# On Propositions and Fineness of Grain (Again!)[1]

**Jeffrey C. King**
**Rutgers University**

What I plan to do in the present paper is, first, sketch the theory of propositions I defended in a recent book I coauthored with Scott Soames and Jeff Speaks.[2] Second, I want to respond to a criticism of that view raised by Peter Hanks [2015]. Finally, I want to discuss some changes in my view since the publication of King, Soames, Speaks [2014]. Before all that, let me begin by motivating my view of propositions and describing how I came to hold it.

In the mid 1990s, I began thinking about the metaphysics of propositions. I became convinced that any theory of propositions worth that epithet had to provide an explanation of how/why propositions have truth conditions. In my first papers on this topic in the mid 1990's, I made clear that I viewed explaining how/why propositions have truth conditions or represent the world as being a certain way as an important desideratum for a theory of propositions.[3] I'll say more about this below.

By that time, I had also become convinced that some version of the neo-Russellian view of propositions as structured entities was correct. So I took it that propositions were some sort of *complexes* with what are usually considered their constituents as parts. Thus, the proposition that Sophie skis is some sort of complex consisting of Sophie and the property of skiing being structured in some way in the proposition. Combining this idea with the previous thought that we must provide some

[1]A version of this paper was presented at the Conference on Propositions on May 8, 2014 sponsored by the ERC Nature of Representation Project at the University of Leeds and at the Unity and Individuation of Structured Propositions Conference: Ninth Barcelona Conference on Issues in the Theory of Reference June 22-24 2015. I thank both audiences for their helpful comments. Thanks also to an anonymous referee for helpful comments.
[2] King, Speaks, Soames [2014]
[3] See e.g. King [1995].

sort of explanation of how/why propositions have truth conditions, the problem of providing an adequate account of structured propositions reduces to the account satisfying at least the following two conditions:

C1. It says what it is that structures constituents to yield the structured complexes that are propositions.

C2. It shows how/why propositions so construed have truth conditions/represent the world as being a certain way.

It seemed to me clear that the classical conceptions of structured propositions of Frege and Russell were unable to satisfy these two conditions. In particular, though their theories *may* satisfy the first condition (in the case of Frege, I'm not even sure he does that in anything but a metaphorical way), neither theory is capable of satisfying the second. The problem is that both Frege and Russell thought that propositions had truth conditions, and so represent the world as being a certain way, by their very natures and independently of minds and languages.[4] The problem is that no one has any idea how something could have truth conditions by its very nature and independently of minds and languages. So because the classical conceptions of propositions due to Frege and Russell were unable to satisfy C2 above, I rejected them.[5]

But of course, as I brought out in King [2007] and subsequent papers, failing to satisfy C2 above doesn't just cut against the classical theories of Frege and Russell. First, it cuts against the view that propositions are ordered n-tuples of their constituents.[6] Consider the proposition that Sophie loves Carl. Consider a view on which that

[4] In saying that Frege and Russell both thought that propositions had truth conditions, I mean only that if asked under what conditions the proposition (thought) that A differs from B is true, both would have been happy to answer that the conditions are that A in fact does differ from B. Thanks to an anonymous referee here.
[5] King [2009] pp. 259-261.
[6] King [2007] pp. 7-8.

proposition is the n-tuple <Sophie, loves, Carl>. Let's set aside the to my mind legitimate worry that there are many tuples that are equally good candidates for being the proposition that Sophie loves Carl.[7] From the standpoint of satisfying C2 above, the problem here is that in general, tuples just are not the kinds of things that have truth conditions. Hence, we have no explanation of how/why propositions understood as tuples *do* have truth conditions. Further, we could have no explanation of why the tuple <Sophie, loves, Carl> is true iff Sophie loves Carl as opposed to being true iff Carl loves Sophie, or Sophie doesn't love Carl or Carl doesn't love Sophie. Nothing in the tuple itself tells us what its alleged specific truth conditions are. In short, the view that propositions are n-tuples cannot explain why propositions have truth conditions generally, nor why they have the specific ones they are supposed to have. Hence, that account of propositions flounders on C2 above and is to be rejected.

Finally, failure to satisfy C2 above cuts against views of propositions as sets of worlds or the characteristic functions of such sets. Let me quote a passage from King [2013b] where I make this point. Here I discuss propositions as functions from worlds to truth-values, but I make exactly similar points about propositions as sets of worlds:[8]

> First, let's consider the functions version: propositions are functions from worlds to exactly two arbitrary elements, say 1 and 0. But why/how would such a function have truth conditions or represent the world as being a certain way? Certainly, there are lots of functions from a set of elements to {0,1} that don't have truth conditions. But then why do functions from a

[7]I raised this objection to the propositions-as-tuples view in King [2007] pp. 7-8.
[8]Immediately prior to this passage, I was discussing Stalnaker's [1984] claim that on the view that propositions are functions from possible worlds to T and F, it doesn't matter what T and F are, as long as there are exactly two of them: "A proposition is a function from possible worlds into truth-values...There are just two truth-values—true and false. What are they: mysterious Fregean objects, properties, relations of correspondence and noncorrespondence? The answer is that it does not matter what they are; there is nothing essential to them except that there are exactly two of them." (p. 2)

> set of worlds to {0,1} have truth conditions? …there just isn't anything in the functions themselves, taken independently of minds and languages, that determines that they have truth conditions.
>
> Further, it does not seem like the functions taken independently of minds and languages determine specific truth conditions either. If a function maps w to 1, is it true or false at w? Recall that Stalnaker thinks that it doesn't matter what T and F are so long as there are exactly two of them. Ok, let's use L.A. and New York instead. If a function maps w to L.A., is it true or false at w? Surely, it is hard to take this question seriously— as a question that has some determinate answer in the absence of stipulation.[9]

So the point here is that construing propositions as functions from worlds to two arbitrary elements doesn't allow us to explain why propositions have truth conditions generally nor why a given such function has the specific truth conditions it is alleged to have. Again, this runs afoul of C2 above. As I indicated above, exactly similar considerations militate against the view that propositions are sets of worlds.

That all these different accounts of propositions fail to satisfy C2 above motivates the search for a view that does satisfy that condition. However, some will have different reactions to the present considerations. So let's pause to consider what I take to be the main alternative reactions.

First, one might be led to simply deny that propositions exist. One might agree that propositions as traditionally conceived fail to satisfy C2 and that this is reason for thinking there are no such things. One might then also think that if there are no such things as propositions traditionally conceived, then there are no such things as propositions. Call this *defeatism*. As I understand defeatism, it is not claiming that the things that play the proposition role are quite different from the way we classically thought they were. I agree with that, and I am not a defeatist. The claim is that *nothing* (at least no one thing) plays the role propositions were thought to play. Whatever jobs

[9] King [2013b] p. 82-83.

propositions were alleged to do need to be done in other ways. Part of the burden of King, Soames and Speaks [2014] is to argue against defeatism by arguing against theories that try to get by without propositions. Speaks' chapter 2 provides such arguments. I also think defeatism should be viewed as a doctrine of last resort. If we simply can't get a theory of propositions that satisfies C2, then that is a reason for rejecting propositions and embracing defeatism. But until we convince ourselves of this, by attempting and failing to formulate adequate theories of propositions that satisfy C2, we should keep defeatism at arm's length.

A second reaction here is to simply reject C2 as a condition on theories of propositions. On this view, there need be no explanation of how/why propositions have truth conditions and so represent. Call this view *primitivism*, since it holds that the claim that propositions have truth conditions is explanatorily primitive.[10] So, that the theories of Frege and Russell hold that propositions by their very natures and independently and minds and languages have truth conditions and that such theories will have no further explanation of how/why this is the case is no strike against them at all. I don't have a good feel for primitivism, as I'll discuss in a moment. But I suspect it is grounded in a metaphysical view (pun intended). The metaphysical view is that it is just a metaphysically brute fact that propositions have truth conditions. This fact is metaphysically brute in the sense that there are no more metaphysically basic facts that the fact that propositions have truth conditions is grounded in. Hence, there can be no explanation of how/why propositions have truth conditions: that they do so is metaphysically basic.

[10] Merricks [2015] defends primitivism and Keller [2013] expresses sympathy for it.

