conversation in which it is an open question whether some regions of logical space that we have identified and distinguished, using our linguistic resources, are empty or not. The regions, which may be empty for all we know, are naturally described as alternative possibilities. A simple example: a brute force inquiry into whether the number 1471 is prime or not might begin by distinguishing the possibility that it is prime, from the possibility that it is composite, and then dividing the latter part of the space into the possibilities that its smallest prime factor is 3, that it is 5, etc. up to 37. We then proceed, by elementary calculation, to eliminate the possibilities, one by one, until only one remains. There are relevant similarities between the elimination of possibilities in empirical and deductive inquiry, but it is also important to distinguish the task of showing that the actual world is not in some nonempty part of logical space from the task of showing that some way of characterizing a part of that space fails to include any possibilities at all. I think the impossible worlds picture helps to obscure this difference.

To Michael Nelson

As Michael Nelson says in summarizing the general character of my actualist account of modal concepts, I ''stretch the common conception of the auxiliary theses an actualist can accept'' by defending the coherence of versions of anti-essentialism and counterpart theory. As he also notes, I do not endorse these metaphysical doctrines; my aim is to make room for them in logical space, and to clarify their content. One point of such an exercise is to sharpen our understanding of more orthodox metaphysical views by showing them to have a coherent contrast. I also

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[3] In Stalnaker (1968), I put an absurd world, where everything is true, into the model in order to interpret conditionals with impossible antecedents, but I didn't mean it to be taken seriously; a more sober but equivalent formulation of the semantics would do without it.

had a more abstract methodological aim: to bring out problematic features of metaphysical debate. Disputes about fundamental issues about what there is to talk about are hard to separate from disputes about the semantics of the terms that are used to talk about them. A defender of a radical metaphysical view is often accused of misleading packaging—of changing the meanings of basic words so that a banal thesis appears to say something more exciting than it actually says, or perhaps so that an untenable thesis seems more defensible than it really is. Evaluating such charges is difficult, since we all have to make sense of alternative metaphysical theories in terms of the resources that we ourselves believe are available, but the different sides to a dispute will have different views about what the available resources are. I think that the differences between Nelson and me about how to frame the metaphysical issues about essentialism and identity illustrate some of the difficulty of separating the metaphysics from the semantics.

First, on essentialism: Anti-essentialism is the rejection of an ''invidious'' (to use Quine's term) distinction between essential and accidental properties. One can avoid the discriminatory distinction by locating properties all on one side of the line, or all on the other. The doctrine that Nelson calls ''indiscriminate essentialism'' makes all properties essential, while what I called ''bare particular'' anti-essentialism follows the other strategy, though it requires qualification, and a more substantive theory of properties than the first alternative. Nelson is not inclined to endorse any kind of anti-essentialism, but he recommends indiscriminate essentialism to one who is so inclined, and he argues that this doctrine is compatible with a theory of contingent identity. I think both the metaphysics and the semantics that he sketches are clear and coherent, but I will argue that the theory is misdescribed as a theory of contingent identity. Let me try to separate out the metaphysical and semantic components of his proposal.

In the context of the standard possible worlds framework, it is easy to characterize the class of models that reflect the doctrine of indiscriminate essentialism: they are the models in which the domains of the possible worlds are all disjoint from each other. So the discriminate and the indiscriminate essentialists can use exactly the same modal language, and the same rules for interpreting it. Their difference is in the nature of the worlds, and not in the language used to talk about them. But there are some purely semantic decisions about the modal language that need to be made: Suppose the value of a variable x, or a name t denotes something that fails to exist in a possible world w; How should an atomic sentence, Fx or Ft, be interpreted? The semantics might stipulate that they are all false, or that they are neither true nor false. Each decision raises further questions, but the important point is that these decisions are independent of the metaphysics. Nelson's gives a still different answer to this semantic question, one that requires a more radical change in the standard language, but is, as I understand it, also independent of the metaphysics. I will sketch a way of implementing Nelson's ''object-blind'' semantics that is a little different from, but I believe is equivalent to the way he does it:[4]

