

## In defence of the contingent existence of propositions

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Recently I have written a paper advancing the positive case for seeing propositions as contingently-existing mind-dependent entities. I have also written a blog post where I use this view to provide an objection to the argument from Anderson and Welty's "The Lord of Non-Contradiction." So suffice to say, I think that there's a lot in favour of this kind of view. But it is now time to play defence. My aim in this post is to defend the view against several objections that I've seen. Hopefully by doing so, I can clarify some of the more technical details of my view.

### Mind-dependent, contingent propositions

Since my concern is with the metaphysics of propositions, I should say a few words about propositions generally. Traditionally, propositions have been defined (in the first instance) by the various *roles* that they are supposed to fulfill. In particular, propositions are taken to be the entities that (i) are the primary bearers of truth value, (ii) the bearers 'de dicto' modal attributes (being necessarily true, contingently true, or necessarily false), (iii) are the meanings of utterances or sentences (in context) and (iv) the objects of belief, desire, etc. (the propositional attitudes). The chief proposal of those who believe in propositions is that there is a kind of entity that plays all four of these roles. (I am not, in this post, going to argue that there is such a thing as propositions. I have written in favour of them before somewhere on my blog, but I have since become more agnostic. To give my all-things-considered view on this issue now would require too many tangents. Anyway, I will not engage here in the debate over whether propositions *exist*. I will simply *assume* that they exist, and then defend the view that I find most plausible given that assumption.)

So if propositions exist, then what kind of entity are they? What is their nature? The position that I favour might best be called "human-centred conceptualism."<sup>1</sup> The basic claims here are that propositions are (i) *representational* entities, and (ii) they owe their representational features to the cognitive activities of human agents. In short, they are mind-dependent.<sup>2</sup>

When I say that propositions are 'representational', I mean that their truth conditions must be explained with essential appeal to (i) what the propositions are *about* (i.e. their referent(s), their subject matter), and (ii) how they represent their subject matter to be (i.e. what they attribute to their referents). So for instance, take the proposition <Trump is impeached>. To derive the truth conditions of this proposition, we first appeal to the fact that this proposition is *about Trump*, and *represents him as being impeached*. From this fact, we get that <Trump is impeached> *is true* if and only if Trump is impeached.<sup>3</sup> To put this point another way, the truth of a proposition is a matter of *accurate representation*. A

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<sup>1</sup> As opposed to 'divine conceptualism', according to which propositions are God's thoughts.

<sup>2</sup> My favourite view of this sort is the one offered by Scott Soames in *What is Meaning?* The basic idea here is that propositions are *cognitive act types*. Humans perform token acts of *representing things as bearing attributes*, and the proposition expressed is identified with the *type of cognitive act* that is tokened. (Of course, each representational act is a token of many types; the relevant type to identify as the proposition will depend on the *semantic* properties of act (uncovered through semantic theory).)

<sup>3</sup> This 'representationalist' account of truth conditions is contrasted with those accounts that take propositional truth to be reducible to some *non-semantic* property that propositions may or may not bear. There are a few views of this type in the literature (see e.g. Jeff Speaks (2014)). See my "Propositions, Modality, and Representation" for a negative assessment of this type of view.

proposition is true if it represents things as they are; and it is false if it represents things as they aren't.

Given that propositions are representational, it seems that this fact about them cannot be left as a brute fact. It needs to be explained. And if it's going to be explained, it also seems most reasonable to seek for an explanation in the one other thing that we know to have representational abilities: namely, creatures with intentional cognition, and in particular, *human beings*. We may not know *how* the human mind has the ability to represent things, but at least we know *that it definitely has this ability*. So it seems reasonable, in searching for an explanation of the intentionality of propositions, to attend to human cognitive abilities as the materials for explanation.

My preferred view, therefore, casts propositions as both *representational* and *mind-dependent* entities. But the latter claim has been the source of a number of objections—particularly for the following reason. If propositions depend on *human* minds, then they must be *contingent* beings, since human beings exist contingently. But if propositions are contingent beings, then how can we account for their modal properties (role (ii))? In particular, how can we account for the existence of *necessary truths*?

The rest of this essay will be aimed to address this question.

### Some basics and some schemas

Soon I will run through some objections and responses to some arguments to the conclusion that propositions must exist *necessarily* in order to account for the phenomenon of *necessary truth*. But before I do so, I need to make some clarificatory remarks in order to narrow in on what's at issue.