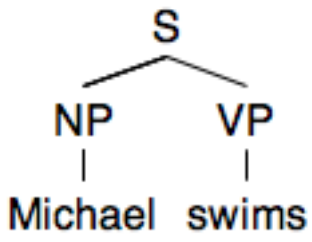
The problem with this view is that it seems completely mysterious. How could it be a metaphysically basic fact that something represents things as being as certain way? That a thing has truth conditions, that it represents things as being a certain way, seems to be precisely the sort of thing that is not metaphysically basic and requires further explanation. There are certain properties the possession of which seem to call out for further explanation and whose possession seems as though it should be grounded in the possession of "more basic" properties. It may be hard to give a criterion for being such a property, but properties like *being alive*, *believing that snow is white*, and *being morally good* seem to be examples of such properties. *Having truth conditions* seems to be an example as well. When we consider other things that represent, we have the same inclination to explain what possession of that property consists in and how/why the thing in question manages to possess the property. Sentences, minds, maps, perceptual experiences all represent. And in each case we feel compelled to explain how/why such things manage to do this. Surely it would seem utterly mysterious to adopt the view that e.g. there is no explanation of how/why perceptual experiences represent things as being a certain why because that they do so is metaphysically basic. The feeling one gets when one hears such a view is "how could something like *that* have no further explanation?'. I think we should think that same thing about the claim that propositions have truth conditions. It just isn't the kind of thing that could have no further explanation.

A third reaction to C2 is to deny that propositions *do* have truth conditions or represent things as being a certain why. On such a view, then, there is nothing to explain! Jeff Speaks (King, Soames, Speaks [2014]) holds such a view, as does Robert Stalnaker

[2012].[11] Call any such view a version of *non-representationalism*. I don't have any *general* argument against non-representationalism. I'll simply say that such views as are known to me have various flaws, at least some of which are traceable to the denial that propositions have truth conditions and represent. However, I will say that I take non-representationalism to be the best reaction I've discussed to C2 and the failure of many theories of propositions to satisfy it other than that of formulating a theory of propositions that satisfies it.

Let me turn now to sketching the positive account of propositions I defended in King, Soames, Speaks [2014]. Here, I will try to illuminate crucial features of the view in somewhat novel ways. Idealizing a lot, let's begin by considering the sentence 'Michael swims' with the syntactic structure as follows:

1.




Let's call the syntactic relation that obtains between 'Michael' and 'swims' in the sentence here R. I call relations like R that lexical items stand in to form sentences sentential relations.

[11]Speaks denies propositions represent, but holds they have truth conditions. But since propositions are just properties, to say that propositions are true or false at worlds is just to say they are instantiated or not at them (or would be instantiated at a nonactual world w if w were actual). And it seems to me plausible to think that they need be no explanation of the fact that properties are instantiated or not by certain kinds of things. So perhaps Speaks can get away with not having to explain how/why propositions have truth conditions. See King, Speaks, Soames [2014] p. 146

It is worth pointing out, and this will figure prominently in what is to come, that the syntactic relation R has a certain semantic significance in English. That is, English speakers *interpret* R in a certain way: they take R to *ascribe* the semantic value of 'swims' to the semantic value of 'Michael'. This is part of the reason that the English sentence is true iff Michael *possesses* the property of swimming. Further, it is a contingent matter that R is interpreted by English speakers in the way it is in the sense that there might have been a language that included the sentence 1, but whose speakers took the sentence to be true iff Michael doesn't swim. In so doing, they would have been interpreting R differently from the way English speakers do.

Because the idea that English speakers *interpret* R, and syntactic concatenation generally, plays a central role in my account of propositions, I should say more about it. That English speakers interpret R as ascribing the semantic value of 'swims' to the semantic value of 'Michael' results in the fact that they take 1 to be true iff Michael *possesses* the property of swimming. Similarly, when English speakers confront other cases of syntactically concatenated expressions, they spontaneously and unreflectively compose the semantic values of the concatenated expressions in characteristic ways. For example, when English speakers confront 'brown cow' they do something like conjoin the properties that are the semantic values of the two expressions; when they confront 'some man', they do something like saturate an argument of the relation expressed by 'some' with the property expressed by 'man', resulting in the (relational) property of properties that is possessed by a property A iff some man has A. That speakers *interpret* syntactic concatenation in the ways they do consists in the fact that they spontaneously and unreflectively compose the semantic values of the concatenated expressions in the

ways described. Hence, this is how my talk of R above being interpreted by English speakers as ascribing the property of swimming to Michael should be understood. I'll put the fact that speakers of English so interpret R by saying that R encodes ascription in English.

But *why* do English speakers interpret syntactic concatenation in the small handful of ways they do? It seems a likely that speakers of different natural languages interpret syntactic concatenation in *the same small handful of ways*. This would make it a reasonable hypothesis that doing so is part of our biologically endowed language faculty. That this is so would make language acquisition significantly easier. When encountering concatenated expressions, speakers would be hard wired to compose the semantic values of the concatenated expressions in a small handful of ways. Hence, speakers would only need to learn which way to do it in specific cases.

It is important to see that the idea that syntactic concatenation has a certain semantic significance in that speakers interpret it in a small handful of ways is not idiosyncratic to my view. Consider what Heim and Kratzer [1998], the standard semantics textbook, call *composition principles*:[12]

(13' ) Functional Application (FA)
If $\alpha$ is a branching node and $\{\beta,\gamma\}$ the set of its daughters, then, for any assignment a, $\alpha$ is in the domain of $||\ ||^a$ if both $\beta$ and $\gamma$ are, and $||\beta||^a$ is a function whose domain contains $||\gamma||^a$. In this case, $||\alpha||^a = ||\beta||^a(||\gamma||^a)$.

(14') Predicate Modification (PM)
If $\alpha$ is a branching node and $\{\beta,\gamma\}$ the set of its daughters, then, for any assignment a, $\alpha$ is in the domain of $||\ ||^a$ if both $\beta$ and $\gamma$ are, and $||\beta||^a$ and $||\gamma||^a$ are both of type <e,t>. In this case, $||\alpha||^a = \lambda x :\ x \in D$ and x is in the domain of $||\beta||^a$ and $||\gamma||^a$. $||\beta||^a(x) = ||\gamma||^a(x) = 1$.

(15') Predicate Abstraction (PA)
If $\alpha$ is a branching node whose daughters are a relative pronoun and $\beta$, then $||\alpha|| = \lambda x :\ x \in D$ and $\beta$ is in the domain of $||\ ||^x$ . $||\beta||^x$.[13]

[12] Heim and Kratzer [1998] p. 105.
[13] PA ends up being revised several times, with the final version appearing on p. 186.

These are just statements as to how English speakers interpret syntactic concatenation in a variety of cases. That is, they tell us how English speakers compose semantic values in cases in which different kinds of expressions are concatenated. Any semantic theory must do this and so is committed to the view that syntactic concatenation has semantic significance in the sense that speakers interpret concatenation as indicating how semantic values are to be composed in different cases. To repeat, then, the view that syntax has semantic significance and is interpreted by speakers in a small handful of ways is not idiosyncratic to my view.

I suspect that my talk of *interpreting* syntactic concatenation may have misled some, including Peter Hanks who I discuss below, as to what I am claiming here. So let me say a bit more about this. As I said, our interpreting syntax in the way we do—that we compose semantic values in the way we do—is part of our language faculty. Doing so is a consequence of our implementing the grammar of our language. As a result, we are not even aware of composing semantic values in the ways we do, which is why we actually have to *learn* clauses like those from Heim and Kratzer [1998] above. We have to *learn* how we in fact compose semantic values.

It should be clear that in talking of *interpreting syntax*, I am using 'interpret' as a technical term. Hence, interpreting syntax has nothing to do with ordinary talk of interpreting, as when we might agree to interpret my touching my nose as a signal that we should leave the party. To repeat, our language faculty is essentially hard wired to interpret syntax in my sense in a small handful of ways and we aren't even aware that we are interpreting syntax in the ways we do nor do we have any choice in doing so.

Obviously, agreeing to interpret my nose touching in a certain way is nothing like that. I'll return to this below in discussing Hanks.