Suppose we interpret the quantified modal language in two stages; begin with a truncated language, one that contains no free variables within the scope of a modal operator. That is, our formation rules say that $\Box\phi$ is well-formed only if ϕ is a closed sentence. The other formation rules are standard. The semantics for this truncated language avoids all of the usual problems of quantified modal semantics, since there

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[4] Equivalent in the sense that the two formulations make the same sentences true in the same models.

is no quantifying into modal contexts (we remain at what Quine called the second grade of modal involvement). The second stage of interpretation is to treat the remaining sentences of the full modal language as abbreviations for sentences of the truncated language. To get the official, unabbreviated version of any sentence ϕ simply replace every subsentence of the form $\Box\psi$, where ψ has one or more free variables with ψ^*, where ψ^* is the universal closure of ψ.[5]

Now consider a sentence that on the surface seems to say that there are contingent identities: $\exists x \exists\ y\ (x = y\ \&\ \sim\Box x = y)$. Unabbreviated, this is the following: $\exists x \exists\ y\ (x = y \& \sim\Box\forall x\forall y\ x = y)$. So what the sentence really says is that there is at least one thing, and it is not necessary that there is at most one thing. This seems to me a clear case of the reinterpretation of a notation that is usually used to say something that is at best controversial (and at worst incoherent) in order to make a metaphysical claim that only Parmenides should find problematic.

While Nelson ties the object-blind semantics to the metaphysical doctrine of indiscriminate essentialism, I don't see that it has anything to do with it. In fact, because the semantics restricts expressive power in the way that it does, it makes it impossible to say anything in the language that distinguishes the indiscriminate essentialist from the orthodox Aristotelian. ''I think that Socrates could have been a sculptor instead of a philosopher, but that he could not have been an aardvark'' says the discriminate essentialist. ''Why do you disagree?'' ''As I interpret you,'' says the indiscriminate essentialist who is using the object-blind semantics, ''what you are saying is that there could have been a sculptor who is not a philosopher, but there couldn't possibly be an aardvark. I agree with the first claim, but not with the second.'' This looks like miscommunication. One using the object-blind semantics will say this, whatever his views about essentialism.

Second, on counterpart theory and contingent identity: Nelson describes me as one who ''embraces'' contingent identity, but I argue that one cannot make sense of contingent identity in a straightforward way; specifically, I unequivocally reject the thesis that there could be a pair of things that satisfy the identity relation, but only contingently so. Even in the counterpart semantics which allows for a non-symmetric and non-transitive counterpart relation, it will be a logical truth that for any x and y, if x = y, then necessarily if x exists, then x = y. What I try to make sense of is the idea that one thing might have been each of two different things, this is a potentially ambiguous thesis in need of clarification; and the counterpart theory is my attempt to explicate it.

Nelson uses the term ''identitarianism'' for a thesis that implies something like the following: the things in other possible worlds whose properties are relevant to determining the modal status of my properties in this world are related to me by the relation of identity. He takes this thesis to compete with counterpart theory, but my counterpart theorist is also an identitarian, at least on one way of construing that potentially ambiguous doctrine. If we are actualists, we need to distinguish a possible world in the sense of a way a world might be from a possible world in the sense of something that exemplifies a way a world might be. There is, of course, only one thing of the latter kind, but there might have been others instead (which is only to say that things might have been different from the way they are.) The actualist also needs to make a parallel distinction between two ways of understanding reference to

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[5] I have ignored names in this sketch; if the language has names, they need to be treated, within the scope of a box, like free variables.

possible people and things. There are no people and things other than the actual ones, but there (actually) exists the possibility of there being other things, and there are also merely possible ways that actual people and things might have been. Suppose my modal semantics makes reference to domains of entities that are components of the possible states of the world, things that are themselves abstract, property-like objects that exist in the actual world, but some of which are unexemplified in the actual world. We could call these things "possible individuals", but that might be misleading in the way that "possible world" is misleading (for the actualist), so let's call them individual roles. Now distinguish two different questions about a possible world w in which Socrates was hooknosed (a world whose possibility makes it true that having been snubnosed was a merely accidental property of Socrates.). (1) Is the person in question (the one called "Socrates" who is hooknosed in this world) identical to our Socrates? (2) is the individual role that would have been instantiated if this possibility had been realized identical to the individual role that Socrates exemplifies in the actual world? The orthodox actualist modal metaphysician (such as Alvin Plantinga) will answer "yes" to both questions. For him, the roles are essences. But they are different questions, and the counterpart theorist is free to answer "yes" to the first and "no" to the second.