*I. de re vs de dicto.* It is standard in these discussions to distinguish between *de re* and *de dicto* modality. Here is how I understand the distinction (although I must say, it seems that everyone has a slightly different understanding of this, so take these remarks as somewhat stipulative). As I understand it, the idea is that the modal attributions (e.g. “necessarily”, “possibly”, “must”, “can”) can either pertain to *objects* or *propositions*. In the *de re* case, we attribute a modal property directly to an object. So for instance, Graham is *necessarily* human. In this case, the modal locution “necessarily” is being used to modify the property that is being attributed. On the other hand, in a *de dicto* case, the modal attribution is applied to a whole proposition. So for instance, *it is possible that it will rain tomorrow*, and *it is necessary that  $2 + 2 = 4$* . In this case, the modal locution ‘it is necessary/possible that’ appears before the sentence expressing the proposition, in order to signal that it bears a certain *kind* of truth: *necessary truth* or *possible truth*.<sup>4</sup>

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<sup>4</sup> In quantified modal logic, the distinction between *de re* and *de dicto* is represented by whether or not there is an open sentence binded by the modal operator. Letting Hg be “Graham is human”, the language of modal logic would represent both “Necessarily, Graham is human” and “Graham is necessarily human” as “ $\Box Hg$ ”. Since “Hg” is closed, this is called *de dicto*. I think that it is worth distinguishing between “Necessarily, Graham is human” and “Graham is necessarily human” because the former “necessarily” seems to bind the whole proposition, whereas the latter “necessarily” seems to bind just the predicate. I think the semantic difference between the two is that the former is true iff the proposition <Graham is human> is necessarily true; and the latter is true iff Graham bears the property <is necessarily human>. I take it that a proposition being “necessarily true” means that it's true with respect to all worlds; and that an object bearing the property of “necessarily F” means that it's F in all the worlds that it exists. (That is, unless the property in question is *existence*.) To represent this difference in the standard language of QML, it is the difference between “ $\Box Hg$ ” and “ $\Box(\exists x:x=g \rightarrow Hg)$ ” (also sometimes called “strong necessity” and “weak necessity”).

The case we are interested in is *de dicto* modality. Our aim is to explain how a proposition can bear the *de dicto* designation of *necessary truth*.

*II. Serious actualism.* Throughout this paper, I'm going to assume a thesis that is commonly called "serious actualism." The basic idea of serious actualism is that *in order for an object to bear a property, that object must exist*. To put this into some formal jargon (which I'll explain momentarily), the thesis is that, for any property  $F$  and any object  $a$ ,  $\Box(\text{if } Fa, \text{ then } a \text{ exists})$ .

Why am I assuming this? Two reasons. First, because this is how I think about things. I cannot make sense of the idea of a non-existent thing bearing properties. Secondly, it is important for me to assume serious actualism for sheer dialectical reasons. My purpose is to defend the contingency of propositions, and this defence would become *too easy* if I were to reject serious actualism from the start. In order to initially give my opponents something to work with, serious actualism must be assumed.<sup>5</sup>

*II. Operators vs predicates.* It is standard in these discussions to let " $\Box$ " signify "necessarily" and " $\Diamond$ " to signify "possibly." Moreover, it is also standard to use quotation marks " $P$ " to talk about the *sentence* " $P$ ", and to use corner quotes  $\langle P \rangle$  to talk about *the proposition* expressed by " $P$ ."

The key feature of the symbols " $\Box$ " and " $\Diamond$ " (and hence for the "necessarily" and "possibly" of English, assuming that the formalism captures something significant about the logic of natural language) that I want to draw your attention to here is that they have the syntactic role of *operators*. What this means is that they are devices for forming new expressions by appendage to old expressions. In a *de dicto* use of " $\Box$ " we take a sentence " $P$ " and concatenate " $\Box$ " in front of it, in order to yield a new sentence " $\Box P$ ". The semantic features of the new sentence " $\Box P$ " will bear some systematic relation to the semantic features of " $P$ " (which I'll spell out shortly). In the *de re* case, we take a predicate " $F$ " and concatenate " $\Box$ " in order to yield a new predicate " $\Box F$ ", which is then predicated upon objects.

When I say that " $\Box$ " and " $\Diamond$ " are *operators*, I mean to caution us against construing them as a kind of *predicate*. They are operators, not predicates. What this means is that their semantics should not be construed as asserting that the thing they operate on has a certain property. " $\Box P$ " is saying "necessarily,  $P$ "; which is not quite the same thing as saying "the sentence " $P$ " bears necessity" or "the proposition  $\langle P \rangle$  is necessary." For one thing, " $\Box P$ " only ever *uses* the sentence " $P$ ", it doesn't *mention* it. In most cases, " $\Box P$ " will be an assertion that's about *things*, and will not refer to any truth bearers. (Of course, we can introduce predicates that refer to properties that a sentence or proposition bears whenever " $\Box P$ " holds. In fact, I will do this. But before I do, we need to keep these ideas conceptually separate.)