Returning to the main theme, in virtue of the existence of the English sentence 1, there is a two-place relation that Michael stands in to the property of swimming. The relation is this: *there is a context c and assignment f such that ___is the semantic value relative to c and f of a lexical item e of some language L and ___ is the semantic value relative to c and f of a lexical item e' of L such that e occurs at the left terminal node of the sentential relation R that in L encodes ascription and e' occurs at R's right terminal node*. This relation, I claimed, is the relation that holds Michael and the property of swimming together in the proposition that Michael swims. As a result, I'll call it the propositional relation of the proposition that Michael swims.

As I did in King [2007, 2009, 2013b], I'll call an object possessing a property, or n objects standing in an n-place relation, or n properties standing in an n-place relation or etc. a fact. Then the proposition that Michael swims is the fact consisting of Michael and the property of swimming standing in the two-place relation mentioned above: *there is a context c and assignment f such that Michael is the semantic value relative to c and f of a lexical item e of some language L and the property of swimming is the semantic value relative to c and f of a lexical item e' of L such that e occurs at the left terminal node of the sentential relation R that in L encodes ascription and e' occurs at R's right terminal node*.[14]

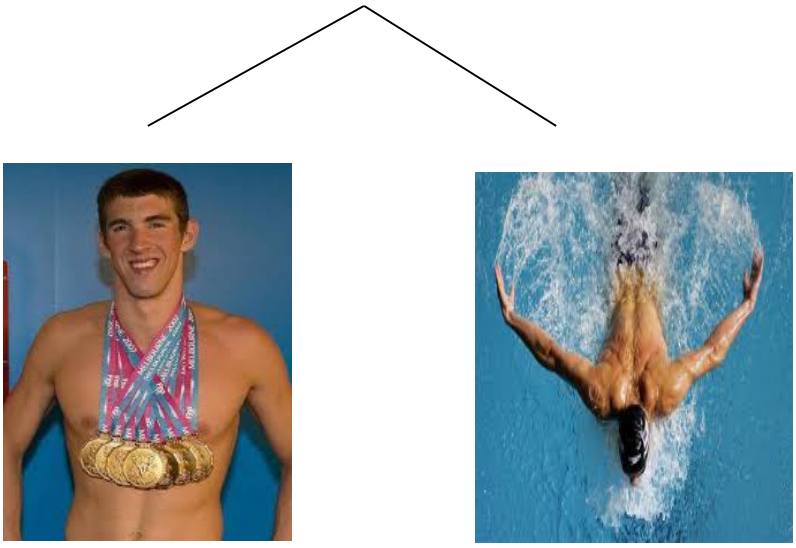
I have claimed that the proposition that Michael swims is the fact described above consisting of Michael standing in the two-place relation mentioned to the property of

[14] If, as some people think, there is no linear order to elements at LF, talk here of left and right terminal nodes is misleading and should be replaced by talk of simply occurring at terminal nodes. See note 32 below.

swimming. We must now face the question of how/why this fact has truth conditions in order to satisfy C2 above. One of the most radical and provocative features of the account of propositions in King [2007, 2009, 2013b] is the idea that speakers endow the fact that is the proposition that Michael swims, and propositions generally, with truth conditions. This will explain why this fact has truth conditions, while many other facts do not.

Though the two-place propositional relation binding together Michael and the property of swimming is highly complex (e.g. it has the sentential relation R of 1 as a component or "part"), let's suppress that complexity for a moment and simply focus on the idea that on the present view the proposition that Michael swims is a fact consisting of Michael standing in the (complex) two-place propositional relation to the property of swimming. We can represent this fact/proposition thus:

1P.



(where the picture on the left is Michael; that on the right is the property of swimming and the branching tree structure is the propositional relation). Recall our earlier discussion of the sense in which speakers interpret syntactic concatenation by composing

the semantic values of concatenated expressions in characteristic ways. Now one way the fact 1P could have truth conditions is if speakers interpreted the *propositional relation* here in the way they interpret the sentential relation of sentence 1 and composed the semantic values at its terminal nodes by *ascribing* the property of swimming at its right terminal node to Michael at its left terminal node. Then the fact would be true iff Michael possessed the property of swimming. So if the *propositional relation* of 1P were interpreted as ascribing the property at its right terminal node to the individual at its left terminal node, and so itself encoded ascription, the fact/proposition would have truth conditions. Hence, in claiming that the propositional relation *is* interpreted in this way, we explain why the proposition/fact has truth conditions.

But the explanation is still preliminary and unsatisfying until we explain what constitutes our interpreting the propositional relation of 1P as ascribing the property of swimming to Michael. We certainly aren't aware of interpreting propositional relations of propositions like 1P. We need to explain what exactly constitutes our so interpreting the propositional relation. Let me sketch my explanation, which comes in two steps.

Call the fact that I claim is the proposition that Michael swims <u>FAST</u>. The first step explains why we should think that it is FAST's propositional relation, rather than that of some other fact, that we are interpreting. The second step explains exactly what constitutes the fact that we are interpreting FAST's propositional relation.

As indicated, we first need to explain is why it is FAST, rather than some other fact, whose propositional relation we interpret as ascribing the property of swimming to Michael so that it is true iff Michael swims. I believe that there are a number of conditions a fact must satisfy in order to be the one whose propositional relation we so

interpret, including being a fact consisting of Michael standing in a two-place relation to the property of swimming.[15] But a crucial condition is that we must be able to make sense of the idea that speakers have some sort of *cognitive connection* to the fact in question. This seems to me just obvious. Surely it would be bizarre to hold that speakers are interpreting the propositional relation of a fact, say, on the other side of the universe in a certain way, where we claim that they have no cognitive connection or access to it at all. Interpreting something requires having some sort of cognitive access to it. Further, since we want speakers of different languages to in some cases grasp the same proposition, we must be able to make sense of speakers of *different* languages interpreting the propositional relation of the *same* proposition/fact. And this requires them to be cognitively connected to the same fact in order that we can make sense of their interpreting *its* propositional relation.

In addition, it seems reasonable to hold that the required cognitive connection to the fact that is the proposition that Michael swims comes about in virtue of speakers deploying sentences of their languages. For by the time speakers deploy sentences of their languages, they presumably must have propositional attitudes whose contents are the semantic contents of the sentences they are using. But this means that propositions must exist by that time. That in turn means that speakers must be interpreting the propositional relations of the facts that are propositions in certain ways by that time. And in turn, this means that speakers at that time must be cognitively connected to the relevant facts. The most straightforward explanation of why speakers have cognitive connections to the facts that are propositions as soon as they deploy sentences of languages is that by

[15] See King [2007] pp. 62-64 and King [2009] p. 268 for discussion.

deploying sentences of their languages they thereby have cognitive access to the relevant facts.[16]

To summarize, then, for a fact to be the proposition that Michael swims, we must be able to make sense of the idea that speakers of different languages all have cognitive access to it and do so in virtue of deploying the relevant sentences of their languages. I'll now argue that FAST is preeminently a fact of this sort.

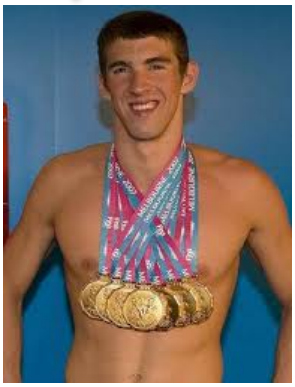
To see this, note first that sentences (types) themselves are likely facts in my sense. For it seems plausible that word types are properties and hence that sentences are properties standing in sentential relations. Obviously, speakers of e.g. English and German have cognitive access to the facts that are sentences in their languages, like 'Michael swims' and 'Michael schwimmt'.

More importantly, as a result, they also have access to the following "interpreted sentences":

[16] Of course the explanation cannot be that they have cognitive access to the facts that are propositions because they are expressed by the sentences they are deploying. For we are now trying to explain how certain facts *came to be* propositions (by having their propositional relations interpreted in certain ways, etc.) and so we cannot appeal to the fact that they *already are* propositions expressed by sentences of the relevant languages.

1IE.