Nelson argues that my counterpart semantics won't allow for a straightforward description of, for example, Allan Gibbard's Goliath-Lumpl case (the statue and the clay). But while I reject the idea that there could be a pair of things that stand in the identity relation, but only contingently so, the modal language I interpret allows for contingent identity statements with singular terms. Suppose "Goliath" expresses an individual concept that has, as its extensions, the statue/lump in the actual world, and the statue in the counterfactual world (where the statue is distinct from the lump); "Lumpl" expresses a concept that has, as its extensions, the statue/lump in the actual world, and the lump in the counterfactual world. Then Goliath = Lump but possibly Goliath ≠ Lumpl is true in the actual world. But even the most conservative modal metaphysician can allow for identity *statements*, that are contingently true, such as that the first U. S. postmaster general = the inventor of bifocals.[6]

Third, on the Barcan formulas: Nelson says that the Barcan formula ($\forall x \Box Fx \supset \Box \forall x Fx$) "seems to require the existence of mere *possibilia* and hence run contrary to actualism." It is not, he makes clear, the principle itself that has this consequence, but it together with certain intuitive modal truths. I am not sure what possibilia are supposed to be, but whatever they are, I am puzzled by the dialectic here. Nelson supposes that Chelsea is an only child who might have had a sister, and he also supposes that nothing exists that could have been her sister. On the face of it, these suppositions provide a counterexample to the Barcan formula. (What is supposed is that everything is necessarily not Chelsea's sister, but it is possible that there be something that *is* Chelsea's sister.) To reconcile the example with the Barcan formula, we need to take back one of the suppositions, presumably the supposition that nothing exists that could have been Chelsea's sister. But if we assume that there is such a thing, it will have to be some kind of shadowy mere possibile. That is how I understand the point, but what motivates this attempt to save a principle to which there are such compelling counterexamples?

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[6] But in the conservative theory, identity statements with rigid designators are always necessary if true. Doesn't the Goliath/Lumpl statement involve rigid designators? The concept of a rigid designator is more complicated in the counterpart semantics.

If there is a problem here, I think it is that if the actualists *reject* the Barcan formula and its converse, then they might find themselves committed to some kind of possibilia, perhaps uninstantiated essences for the sisters that those without them might have had.

Nelson's object-blind semantics avoids all of these problems; in my formulation of his semantics, the Barcan formula, unabbreviated, becomes a tautology when a vacuous quantifier is removed from the antecedent. But I think the problems are avoided only by restricting the language so that problematic things cannot be said.

One final remark about my countermodel, in the counterpart semantics, to the qualified converse Barcan formula: Nelson thinks that I am mistaken in claiming that I have constructed a model that falsifies the formula. The point here is technical, and not a philosophical. One may object that the semantic rules or models are defined in an unintuitive way, but the technical point—an independence result—is independent of the intuitive plausibility of the semantics. We can argue about the conceptual significance of the technical point, but the point itself can be checked by a mechanical application of the rules.

To William Lycan

Bill Lycan devotes most of his discussion to my paper on the argument from the conceivability of zombies to the falsity of materialism. We are in basic agreement that the argument fails, and we are both proponents of what he calls (following David Chalmers) type-B materialism, but we differ in our diagnoses of the problem with the argument, and in our views about exactly how the type-B materialist should spell this doctrine out. I am not sure how much of our disagreement is substantive, and how much is about the right way to formulate metaphysical views that we agree on, but Lycan gives a clear an accurate account of my argument, and zeros in on the point at issue. The key question is closely related to the main issue discussed in Jeff King's paper; like King, Lycan wants to make room in his metaphysics for worlds, or world-states, that are metaphysically impossible.