For vividness, compare the distinction between "it is not the case that  $P$ " and " $\langle P \rangle$  is false." "It is not the case that..." (and " $\neg$ " in symbolic logic) syntactically functions as an *operator*. It doesn't function to *attribute* a property to the sentence/proposition that it acts on. Rather, it forms a new sentence that inherits its truth conditions via a truth function from the sentence/proposition it operates on. On the other hand, "... is false" does attribute a property (*falsity*) to the sentence/proposition that it is predicated upon. As such, in order to use this predicate, we need to actually *mention* a sentence or proposition in the subject position.

On that note, it's worth mentioning now that *truth* is expressed in both predicate and operator

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<sup>5</sup> Serious actualism is actually highly controversial. In fact, it is assumed false in Kripke's semantics for quantified modal logic. But I'm not going to explore this issue here.

form. First, there is the expression “*it is true that...*” which functions as an operator. Essentially, it is a truth-functional operator that has the same truth table as “ $\dashv$ ”. Secondly, there is the predicate version expressed by “‘S’ is true” and “<P> is true” which predicates a property (*truth*) to a sentence or proposition (respectively). It is only in its predicate form that “... is true” is genuinely *metalinguistic*, whereby one must *mention* a sentence or proposition in the subject position.

*III. The representationalist theory of de dicto modality.* I said earlier that as long as we take propositions to be representational, we can explain their truth conditions with essential reference to what they’re about and how they represent it. Here is the schema that I accept to explain the *truth* of propositions:

(Accepted Schema 1) <P> is true iff <P> represents things as thus-and-so, and things are thus-and-so.

When it comes to de dicto modality, my favoured position takes basically the same approach. First, we derive facts about what the given (non-modal) proposition *P* represents, and how it represents its subject matter. These are <P>’s *truth conditions*. Then, the truth conditions for the modalized proposition < $\square$ P> are given by whether or not <P>’s truth conditions *must* have obtained. Putting this in schema form:

(Accepted Schema 2) < $\square$ P> is true iff <P> represents things as thus-and-so, and it *must* be that things are thus-and-so (things *could not have failed* to be thus and so).

And similarly for possibility.

(Accepted schema 3) < $\diamond$ P> is true iff <P> represents things to be thus-and-so, and it *could* have been that things are thus-and-so.

Schema 2 and 3 are my ‘official’ accounts of de dicto modality for propositions. (No doubt, there are some people who, upon seeing the modal language ‘*must*’ and ‘*could*’ appear on the right-hand side of the schemas will be eager to cry ‘circularity.’ But I think that this circularity charge is misplaced. The challenge I’m addressing in this paper is *only* to explain the notion of *necessary truth* for *propositions*, not to explain *necessity* (simpliciter) in non-modal terms.<sup>6</sup>)

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<sup>6</sup> The tactic that I employ is to explain the de dicto necessary truth of a proposition in terms of what is necessary for the things it represents. One might put this loosely as saying that I’m explaining the notion of necessary truth in terms of the essential nature of things. There are two complications with this strategy.

The first one is less serious. There was a time (i.e. the era of Carnap) where it was widely thought that all talk of necessity was to be explained in terms of the analytic or logical features of the representations we use to conceptualize things. According to this line of thought, there are no modal features ‘*in the world*’. Suffice to say that (following Kripke) I reject this thought, but to explore this issue here would take me too far afield.

The second one is a bigger complication. It has to do with the fact that propositions can either be *singular* or *general* (e.g. “Graham is two legged” vs “the best conventional deadlifter is two legged”). Each of these kinds of propositions pose distinct challenges for explaining de dicto modality in terms of what is possible/necessary for their subject matter, since in one case the subject matter involves individuals and in the other it does not. There’s a difference between what is possible/necessary for *a particular thing*, and what is possible/necessary for *things in general*. So a proper, fully-fleshed-out account of de dicto modality ought to be sensitive to this distinction. If I were to do a deep-dive into this subject I would have to flesh out these details. But I will not do that here, since my main aim is to counter objections. (There is an extended fleshing-out of the details in response to this problem in Simchen

*IV. The possible world idiom.* Before we go any further, we need to bring in everybody’s favourite crutch for discussing modality: the possible worlds. When the seventeen-year-old Saul Kripke first developed a semantics for the purpose of unifying the various modal logic systems and proving various meta-theoretic results, he invoked the metaphor of “possible worlds.” The possible worlds served, for his semantic theory, as objects to which we can relativize the truth/falsity of sentences. They allow us to say things like “snow is white” is true relative to possible world  $w$ , and “grass is blue” is true relative to possible world  $w^*$ . Doing so allows us to translate all of our talk of “necessity” and “possibility” into the more familiar idiom of “all” and “some.” Thus we can say, with increased clarity, that:

(Accepted schema 4)  $\langle \Box P \rangle$  is true iff  $\langle P \rangle$  is true with respect to (or *at*) all possible worlds;

(Accepted schema 5)  $\langle \Diamond P \rangle$  is true iff  $\langle P \rangle$  is true with respect to (or *at*) some possible worlds.