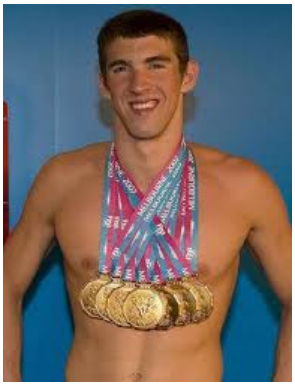
Michael



swims

1IG.

Michael



schwimmt

These are just the sentences, together with the semantic relations the lexical items bear to their semantic values (including the semantic values themselves—these relations are represented by vertical lines connecting ‘Michael’ to Michael and ‘swims’/’schwimmt’ to

the property of swimming). Hence these interpreted sentences are just "bigger" facts than the sentences themselves in virtue of including the semantic relations between lexical items and their semantic values, as well as the semantic values themselves.[17] It seems to me that by having cognitive access to the sentences 'Michael swims.' and 'Michael schwimmt.' and being competent in English and German, English and German speakers thereby have cognitive access to the facts that are the interpreted sentences 1IE and 1IG respectively. For the sake of things to come, let's discuss this a bit further.

Recall that we are using the notion of *cognitive access* to explain how speakers could be in a position to interpret the propositional relations of things like 1P and endow them with truth conditions. Hence, having cognitive access to sentences and interpreted sentences cannot be a matter of having propositional attitudes towards the propositions expressed by natural language sentences on pain of our account of how propositions expressed by natural language sentences have truth conditions presupposing the existence of propositions expressed by natural language sentences. This means that the sense in which speakers have cognitive access to sentences and interpreted sentences cannot require e.g. understanding, and hence grasping the propositions expressed by, the former. The notion we need is one on which speakers have the sentences and interpreted sentences in mind in such a way as to be in a position to interpret features of them. In the case of a sentence, the speaker must have the sentence in mind as a result of which she is in a position to understand it but has not yet done so. It is worth commenting on what

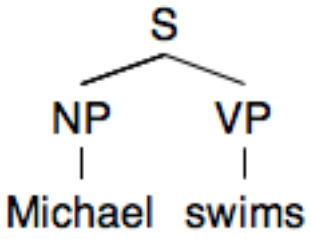
[17] We can describe the fact 1IE as follows: Michael is the semantic value of 'Michael' relative to some context c and assignment f, and the latter occurs at the left terminal node of the syntactic relation R that in English encodes ascription and the English word 'swims' occurs at the right terminal node of R and has as its semantic value relative to c and f the property of swimming. The figures in 1IE and 1IG fail to capture that 'Michael swims.'/'Michael schwimmt.' is English/German and that Michael is the semantic value of 'Michael' relative to a context of utterance (this qualification is unnecessary here, but would be crucial if we considered the sentence 'I swim' in a context with Michael as the speaker).

this sense must be. When speakers have cognitive access to sentences in this sense—have them in mind in the relevant sense—they are rather dimly consciously aware of what it is they have in mind. If current syntactic theory is on the right track, when speakers have even simple sentences like 1 in mind in this sense, they are by no means even close to being consciously aware of the syntactic complexity of the object of their awareness. Hence, the cognitive access speakers have to sentences that we are appealing to here is rather dim, at least on the conscious level. The idea is that when a speaker has cognitive access to a sentence in this sense, she is able to have cognitive access to the corresponding interpreted sentence by simply exercising her linguistic competence with the lexical items and accessing their semantic values (relative to parameters). She thereby has in mind, or has cognitive access to, the relevant interpreted sentence, again in the dim sense discussed above in which she is not consciously aware of its complex syntactic structure. This is how a subject moves from having cognitive access to 1 to having cognitive access to the interpreted sentence 1IE or 1IG above.

Let's say that the fact of object o possessing property P is a witness for the fact of there being P's (i.e. the fact of the property P having the property of being instantiated); similarly for the fact of o bearing R to o' and the fact of there being an x and y such that xRy, and so on. (I'll sometimes say that the fact that o possesses P witnesses there being P's *with respect to o* and similarly for other cases.) The facts 1IE and 1IG are both witnesses for the fact that I claim is the proposition that Michael swims, namely, FAST, with respect to context, language, lexical items, etc. FAST is the result of "existentially generalizing" on the words in 1IE/1IG, the languages involved, the context etc.

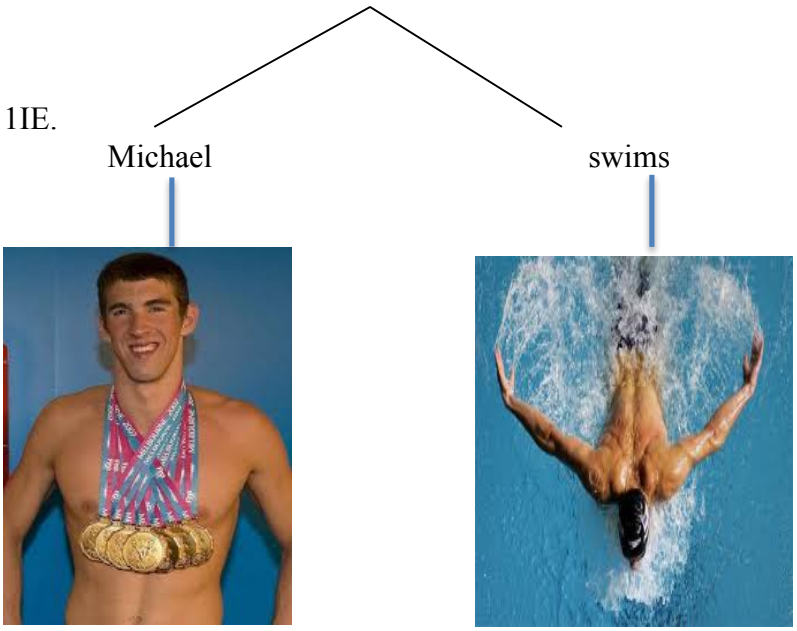
The crucial point for current concerns is that that having cognitive access to a witness for a fact allows one to have cognitive access to the fact witnessed. I suspect this is true in general: having cognitive access to the fact of o possessing P allows one to have cognitive access to the fact of there being P's. But whether that is so or not, in the present case of 1IE and 1IG, it seems very plausible that having cognitive access to the latter provides speakers cognitive access to FAST. The crucial idea here is that when one has cognitive access to a given fact, one is able to *abstract* from certain features f1,…,fn of the fact one has in mind, thereby having in mind the fact witnessed with respect to f1,…,fn by the original fact. Not only does it seem plausible that one is able to abstract from features of a witness fact in this way, thereby having the fact it witnesses in mind, but it also seems plausible that we do this in moving from having a sentence in mind to interpreting the propositional relation of the proposition expressed by the sentence and thus understanding it. Consider again the sentence 'Michael swims':

1.




and suppose a speaker has the sentence in mind. As indicated, the speaker then accesses the semantic values of the sentence (relative to the context of utterance and assignment), with the result that the speaker now has the interpreted sentence in mind:

1IE.




At this point, the speaker abstracts from all the now irrelevant features of the interpreted sentence: the words in it, what language it is in, the context in which the utterance was made, and so on. After all, these features of the interpreted sentence were just a means for getting from the sentence to the semantic values of the lexical items in it (with respect to parameters). Since that has been done in moving from the sentence to the interpreted sentence, there is no reason to retain those features. The speaker thereby has the proposition that Michael swims, FAST, in mind, which the interpreted sentence witnessed with respect to a language, context, lexical items and so on. Hence, the speaker is now in a position to interpret its propositional relation, and thereby entertain the proposition. Note for later that in the process so far, there has been no composition of semantic values and hence the semantic significance of the syntax in 1, which precisely is that semantic values are to be composed in a particular way, has not yet been processed.

A final point is worth emphasizing about these matters. In moving from having cognitive access to a sentence like 1, to having cognitive access to an interpreted sentence like 1IE, and finally to having access to a fact/proposition like FAST and so being in a

position to interpret its propositional relation, speakers are not consciously aware of doing so and do not do so voluntarily. I think this is for two related reasons. First, as I've indicated, the speaker is only dimly consciously aware of the sentence in the first place in having cognitive access to it, not being consciously aware of its real syntactic complexity. Second, we are describing the process of understanding a sentence and so grasping the proposition it expresses. We expect this process to be governed by the language faculty. Like many processes so governed, e.g. constructing a sentence with quite significant syntactic complexity including much hierarchical complexity, we shouldn't expect speakers to have conscious awareness of such a process or feel as though they are voluntarily engaged in it.