The zombie argument begins with the premise that it is conceivable that there be a world physically exactly like ours, but in which nothing is conscious. It is concluded that it is therefore metaphysically possible that there be such a world, and this entails that materialism (the thesis that everything supervenes on the physical) is false. Lycan grants the premise, but rejects the inference. ''Conceivability is cheap and shallow,'' and metaphysical possibility cannot be inferred from it. He accepts the picture of a wider set of conceptually possible worlds, only some of which meet the further constraint of being metaphysically possible. Conceivability suffices to show that a zombie world is conceptually possible, but to succeed in establishing its conclusion, the argument would have to show that such a world is also compatible with the metaphysical laws—that the things in them all have their essential natures. My contrasting response to the argument rejects the picture of the metaphysically possible worlds as a proper subclass of the worlds that are conceptually possible and grants that success in conceiving of a possible situation suffices to show that it is metaphysically possible. But I contest the basic premise of the argument—that we can really conceive of a zombie world. My reason for contesting the premise is not that I grant that there is a clear and independent notion of conceivability that is a sufficient test for possibility; rather, it is that I am not sure how to understand what it

means to conceive of a possible situation (and not just to think that one has) unless it is for there to be a possible situation that one has conceived of. Lycan and I can agree that there is no a priori test that can establish that something is metaphysically possible, but I want also to deny that there is any a priori test for whether we have succeeded in forming a clear and distinct conception of something. The reason is that the contents of our conceptions are determined by the resources that the world provides for characterizing the possibilities (the things, properties and relations we use to specify what kind of possible situation we are talking about), and we can be ignorant or mistaken, for empirical reasons, about the nature of those resources.

My specific strategy was to try to find more neutral terminology for describing the kind of world that the proponents of the zombie argument are calling a zombie world, and I argued that one could give a determinate characterization of the world without stipulating that consciousness was absent from it, and in fact without directly specifying anything about the mental properties of anything in the world. A z-world is a world physically exactly like the actual world, and containing nothing that did not supervene on the physical. It is common ground (between proponents and opponents of the zombie argument) that the z-world is metaphysically possible; what is contested (I argued) is, first, whether the world is actual, and second, whether it is properly described as a zombie world. The two disputes are linked, since the z-world would be correctly described as a zombie world only if it is not the actual world.

My argument depended on the determinacy of my characterization of the z-world, but as Lycan correctly argues, if we allow metaphysically impossible worlds, then both materialists and dualists can agree that there are two kinds of z-world, those that are zombie worlds, and those that are not. What is in dispute is which of them is metaphysically possible (as well as whether one of them is actual). Have I then just begged the question against Lycan's version of type-B materialism? I concede that my argument is not decisive; the more abstract and general issue about how to understand conceivability and metaphysical possibility must be addressed on its own terms. Let me try to motivate my side of the dispute about the general issue by returning to the analogy (used throughout my original paper) with the substance water and our various concepts of and theories about it.

Imagine two philosophers, A and B, who agree that there is a metaphysically possible world that fits the description that Putnam gave of Twin Earth, a world (call it the xyz-world) that is superficially like ours, but with a chemically different substance playing the role that water in fact plays. As Lycan notes in passing, it would be a nontrivial task to show that there is a coherent possible physics and chemistry that could explain how such a world could be possible, but A and B agree to set that worry aside. Their disagreement consists in the fact that A claims that there is in addition a distinct world-state, a metaphysically *im*possible world, that is *exactly* like the xyz-world with respect to the nature of the stuff in the lakes, streams and bathtubs (and in all other respects that are describable at the level of physics and chemistry). The only difference between this impossible world—call it the wxyz-world—and the xyz-world is that in the wxyz-world, the stuff in question is really *water*. (The reason the world is metaphysically impossible is that the water in it lacks its essential nature.) B denies that there is such a world. Or perhaps he should put his point by saying that the wxyz-world is really the xyz-world, misdescribed. For the xyz-world and the wxyz-world do not differ in any substantive respect; the difference between them is only in the labels that we attach to some of the stuff in them. The worlds do not differ in the labels used by the citizens of the worlds—in both cases,

the English speakers in them call the stuff in question "water". The two world-states differ only in the language *we*, from the perspective of the actual world, use to describe them.