After Kripke introduced this metaphor, the philosophical community in the 1970s and the 1980s became very interested in the metaphysics of possible worlds. This was especially true for those who thought that talk of ‘necessity’ and ‘possibility’ was legitimate, but couldn’t be taken as brute, and needed to be reduced to non-modal terms. (There are interesting historical reasons for why the philosophical community thought this way, and the blame can largely be traced to W.V.O. Quine.) Some thinkers (i.e. David Lewis) believed that there was literally a multiverse of universes that were just as ‘real’ or ‘concrete’ as our universe, and identified these as the *possible worlds*. Other thinkers (i.e. Stalnaker, Plantinga) tried to reduce the possible worlds to various abstract objects. All the while Saul Kripke lamented having ever evoked the metaphor of “possible worlds.” For him, the purpose was only to introduce a useful metaphor for the purpose of visualizing the mathematical apparatus employed in his semantic theory. But their purpose was *only* for the representation of a semantic theory for the formalized logical systems designed to capture the logic of “necessarily” and “possibly”; they weren’t supposed to be taken as revelatory of the nature of *necessity* and *possibility*.

I will get back to the metaphysics of the so-called “possible-worlds” later. For now let’s also present the expanded conception of possible worlds for quantified modal logic. On this conception, each possible world can be thought of as an object—any object—to which we can relativize the formal model-theoretic conception of truth. This means that each world must have a domain of individuals which we can informally (picturesquely) think of the inhabitants of the world. We also have an ‘interpretation function’ that maps the predicates of our language into the powerset of the domains of each world, and the names to the individuals.<sup>7</sup> Or in non-mathematical terms, there’s a distribution of properties to the

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*Necessary Intentionality* (2012.)

<sup>7</sup> Note that I am departing from standard ‘variable domain quantified modal logic.’ Standard VDQML maps predicates to the powerset of the *superdomain* (union of all domains) relative to worlds. Effectively this means that objects will bear properties relative to worlds in which they don’t exist. In metaphysical terms, this would be a violation of serious actualism. There are good formal reasons for doing this. But in this paper, I’m not so much interested in the formalism as I am interested in the metaphysics, so it’s better to set up the semantic apparatus in a way that’s faithful to the metaphysics of serious actualism. Formal efficiency be damned.

individuals relative to the worlds.<sup>8</sup>

Casting possible worlds in this way allows us to give a possible-worlds representation of *de re* modality as well. Say that  $a$  is an individual and  $F$  is a property. (Although we have to make one exception:  $F$  cannot be the property of existence.) Then we say that:

(Accepted schema 6)  $\langle a \text{ is } \Box F \rangle$  is true iff  $a$  is  $F$  at all worlds in which  $a$  exists;

(Accepted schema 7)  $\langle a \text{ is } \Diamond F \rangle$  is true iff  $a$  is  $F$  at some world in which  $a$  exists.

Remember, we're assuming serious actualism, which in this context implies that things don't bear any properties at worlds in which they don't exist. Given these schemas, it follows that  $\langle \text{Graham is necessarily human} \rangle$  is *true*, because I'm human at all the worlds in which I exist. But since I don't exist in all worlds (because I'm a contingent being), it follows (from serious actualism) that  $\langle \text{Graham is human} \rangle$  is truth-value-less at some worlds. Thus the *de dicto* necessity claim  $\langle \text{Necessarily, Graham is human} \rangle$  is false, since it is not true at all worlds.

Perhaps this is a surprising result:  $\langle a \text{ is } \Box F \rangle$  does not generally imply  $\langle \Box(a \text{ is } F) \rangle$  according to serious actualism. But that just follows from serious actualism and schemas 4 and 6. This fact will come up again, so it's worth bearing in mind that this surprising consequence is traceable entirely to serious actualism and is entirely independent of one's conception of propositions.

### Three quick arguments for the necessary existence of propositions

*IV. The easy argument for necessary existence.* In their SEP article on propositions, Matthew McGrath and Devin Frank propose the following 'easy' argument for the necessary existence of propositions (they do not end up endorsing it). Take any proposition that is *necessarily true*—say, that all triangles have three angles. Since the proposition is *necessarily true*, it must be *true in all possible worlds*. But if it is true in all possible worlds, then it must *exist* in all possible worlds. That is, it must be a *necessarily existing entity*.

The flaw in this argument, according to my view of propositions, is that it assumes that a proposition must be *true in* a world in order to be true *at* the world. It's as if the proposition must be a member of the domain of a world  $w$  in order to be evaluated as true *with respect to*  $w$ . (As if it must be an inhabitant of the world in order to represent it accurately.) But I see no reason to accept this. A map of a place can accurately depict the place without also residing within the place (as one of its denizens).