So having cognitive access to a sentence like 1 gives speakers cognitive access to an interpreted sentence like 1IE, which in turn gives speakers cognitive access to FAST. Thus we can see how English and German speakers can all have access to FAST in virtue of deploying the relevant sentences of their languages. Hence, we are in a position to make sense of their interpreting its propositional relation as encoding ascription, and so make sense of the claim that it is FAST whose propositional relation we so interpret. In doing so, the speaker would entertain the proposition FAST.

But even if we are now convinced that it is *FAST's* propositional relation that we interpret as ascribing the property of swimming to Michael, we need to say what constitutes our so interpreting it. That is, what is it we do that amounts to our so interpreting it? It is simply that we compose the semantic values at the terminal nodes of the propositional relation in the way we do. In the end, this is just a matter of the *sentential relation* R having the semantic significance it does. As we have seen, one way

of entertaining the proposition that Michael swims is to first have the sentence 'Michael swims' in mind. (Recall that the sentential relation of this sentence has a certain semantic significance: it ascribes the semantic value of 'swims' to the semantic value of 'Michael'.) One then accesses the semantic values of 'Michael' and 'swims'. One thereby has the interpreted sentence 1IE above in mind. Abstracting from the fact that 'Michael swims' is an English sentence containing certain lexical items that was uttered in a certain context and so on, one thereby has the fact that is the proposition that Michael swims—FAST—in mind. Only now are semantic values composed; as was mentioned earlier, no composition of semantic values occurs in going from having the sentence in mind to having the interpreted sentence in mind to having FAST in mind. Hence, when the composition of semantic values occurs, it is FAST that we have in mind/have cognitive access to. In now composing semantic values the semantic significance of the *sentential relation* of 'Michael swims' is finally processed. Thereby, the property of swimming is ascribed to Michael. Since it is the fact that is the proposition that Michael swims that we have in mind when semantic values are composed, we count as interpreting its *propositional relation* as ascribing the property of swimming to Michael. So interpreting the sentential relation in the way we do, by composing semantic values in a certain way at a certain point in the process just described, *just is* interpreting the propositional relation in the relevant way. Note that this means that all composing of semantic values takes place in the definition of truth at a world for propositions.

To summarize, FAST has truth conditions because speakers interpret its propositional relation as ascribing the property of swimming to Michael. The account of what constitutes speakers doing this is in two steps. First, reason was given for thinking

that it is *FAST's* propositional relation that gets interpreted as ascribing the property of swimming to Michael. Second, an account was given of what so interpreting FAST's propositional relation consists in. On that account, interpreting FAST's propositional relation as encoding ascription just is interpreting 1's sentential relation as encoding ascription.

Before turning to other matters, I should say that I have not always been clear on this latter point. In King [2007], I talked of the propositional relation *inheriting* its semantic significance from the sentential relation.[18] In King [2009], I talked as though interpreting the propositional relation was something over and above interpreting the relevant sentential relation.[19] It wasn't until King [2013] that I was clear that interpreting the propositional relation in a certain way *just is* interpreting the relevant sentential relation in that way.[20] Once you are clear about the fact that interpreting the sentential relation is just a matter of composing semantic values (relative to contexts) in a certain way and that semantic values only get composed in the definition of a proposition being true at a world on my view, you see that interpreting the propositional relation in the relevant way in this definition just is composing semantic values in the way dictated by the interpretation of the relevant sentential relation. But then, to repeat, interpreting the propositional relation just is interpreting the syntax. As discussed above, we count as interpreting the propositional relation when we process the semantic significance of the syntax, because the proposition is the entity we "have in mind" at that point. If this is right, not only does the existence of the sentence 1 with its syntax interpreted as it is

[18]King [2007] pp. 59-61
[19]King [2009] p. 266-68
[20]King [2013] p. 80. I say the same thing in King, Speaks and Soames [2014] Chapter 4, but I am most clear about it in Chapter 10 of that work.

metaphysically necessitate the existence of FAST, but it would be metaphysically impossible e.g. for the sentence 1 to exist with its sentential relation interpreted as encoding ascription and the propositional relation of FAST not to be so interpreted.[21] If interpreting the syntax just is interpreting the propositional relation, the former couldn't occur without the latter.

This brings up one other issue that should be cleared up. Following Jeff Speaks in King, Speaks and Soames [2014], let's use *[PR]* to represent the propositional relation of FAST and consider two candidates for being that proposition:

F. [PR](Michael, the property of swimming)

F+. [PR](Michael, the property of swimming) & PR encodes instantiation

I have been ambivalent for some time as to whether F or $F^+$ is FAST--the proposition that Michael swims. I generally have said that it is F+.[22] But here for example I have talked as though it is F. Assume for the moment that F and F+ are different facts. Then given what I have said, the existence of F metaphysically necessitates the existence of F+.[23] For if F exists, its propositional relation is interpreted as encoding ascription as a matter of metaphysical necessity.[24] However, that is just to say F+ exists.

---

[21]Jeff Speaks notes this in King, Speaks and Soames [2014] p. 152 and note 4.

[22] King [2007], King [2009], King [2013b], King, Speaks, Soames [2014] Chapter 4. Caplan and Tillman [2013] p. 118 note that in King [2007] p. 61 I appear to say FAST is F. My remark can be read that way, but it wasn't what I intended.

[23]Jeff Speaks points this out in King, Speaks Soames [2014] p. 152 note 5. Caplan and Tillman [2013] p. 120 incorrectly claim that on my view F could exist without F+ existing.

[24] Because of this, Caplan and Tillman [2013] p. 116 are wrong to claim that on my view F (which they call the *plain propositional fact*) could exist and not have truth conditions or could exist and have different truth conditions (they actually consider a different proposition but the point is the same). In saying this, they are assuming that it is e.g. metaphysically possible for sentence 1 to exist and have its sentential relation encode ascription, while FAST exists and either its propositional relation isn't interpreted at all or it is interpreted differently. For the reasons given, neither of these things is metaphysically possible. They are also wrong to claim that I hold that F existed prior to its propositional relation encoding ascription, again for reasons given above (p. 118, 119) . They cite a passage from King [2009] where I talk of speakers coming to interpret the propositional relation of F, suggesting that I do hold F existed prior to its propositional relation encoding ascription. But immediately following the passage they quote, which is

But is there a fact distinct from F+ that is F? I used to think so, but now I am not so sure. F would have to be a fact that did not include PR encoding ascription. As we have seen, if PR exists it must encode ascription as a matter of metaphysical necessity. So the question whether there is a fact F distinct from F+ amounts to asking whether, given a fact (F+) that includes a relation that is a component of that fact (PR) possessing a property (encoding ascription) that it possesses *essentially*, there is a "smaller" fact that is just like the first except that though it includes the component in question (PR) it does not include that component possessing the property that it in fact essentially possesses (encoding ascription). When I consider other purported cases of this, I am led to doubt whether there is a fact that would be the analogue of F understood in this way. So consider the fact consisting of me standing in a specific spatial relation to a wooden table. Let the fact include the table being made of wood. Assume that the table possesses the property of being made out of wood essentially. Is there a "smaller" fact that differs from this one only in not including the table possessing the property of being made of wood? I'm not sure, but it seems to me the answer is not obviously affirmative. If the answer is no, then there really is only one fact corresponding to F and F+ and it is FAST—the proposition that Michael swims. But suppose now that there really are the two facts F and F+. Which is FAST? I've often mentioned that it is likely that we will have to appeal to which fact is most eligible to be FAST to distinguish the fact that is FAST from

---

part of something I call *a highly idealized mythological story*, I explicitly say that my talk of *temporal* priority in the myth is a device to highlight *explanatory* priority (p. 268). So I was explicit that the talk of temporal priority in the passage they cite is really talk about explanatory priority and should not be understood temporally. Though Caplan and Tillman note this in a footnote (p. 119 note 33), they nonetheless claim in the main text that I hold that F existed before its propositional relation encoded ascription. To repeat, I don't.

other facts intimately related to it.[25] If F and F+ really are distinct, it seems to me the more minimal F is more eligible to be FAST than the unnecessarily larger fact F+.[26] Hence it F is FAST.