B grants to A that it is *conceivable* that there could have been a possible world that was correctly described by A's description of the wxyz-world, since it is conceivable that the xyz-world is actual, and if it had been, then *it* would have been correctly described by A's description of the wxyz-world. But this "diluted sense" (to use Lycan's phrase) in which the wxyz-world is conceivable is not good enough for A.

What might the basis be for the disagreement between A and B? It will concern what kind of thing they think they are talking about when they talk about possible (or impossible) worlds Perhaps A thinks of worlds as something constructed out of linguistic or conceptual material, but according to B, even if we use a concept expressed by our word "water" to stipulate that the world we are describing is one containing water, it is *water* we are locating in that world, and not some concept of it. We, in describing the world, are referring to the actual stuff and saying that *it* is found in the world we are characterizing. B's reason for rejecting the wxyz-world is that the description that purports to characterize such a world contains conflicting stipulations. To locate *water* in the world is the same as to locate H2O there—that is common ground—so A's description of the wxyz-world seems to be telling us both that it is a world containing this stuff, and that it is a world that does not. (As Lycan remarks, he wants to allow for *logically* impossible worlds, as well as for worlds that are conceivable, but metaphysically impossible, but the wxyz-world is presumably not supposed to be one of these.)

As Lycan observes, I had expressed my skepticism about the picture of the metaphysically possible worlds as a proper subclass of the conceivable worlds, distinguished by the metaphysical laws true in them, with a rhetorical question, "to what do the metaphysical laws owe their exalted status?" His answer is that these laws are generated by the natures and essences of things. But to understand the idea of a metaphysically impossible world, we need to understand what it means for a thing (or a kind) to exist without its essence or nature, and I lose my grip on what essences or natures are if they are the kinds of things that can be detached from the things that in fact have them. I can understand (dimly at least) what it would mean for there to be something that fit our *concept* of water without having the nature of water: that would be for something other than water to fit our concept of water. This would imply that our concept is like a nonrigid designator for a kind of stuff. What I don't understand is what it would mean to say that a substance was really water itself, but it had a different essential nature.

At the end of his paper, Lycan grants that in the case of natural kind terms such as 'water', we might just as well treat the conceivable, but metaphysically impossible world as a misdescribed metaphysically possible world, in the way that I have suggested for the wxyz-world. But, he argues, there are many other cases of substantive metaphysical necessities that cannot be treated in this way. But I think that the strategy generalizes, and that it helps to clarify metaphysical issues to apply it to controversial metaphysical theses and proposals, and to putative necessary truths whose source is unclear or controversial. I will look briefly at two of his examples, but first I want to emphasize again that my rejection of the concentric circle picture of the metaphysical possibilities as a proper subclass of a class of conceptually possible worlds is not based on the empiricist doctrine that all necessity is concep-

tual, or reducible to conceptual necessity. The reverse is closer to the motivation: we can understand conceptual necessity and possibility only in terms of the metaphysical possibilities (though the relations between our conceptual resources and the possibilities may be a complex one.) So when Lycan says of various metaphysical theses, and of truths of mathematics, that they ''are not logical truths, nor are they analytic'' I am happy to agree with him, but I don't take this to support the distinction between conceptual and metaphysical necessity.

What about ''Nothing is both red all over and green all over''? I think this example was a problem for Wittgenstein, not because it is a putative case of something that is metaphysically, but not conceptually necessary, but because it conflicted with some metaphysical assumptions implicit in logical atomism. I can't say that I can conceive of the possibility that it is false, but maybe that is my lack of imagination.

Is it conceivable or possible that distinct physical objects occupy the same region of space at the same time? I think I can conceive of possible situation in which there were ghost-like objects that interpenetrate. Would they be correctly called ''physical objects'' (by us, given the actual facts about what it is to be a physical object)? Semantic questions interacting with questions about actual physics, have to be answered to be clear about exactly what a person who claims that this is conceivable is conceiving of, but if they are answered in a way that gives one reason to say that this possibility is conceivable, I think it will also justify the claim that it is metaphysically possible.

Metaphysical disputes, such as the one between my characters Anne, Dave, Patricia and Sydney, involve a mix of conceptual and empirical issues; untangling them is difficult, but clarifying if we can do it. The very abstract issues about the modal framework should be settled, I think, by how well they contribute to this kind of task.