This issue concerns the *de dicto* modal status of a necessary proposition  $\langle P \rangle$ . Recall my inherently 'representational' definition of the *de dicto* necessity given in *accepted schema 2*. This was an explanation of the truth of  $\langle \Box P \rangle$ , and if you look carefully, it does not require  $\langle P \rangle$  to be a necessarily existing entity. Rather,  $\langle P \rangle$  must represent things to be a certain way, and things must be that way in all worlds. But that doesn't require  $\langle P \rangle$  to also exist in all worlds.

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<sup>8</sup> It is important to bear in mind that model theory is really a *set theoretic, abstract representation* of our ordinary notion of truth. We shouldn't confuse it with the real thing (truth itself). After all, the world is not an abstract object or a set, and properties are not subsets containing individuals. I say this just to reinforce the Kripkean sentiment towards possible worlds: that they are abstract, artificial *representations*, designed by the logician just for the purpose of conveying their semantic theory.

A careful reader might have noticed that I have slid from talking about a proposition  $\langle P \rangle$  bearing the *property of de dicto necessary truth* to the truth of  $\langle \Box P \rangle$ . These are different things. One is the truth of a proposition containing a modal operator; the other is a non-modal proposition bearing a kind of modal property. Have I made a mistake?

No. The *property of de dicto necessary truth* is a property that a proposition  $\langle P \rangle$  bears whenever  $\langle \Box P \rangle$  holds. Let's even explicitly define it that way. Let 'N' be the property that is such that:

(Accepted Schema 8)  $\langle P \rangle$  is N iff  $\Box P$ .

(Think of N as a *kind, or mode*, of truth. It's like truth, but *stronger*, since it requires truth at *all worlds*.) Using this definition, we see that the above argument fails. A proposition  $\langle P \rangle$  can bear N even if  $\langle P \rangle$  doesn't necessarily exist.

Before moving onto the next argument, I want to indulge in a little tangent. One might be wondering, what is the relation between this property N and the *de re* modal attribute of being *necessarily true*, given by "    is  $\Box$ -true"? The answer is that the former necessarily implies the latter.

(Accepted Schema 9)  $\Box(\text{if } \langle P \rangle \text{ is N then } \langle P \rangle \text{ is } \Box\text{-true})$ .

You can think of it this way. A proposition (unlike a sentence) is one that bears its truth conditions *essentially*. Hence, it doesn't change its truth conditions whether it is in one world or another. Thus if a proposition exists *in* a world and is true *at* the world, then as an inhabitant of the world it will also be true there. Now, if a proposition bears N, it will be true *at* all the worlds. Hence, a fortiori, it will be true *at all the worlds in which it exists*, and it will be true *in all the worlds it exists*. Hence, it will bear the property *truth* in all the worlds in which it exists (that is, it will be essentially true).

Interestingly, according to my mind-dependent view of propositions, the converse doesn't hold. To be specific, we reject:

(Rejected Schema 1)  $\Box(\text{if } \langle P \rangle \text{ is } \Box\text{-true then } \langle P \rangle \text{ is N})$ .

To see why, consider the proposition  $\langle \text{there are minds} \rangle$ . Since propositions are mind-dependent beings, this will be true at all worlds *in* which it exists. Hence it will bear the *de re* property of being essentially true. But it will not bear N, because  $\langle \text{necessarily, there are minds} \rangle$  is false.

*IV. Joshua Rasmussen's first argument.* In Joshua Rasmussen's paper "From Necessary Truth to Necessary Existence", he presents the following derivation. The point is to show that the defender of contingently existing propositions must reject some basic axioms of modal logic, in particular K (the distribution axiom  $\Box(A \rightarrow B) \rightarrow (\Box A \rightarrow \Box B)$ ) or S4 ( $\Box P \rightarrow \Box \Box P$ ). His derivation proceeds as follows:

1.  $\Box P$ .
2.  $\Box P \rightarrow \Box \Box P$ .
3. Therefore:  $\Box \Box P$ .
4.  $\Box (\Box P \rightarrow \text{it is true that } P)$ .
5.  $\Box (\text{it is true that } P \rightarrow \langle P \rangle \text{ is true})$ .
6.  $\Box (\langle P \rangle \text{ is true} \rightarrow \langle P \rangle \text{ exists})$ .

7. Therefore:  $\Box \langle P \rangle$  exists. [By the Distribution Axiom:  $\Box(A \rightarrow B) \rightarrow (\Box A \rightarrow \Box B)$ ]  
 (Hint for the derivation: apply the distribution axiom to 4-6, chain the results, and then apply modus ponens.) Does this argument prove that my view of propositions is doomed? Do I need to reject S4 or K? Not so fast.