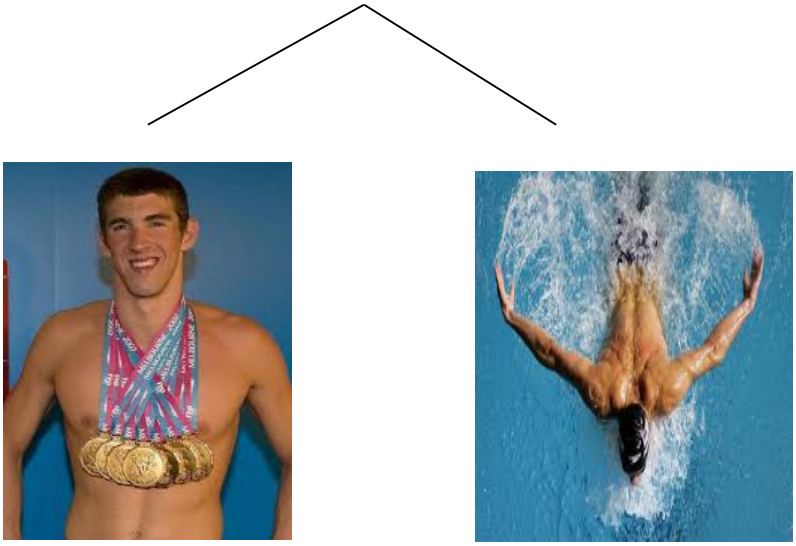
Let me now turn to Peter Hanks' [2015] criticism my view of propositions that I just sketched. The main criticism Hanks makes of my view concerns the fact that my explanation of how/why propositions have truth conditions appeals to the claim that we interpret syntactic relations. Hanks claims that interpreting syntactic relations in my sense requires already having beliefs, intentions and other propositional attitudes. If I try to reapply my explanation as to how propositions have truth conditions to the objects of *these* attitudes, I fall pray to a regress. If I give some other account of how the objects of these attitudes have truth conditions, I render my own account superfluous. Call this *Hanks' regress objection*. As I suggested above, I believe that this objection is based on misunderstanding my notion of *interpreting syntax* and that it fails.

As Hanks notes and as we have seen, the key to my explanation of how/why propositions have truth conditions is that speakers *interpret* the relations binding together the constituents of propositions, which I call *propositional relations*. So if this is the proposition that Michael swims:

[25] King [2007] pp. 62-64; King [2009] p. 273; King [2013b] p. 80; King, Speaks and Soames [2014] chapter 4.

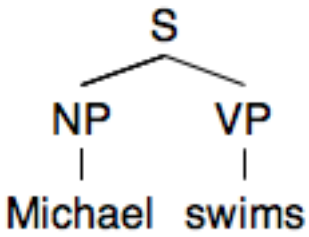
[26] F+ is unnecessarily larger since it has additional components not had by F, but F plays the proposition role as well. Caplan and Tillman [2013] p. 120 consider this as a reason for claiming F is more eligible than F+ to be FAST, but reject it on the grounds that I hold that F existed before it had truth conditions, making it less eligible to be FAST. As I've indicated, they are wrong to think that on my view F existed prior to having truth conditions. See note 23.

1P.



I claim that it has the truth conditions it has because we interpret the relation binding together Michael and the property of swimming (represented as branching lines in 1P) as *ascribing* the property of swimming to Michael. In turn, I claim that this is simply a matter of our interpreting the syntactic concatenation in a sentence like the following as ascribing the semantic value of 'swims' to the semantic value of 'Michael':

1.




Hanks makes no objection to my claim that interpreting the propositional relation in 1P *just is* interpreting the syntactic relation R in a sentence like 1 or e.g. its German translation. So Hanks must agree that if there is any problem with my account of interpreting the propositional relation it will be a problem with my account of interpreting

the syntactic relation, since he doesn't deny my claim that these are the same thing. Hence, for ease of exposition, I'll talk here about interpreting syntactic relations.

Hanks considers a case in which we interpret a mug sitting on his desk to mean that it is snowing in Minneapolis. He says that this sort of interpretation presupposes that the interpreter already has beliefs, intentions and so on. Interpreting in this way already presupposes that the interpreter has propositional attitudes. So, he thinks that my claim that speakers interpret syntax similarly presupposes that speakers already have propositional attitudes. Now if I try to reapply my account of propositions to the objects of *these* attitudes, I'll have to again appeal to my notion of *interpreting syntax*, which Hanks claims will require the interpreter to already have still further propositional attitudes that need to be accounted for and so I fall victim to a regress. If I give some other account of the objects of these attitudes that Hanks claims my interpreter of syntax must already have, I render my own account of the objects of the attitudes superfluous since this other account already gives a theory of the objects of the attitudes.

The problem with Hanks' argument is that from the fact, if it is one, that interpreting a mug on his desk to mean it is snowing in Minneapolis requires the interpreter already to have propositional attitudes it just doesn't follow that interpreting syntax in my sense already requires one to have propositional attitudes. I can happily agree that interpreting a mug on Hank's desk presupposes that the interpreter already has propositional attitudes. As I said above, in my talk of interpreting syntax I am using 'interpret' as a technical notion that has nothing to do with ordinary cases of interpreting such as the mug case. This should make clear that the fact that ordinary cases of interpreting, like Hanks interpreting his mug to mean that it is snowing in Minneapolis,

require a creature to already have beliefs, intentions and other attitudes is irrelevant to the question of whether *interpreting syntax* in my sense requires already having propositional attitudes. As I said, our interpreting syntax in the way we do—that we compose semantic values in the way we do—is part of our innate biologically endowed language faculty. Call this part *the composition rule module*. That we interpret syntax in the way we do is a consequence of the composition rule module being implemented in our brains in the form of a component of our biologically endowed language faculty. As a result, we are not even aware of composing semantic values in the ways we do and have no choice as to how we do it. Obviously, this is quite unlike interpreting mugs on desks to mean snow in Minneapolis.

The important point for assessing Hanks' regress objection is that the composition rule module being implemented in our brains as a result of our biological language endowment, and hence our composing semantic values in the way we do, doesn't require our already having beliefs, intentions and other propositional attitudes. The composition rules module is just part of UG—the initial state of our biologically endowed language faculty. Having an innate UG doesn't require already having beliefs, intentions and other propositional attitudes.[27] Since interpreting syntax is just a reflex of a part of our innate UG, it doesn't require already having beliefs, desires and other attitudes, contrary to what Hanks claims.

[27] It cannot be ruled out at this point that the having of an innate UG requires the having of states that are in some sense contentful. But even if so, the point is that there is every reason to think that these states and their contents are nothing like ordinary propositional attitudes and their contents, which is what we are giving an account of.

Hence, Hanks' regress objection to my view fails: my view neither falls prey to a regress nor is it rendered superfluous by the account of the contents of perceptual experience.

As we have seen, on my view of propositions the sentential relation of a sentence is a component part of the propositional relation of the proposition expressed by the sentence. Indeed, the sentential relation supplies all the significant structure to the propositional relation. In turn, this means that sentences with different syntactic structures will express different propositions. Obviously, then, my theory individuates propositions very finely. The most common reason I hear for opposing my theory of propositions is that it individuates propositions *too* finely. Hence, I take this to be a, and perhaps *the*, major objection to my view.

In King [2013a], I considered a number of versions of the objection that my theory of propositions individuates propositions too finely. I showed that all the objections were fatally flawed. I also argued that any attempt to formulate a theory of structured propositions that individuates them in the way my opponents favor will itself face severe difficulties. The result will be an ad hoc and unprincipled theory. I think this goes a long way towards addressing this major objection to my view.

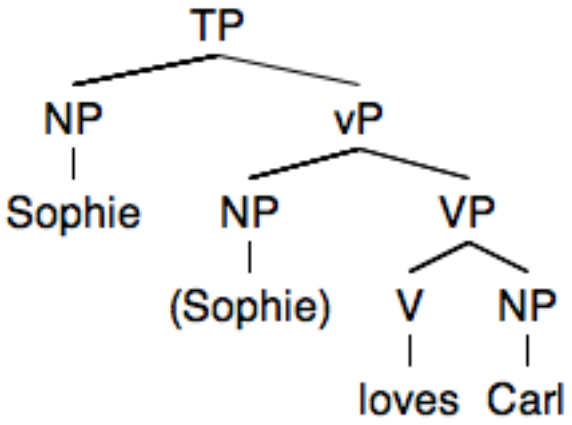
However, despite this I want to explore a version of my view that individuates propositions somewhat less finely than the current view does. I want to consider two specific cases in which I think it *is* hard to deny that sentences with different syntactic structures express the same proposition. I then want to ask how my view might be altered so as to secure this result.

Like forty some percent of the world's languages, English is a S(ubject)-V(erb)-O(bject) language, as illustrated by the following example:

2. Sophie loves Carl.

Simplifying a bit, let's assume it looks as follows at LF:[28]

2LF.



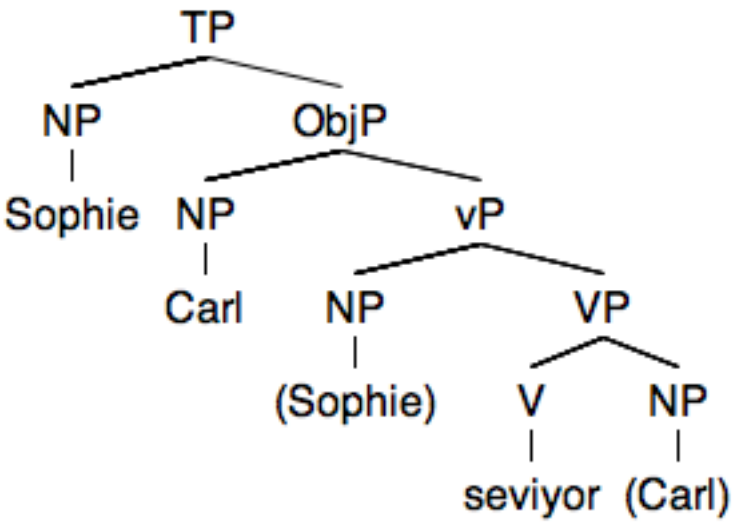

However, there are also many S(ubject)-O(bject)-V(erb) languages.[29] Hence, instead of something like 2, in Turkish we have:

3. Sophie Carl seviyor.

Simplifying a bit again, I assume that at LF this looks something like the following

[28] Occurrences of expressions with parentheses around them indicate that they have been moved/copied to another location in the syntactic tree.
[29] Indeed, a higher percentage of the world's languages are SOV languages than are SVO languages.

3LF.




Now since the sentences 2 and 3 have different syntactic structures, they express different propositions on my view. But, critics will say, surely they express the same proposition.

It is worth noting that if one assumes that in understanding a sentence, one composes semantic values in accordance with the syntactic structure of the sentence and how it encodes the manner in which the values are to be composed, there will be a difference in the steps one goes through in understanding 2/2LF and 3/3LF.[30] Though there could be different accounts of exactly how semantic values are composed in 2LF and 3LF, given the assumptions just mentioned, on any such account speakers will go through different steps of composing semantic values in understanding 2LF and 3LF. One account of how values are composed runs as follows. In the case of 2LF, one first composes the semantic values of 'loves' and 'Carl' to assign a value to the VP node.

[30] In discussing semantic values here, I suppress reference to context and assignment function. Also, since the composition of semantic values occurs in the definition of the truth of a proposition at a world, we also need a world parameter, which I suppress as well.

Presumably the composition here is that of saturating the second argument place of the *loves* relation with Carl, yielding the relational property of *loving Carl*. At the vP node, the property of *loving Carl* is ascribed to Sophie and the node is assigned 1 iff Sophie possesses the property of *loving Carl*. Finally, the TP node is assigned the truth value at the vP node in a case of vacuous composition. In 3LF, the *loves* relation (expressed by 'seviyor') combines with Carl, resulting in the relational property of *loving Carl* being assigned to VP. This property is ascribed to Sophie at vP resulting in that node being assigned 1 iff Sophie loves Carl. The truth-value at vP is passed up to ObjP and TP in two instances of vacuous composition. I wanted to note that the steps that one goes through composing semantic values in understanding 2/2LF and 3/3LF are different given the assumptions we have made because one might be tempted by the view that if the steps *are* different in the two cases, then perhaps it is not unreasonable to think the sentences express different propositions after all. If the sentences are understood differently, and understanding the sentences is entertaining the propositions they express, perhaps they express different propositions. But I only mention this in passing and for its intrinsic interest. I now want to explore whether there is a version of my view that has 2 and 3 expressing the same proposition.

Given what we have said about how the syntactic concatenations in 2LF and 3LF are interpreted, though there are differences that result in semantic values being composed in slightly different ways, there are also common elements. In both LFs we have the same nontrivial composition occurring at the same nodes. Specifically, note that Carl composes with the *loving* relation at the VP node in 2LF and 3LF to yield the property of *loving Carl*. So both VP nodes are interpreted as combining Carl with the

*loving* relation yielding the relational property *loving Carl.* Let's say that these branching nodes at VP encode *saturation* in their respective languages and have as their associated semantic values *loving Carl*. Similarly, in 2LF and 3LF the vP node is interpreted as ascribing the property (*loving Carl*) associated with one daughter node (VP) to the object (semantic value of 'Sophie') associated with the other daughter node (NP). Let's put this by saying that the vP nodes in both trees encode *ascription*. So here is what 2LF and 3LF have in common: lexical items a,b, and c of some language L whose semantic values relative to c and f are Sophie, Carl and the *loving* relation (respectively) occur at the terminal nodes of a syntactic tree R, where Carl and the *loving* relation are associated with the daughters of a node n that is interpreted in L as encoding saturation and so has as its associated semantic value relative to c and f the property of *loving Carl*; and Sophie and the semantic value associated with n relative to c and f are associated with the daughters of the node n' in R, which immediately dominates n and encodes ascription in L. Then we can say that in virtue of the existence of the sentence 2 or 3, the following fact exists, which I now claim is the proposition that Sophie loves Carl and is expressed by both 2 and 3: there is a language L, context c, assignment f and lexical items a,b, and c of L whose semantic values relative to c and f are Sophie, Carl and the *loving* relation (respectively) that occur at terminal nodes in a syntactic tree R, where Carl and the *loving* relation are associated with the daughters of a node n that is interpreted in L as encoding saturation and hence has as its semantic value relative to c and f the property of *loving Carl*; and Sophie and the semantic value associated with n relative to c and f are associated with the daughters of the node n' in R, which immediately dominates n and encodes ascription in L.[31] Call this fact/proposition *SLC*.

[31] An anonymous referee wondered whether the propositional relation here binding together Sophie, Carl

Assuming this is on the right track, we now have to retell our story about how speakers have cognitive access to SLC in virtue of deploying sentences of their languages and what their interpreting this fact in a certain way consists in. But it seems that we can do that with relatively little alteration of the original story. Again, we claim that by having cognitive access to sentences of their languages like 2 and 3 above, speakers have cognitive access to the interpreted sentences corresponding to 2 and 3 above, which are facts consisting of the sentences together with the semantic relations lexical items in the sentences bear to their semantic values relative to the context of utterance and assignment function together with those semantic values. With the interpreted sentence before the speaker's mind as a result of her cognitive access to it, she may as before abstract from various features of the interpreted sentence including the words in it, what language it is in, the context in which the utterance was made, and so on. However, we now claim that in addition she abstracts from the precise syntactic structure of the sentence and thereby the precise series of steps of composing semantic values encoded by the syntax. She focuses only on the nodes in the syntax that encode *saturation* and *ascription* and the hierarchical relations between them, since these are the only nodes in both trees where there is non-vacuous composition. The result is that she now has cognitive access to SLC

---

and the *loving* relation in the proposition that Sophie loves Carl is itself a "bona fide syntactic relation" requiring some further language in which a sentence has this syntax. The answer to that is no. The propositional relation here obtains between Sophie, Carl and the *loving* relation in part because of the existence of sentences like 2LF and 3LF with their (different) syntactic relations. But the propositional relation itself is not a syntactic relation. The referee worried that if it isn't, "a prior, language-independent notion of proposition [is] then required in order to understand that the two sentences express the same proposition". I can only reply that I don't see why the one would think that from the fact that the propositional relation is not a bona fide syntactic relation, it would follow that a prior language independent notion of proposition is required. In this respect, the new view is no different from the old view. On that view as well, the propositional relation is not a syntactic relation. But again, I don't see why this would mean that some language independent notion of proposition would be needed.