The premise I officially reject is 5. Recall the distinction between “it is true that...” used *as an operator* and “... is true” used *as a predicate* from §II. When we use “is true” as a predicate we need to *mention* a proposition and then predicate the property *truth* upon it. Given our commitment to serious actualism, this requires the proposition  $\langle P \rangle$  to *exist* in a world in order to bear the property of truth *in* that world. (The proposition must be a member of the domain of  $w$  in order for  $\langle \langle P \rangle$  is true  $\rangle$  to evaluate true with respect to that world.) But the operator “it is true that...” works differently. “It is true that P” does not mention the proposition  $\langle P \rangle$ ; the proposition itself is not part of its subject matter. Rather, the sentence “it is true that P” expresses a proposition that is truth-functionally equivalent to “ $\neg\neg P$ ”. The only individuals it refers to are whatever individuals a use of “P” would refer to. As such, we can evaluate “it is true that P” (or the proposition expressed by it) with respect to worlds where the proposition  $\langle P \rangle$  doesn’t exist as an inhabitant. “It is true that P” may very well be true with respect to some worlds in which the proposition  $\langle P \rangle$  is not a member of the domain (provided  $\langle P \rangle$  represents those worlds accurately). If so, then “it is true that P” would be true at those worlds, but “ $\langle P \rangle$  is true” would not be.

In conclusion, a proponent of contingent propositions must reject:

(Rejected Schema 2)  $\Box(\text{it is true that } P \rightarrow \langle P \rangle \text{ is true})^9$

But I don’t believe that this is biting a bullet. Rather, we need to appreciate the semantic difference between the use of operators and predicates.

Within Rasmussen’s paper, he only briefly considers the prospects of rejecting premise 5. According to him, the only reason he can think of that one might reject premise 5 is because one is some sort of redundancy theorist that denies that truth is a property altogether. Perhaps one believes that “it is true that P” and “P is true” are both redundant ways of saying “P.”

To be clear, this is not a position I endorse. I do in fact believe that truth is a property of propositions (and sentences). In fact, I believe it to be the property that I’ve explained in accepted schema 1. This is the property that one expresses when one uses the predicative form “... is true.”

My only claim is that “it is true that...” functions differently. Paradoxically, I do not believe that this expression expresses the property of truth. But is that a weird thing to say? I don’t think so. Consider again the case of falsity. I also think that falsity is a property. But it isn’t semantically expressed by “it is not the case that it’s raining” (nothing about that sentence is metalinguistic or meta-propositional). Indeed, “ $\neg$ ” doesn’t express any property at all. Rather, it operates on a sentence, “it is raining”, to produce a new sentence “ $\neg$  it is raining” that is true iff “it is raining” is false. (Yes, its *truth conditional* contribution is a *function of truth values*, and one must mention falsity to specify that function; but that’s not the same as saying that “not” expresses the property of being false.)

Lastly, I’m happy to accept that there are systematic (a priori? analytic?) connections between the truth operator and the truth property. Surely we retain:

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<sup>9</sup> On that note, we must also reject  $\Box(P \rightarrow \langle P \rangle \text{ is true})$  and  $\Box P \rightarrow \Box(\langle P \rangle \text{ is true})$ , for similar reasons.



(Accepted schema 10) It is true that  $P \leftrightarrow \langle P \rangle$  is true.

We just don't get the necessary version, because propositions don't necessarily exist. (Thanks a lot, serious actualism...)

*V. Rasmussen's second argument.* Both of my responses to the previous arguments have rested on there being a distinction between "truth in a world" and "truth at a world", where the former requires a proposition to exist *within the domain* of a world, and the latter only requires the proposition to represent what goes on in the world accurately. There has been a lot of controversy concerning this distinction, and I'll attend to the bulk of that controversy in the next section. But before I do, I should mention that Rasmussen has a quick argument against this move in his paper. According to his argument, the defenders of such a distinction must reject S4. Here's what he has to say: "Consider that if  $\langle 1=1 \rangle$  is a necessary truth, then it seems that it should also be necessary that  $\langle 1=1 \rangle$  is a necessary truth (that is,  $\langle \langle 1=1 \rangle$  is a necessary truth  $\rangle$  is a necessary truth)... But if all propositions are contingent, then it is difficult to account for the necessity of this second proposition...."

This situation is not quite as dire as Rasmussen leads on. To be clear, so long as we're using " $\square$ " as an operator, we are quite free to accept

(Accepted schema 11; standardly known as S4)  $\square P \rightarrow \square \square P$ .

So we do not do any violence to the standard modal logics. (Which is just what one would expect, since the standard practice of logicians is to construe the truth bearers of their systems to be the sentences of formalized languages, and they allow the domain of objects to be whatever one pleases. So modal logic as such isn't going to directly bear on the metaphysics of truth bearers. It will only have things to say once we've made some assumptions about the properties of propositions, and that's where the controversies will take place.)

Furthermore, we can also accept a few schemas that are related to S4 but take the relevant modal contributions to appear in the predicates. Using 'N' again as the predicate of de dicto modal necessity defined in §IV, we can also accept the schemas:

(Accepted schema 12) If  $\langle P \rangle$  is N then  $\langle \square P \rangle$  is N;

(Accepted schema 13) If  $\langle P \rangle$  is  $\square$ -true, then  $\langle \langle P \rangle$  is  $\square$ -true  $\rangle$  is  $\square$ -true.

But once we've switched to treating the modalities as embedded in predicates applied to propositions, then we must take care not to assert what would imply the necessary existence of propositions. In particular, we must reject these variants:

(Rejected schema 3) If  $\langle P \rangle$  is N then  $\square(\langle P \rangle$  is N).

(Rejected schema 4) If  $\langle P \rangle$  is  $\square$ -true then  $\square(\langle P \rangle$  is  $\square$ -true).

But is this really so bad for the defender of contingent propositions? Not really. Recall a remark I made in §IV: once we've accepted serious actualism, we mustn't take  $\langle \text{Graham is necessarily human} \rangle$  to imply

that  $\langle \text{Necessarily, Graham is human} \rangle$ , since the latter, but not the former, implies Graham's necessary existence (according to my construal of the *de re* / *de dicto* distinction). This surprising feature is an upshot of serious actualism and is completely independent of the thesis that propositions are contingent entities. It should not be taken as a mark against the contingency of propositions, since it is a consequence of a different thesis. Well, the above failure of Rejected Schemas 3&4 is not so different from that case. Each of them is just another instance of the fact that, once we accept serious actualism, we must take care not to confuse  $\langle a \text{ is } \Box\text{-}F \rangle$  with  $\langle \Box(a \text{ is } F) \rangle$ ,<sup>10</sup> hence the legitimacy of accepted schemas 12&13 should not be confused to legitimate the rejected schemas 3&4.

In the last three sections, I've been listing several schemas that the defender of contingent propositions must reject. No doubt some detractors will take this as a sign that I'm willing to bite one bullet after another. Surely that reveals the weakness of my view. However, I *really* do not think that the dialectical situation is like this. In each case, I've been at pains to show that (i) I'm not rejecting any schemas that are theorems of standard modal logic, and (ii) I'm just taking care to heed the semantically relevant distinction between predicate and operator. For those who still believe that I'm biting bullets, I'm not sure what else I can say to them. I can still accept modal logic, and take truth and necessary truth as genuine properties; so what's the problem? If they regard rejected schemas 1-4 as so intuitively obvious on their own merits, then I have to put the question back to them: are you sure *you're* not glossing over semantically relevant distinctions?

### Inner and outer truth

In some way or another, all of my responses have relied on the claim that a proposition can be true *at* a world without existing *in* that world. The proposition need not *bear the property of truth as an inhabitant of that world*. This distinction between "true at" and "true in" harkens back to Robert Adams and Kit Fine. Fine says that a proposition possesses "outer truth" with respect to a world if it is true at it but need not exist in it, and it possesses "inner truth" with respect to a world if it bears truth in that world. Ever since the distinction was introduced, there have been a number of philosophers who have been suspicious. Here are some of the things that they have said against it.

*VI. Outer truth is only dubiously consistent with serious actualism.* I've heard it said that  $\langle p \rangle$  bearing the property of *outer truth at* a world  $w$  in which  $\langle p \rangle$  doesn't exist is in violation of serious actualism, since it means that  $\langle p \rangle$  bears a property at a world in which it doesn't exist.

This is a misunderstanding. Let  $\langle p \rangle$  be the proposition  $\langle \text{Socrates doesn't exist} \rangle$  and  $w$  be a world in which Socrates doesn't exist. The proposition  $\langle p \rangle$  exists in *our world*, but it does not exist *in*  $w$ . Hence, it doesn't bear *any* properties in  $w$  (as per serious actualism). But in *our world* it bears the *this-worldly-property* of *representing Socrates as non-existent*. Since  $w$  is a world in which Socrates doesn't exist, it follows that *the way*  $\langle p \rangle$  *represents things* is how *things are in*  $w$ . It thus bears (in our world) the property of *representing things as they are in*  $w$ . This is all that is meant by  $\langle p \rangle$  being true at  $w$ . There's no violation of serious actualism.

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<sup>10</sup> Or  $\langle \langle P \rangle \text{ is } N \rangle$  with  $\langle \Box P \rangle$ . Remember, I defined  $N$  so that the tie between these is only a material biconditional, not a strict biconditional. They are not interchangeable in modal contexts. The reason for this, once again, is serious actualism.

*VII. The advocate of contingent propositions must reject the intuitive definition of truth at a world:  $\langle p \rangle$  is true at  $w$  iff were  $w$  actual,  $\langle p \rangle$  would be true.*

The objector is right that my view must reject this definition of ‘true-at- $w$ ’ (add it to the list!). But I find it rather disingenuous to claim that there’s such a thing as *the* intuitive definition of “truth at a possible world.” Remember, possible worlds were introduced into this debate in order to visualize the mathematical apparatus that was developed by Kripke to give soundness and completeness proofs for the various formal systems that were intended to give a formal capture of the natural language uses of “necessarily” and “possibly.” With such a far remove from ordinary thought and talk, claims of intuitions are spurious here.

At any rate, my view can offer an alternative definition, that makes essential appeal to the representational features of propositions. To wit,

(Accepted Schema 14)  $\langle p \rangle$  is true at  $w$  iff  $\langle p \rangle$  represents things to be such-and-so, and were  $w$  actual, things would be such-and-so.

However, I am quick to note that I offer this definition *only* so that we can discuss the modal attributes of propositions (on my view) using the possible-worlds crutch. It is not to be taken as revealing the nature of the modal features of propositions. For that, we need to look to the ‘official’ definitions given by accepted schemas 2 & 3.

*VIII. The notion of ‘outer truth’ is mysterious until it has been explained.*

See above for my response, where I take myself to have given an explanation. Of course, my explanation makes essential appeal to the representational features of propositions. And perhaps *those* need an explanation. But those need to be explained as part of an explanation of *truth* (simpliciter); they aren’t a peculiar problem for *outer truth*.

My official definitions 2 & 3 also make use of an unreduced idiom of ‘must’ and ‘could’, but if this is one’s complaint, then see again my parenthetical remark in §III. The point of these schemas is to give the truth conditional contributions of ‘necessarily’ and ‘possibly’ when operating on propositions. It is not to say what *necessity* and *possibility* really are in their ultimate natures, by reducing them to non-modal terms.

*IX. The problem with the notion of “outer truth” is that it is mere “picture thinking.” Talk of “comparing” what a proposition says “outside” of a possible world with what goes on “inside” the possible world is just a metaphor. It needs to be replaced with an actual definition.*

Look, as I see things, *virtually all talk of possible worlds is metaphoric*. Possible worlds are just a picturesque way of thinking of the semantic apparatus that allows us to track the logic of “necessarily” and “possibly.” It should not be taken as revealing the deep metaphysical nature of necessity and possibility. So to complain that “outer truth” is too picturesque, despite being totally kosher as far as modal logic is concerned, is to fail to appreciate this point. I think *you’re* the one who’s taking the pictures too literally. *Tu Quoque!*

## Postscript

I sometimes get the sense that those who worry about the alleged mysteriousness of the truth-in-a-world vs. truth-at-a-world distinction are motivated by that old-school reductionist program. Apparently the motivation goes like this. *Necessity* and *possibility*, if they are to be legit, must be reduced to truth *at all*, or some, worlds, respectively. So to understand the nature of modality, we must understand the nature of these worlds. David Lewis says that they are concrete universes that are unrelated to ours in space and time. And perhaps we can understand true-in-vs-true-at if we accept that view, but who would want to do that other than Lewis? But if we're not going to go with Lewis, then we need to understand these worlds as some sort of conglomeration of abstract objects, and this will most likely involve propositions. But if worlds are constructs of propositions, then how can we understand a proposition being true at a world without existing in it? That would be very confusing!

Actually there is a way to do it; see Einheuser (2012). But the main point that I would want to make is that we do not need to accept the reductionist presupposition that gives rise to this problem. We don't need to say that *modality really is just truth at the worlds* and *the worlds really are just conglomerates of propositions*. It's better, I think, to say that modal attributes are real attributes of real objects (or can be understood thereby) and therefore they are not essentially a matter of possible worlds. Instead, the possible worlds are *theoretical fictions* that are instrumentally useful for semantic theory, but are not fundamentally revelatory of the nature of modality.

According to this metaphysics of modality, there is only one possible world: the actual world. The modal facts are real facts about this-worldly objects; they are not to be construed as derivative of non-modal facts about what goes on in other worlds. (I've said a bit more about this view of modality in my review of David Lewis' *On the Plurality of Worlds*.) On this conception, *there really is no mystery about the true-in vs. true-at distinction*. It's simple: "true-at" is a semanticist's instrument for modelling modal talk, and "true-in" is vacuous for all but the actual world, since there is only one world (the actual world) for a proposition to be true in.

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