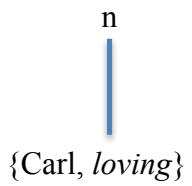
and so has it before her mind in such a way that she can interpret its propositional relation.

We now must explain what our interpreting the propositional relation of SLC consists in. Again here, the story is similar to the one we told about what interpreting the propositional relation of FAST—the proposition that Michael swims—consists in. To begin with, recall what I claim SLC is. It is the following fact: there is a language L, context c, assignment f and lexical items a,b, and c of L whose semantic values relative to c and f are Sophie, Carl and the *loving* relation (respectively) that occur at terminal nodes in a syntactic tree R, where Carl and the *loving* relation are associated with the daughters of a node n that is interpreted in L as encoding saturation and hence has as its semantic value relative to c and f the property of *loving Carl*; and Sophie and the semantic value associated with n relative to c and f are associated with the daughters of a node n' in R, which immediately dominates n and encodes ascription in L. Note that in this fact—SLC—less structure is imposed on Carl, Sophie and the *loving* relation than is imposed on 'Sophie', 'Carl' and 'loves'/'seviyor' in the LFs 2LF and 3LF. This is, of course, precisely what allows both sentences to express the same proposition even though they differ syntactically.

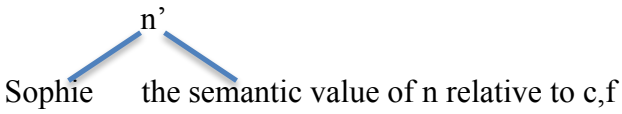
In order to illuminate some features of SLC and facilitate explaining what interpreting its propositional relation consists in, it may help to provide a rough graphic representation of it. Here is one:

SLCg. n'

{Sophie, the semantic value of n relative to c and f}




n' and n represent the nodes mentioned in the description of SLC, though in the fact itself they are existentially quantified over.[32] The blue vertical line from n' to {Sophie, the semantic value of n relative to c and f} represents that Sophie and the semantic value of n relative to c and f are associated with the daughters of n'. I use the set theoretic notation {Sophie, the semantic value of n relative to c and f} to indicate that SLC includes only that Sophie and the semantic value of n relative to c and f are associated with daughters of n'. It doesn't include which is associated with the left daughter and which is associated with the right. Had I instead depicted this portion of SLC as follows, I would have misled regarding this point:[33]




The blue vertical line running from {Sophie, the semantic value of n relative to c and f} to the node n indicates that n' immediately dominates n. Finally, the blue line from n to {Carl, *loving*} again indicates that Carl and *loving* are associated with daughters of n.

[32]To some people, talk of something being *existentially quantified over* in a fact can sound like a category mistake. But it is not. Think of the fact of there being F's, for some property F. Here instances of F are quantified over in the fact. That is, the existentially general fact of there being F's consists in F having the property of having instances. So this existentially generalized fact consist of a property having a property.

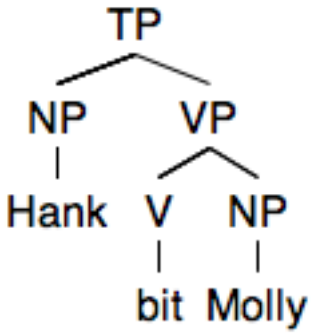
[33] If, as Chomsky [1996] and others have argued, there is no linear order to elements at LF, then 2LF and 3LF above are similarly misleading. According to this way of thinking, linear order of elements is imposed in the phonological component. At LF, we only have hierarchical relations (dominance, c-command, etc.). However, according to Kayne's [1994] Linear Correspondence Axiom (LCA), which Chomksy [1996] is clearly sympathetic to, the hierarchical relations at LF (specifically, *asymmetric c-command*) uniquely determine the linear order required at PF (phonological form). On this picture, the LCA can be thought of as a principle of the phonological component. Linearization is required of the outputs of PF simply because they need to be strings of sounds or signs.

Though it is depicted nowhere in SLCg, recall that the node n encodes *saturation* and that n' encodes *ascription*. That this is so is due to the common semantic significance of some of the syntax in both 2LF and 3LF. This provides the beginning of the explanation of how/why we interpret SLC in such a way that it is true iff Sophie loves Carl. Recall our account of what interpreting the propositional relation of FAST consisted in. The syntax of sentence 1 encodes information as to how to compose semantic values. But on a theory of the sort we are considering, all composing of semantic values takes place in the definition of truth (at a world) for propositions. But then this means that following the instructions for composing semantic values given by e.g. the sentential relation R of sentence 1 amounts to interpreting the propositional relation of the proposition expressed by 1 as ascribing the property at the left terminal node of the proposition to the object at the right terminal node. In short, following the instructions given by the syntax for composing semantic values *just is* interpreting the propositional relation in a certain way. Similar remarks apply in the case of SLC. The syntax of both 2LF and 3LF encode information about how to compose semantic values. Both syntactic structures encode the instruction to saturate the *loving* relation with Carl to yield the property *loving Carl* and both encode the instruction to ascribe the property of *loving Carl* to Sophie. But then following these instructions in composing the semantic values in the definition of truth (at a world) for propositions just is a matter of interpreting the propositional relation of SLC/SLCg in the relevant way. In particular, it is a matter of interpreting n as encoding saturation and n' as encoding ascription. Thereby, SLC is true iff Sophie loves Carl. As before, interpreting the propositional relation in a certain way just is interpreting the syntax in that way.

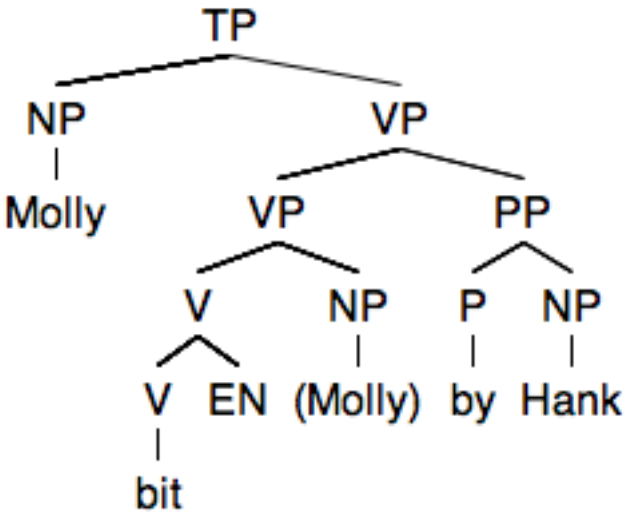
It is worth noting that there is a slightly different option for explaining how speakers have cognitive access to SLC in virtue of deploying sentences of their languages and what their interpreting this fact in a certain way consists in. The version of the story I just told has a speaker who has 2LF and a speaker who has 3LF in mind both abstracting from the differences in the syntax of 2LF and 3LF, thereby both having cognitive access to SLC/SLCg. They then cash in the semantic significance of the syntax of each of their sentences by interpreting n as encoding saturation and n' as encoding ascription. On this way of thinking, one who grasps the proposition expressed by 2LF and one who grasps the proposition expressed by 3LF go through the *same processes* of composing semantic values. But maybe we should say instead that the person who grasps the proposition expressed by 3LF goes through a *different* sequence of composing semantic values than does someone who grasps 2LF. However, both count as interpreting the propositional relation of SLC in going through the sequence they go through, because both sequences have in common as their nontrivial modes of compositions only the modes encoded by n and n' in SLC. This would be rather like the case of two musicians counting as playing the same song, even though they produce slightly different series of notes.

We were able to have 2LF and 3LF express the same proposition despite the syntactic differences between them because in both sentences the same steps of non-vacuous composition occurred. It seems as though the same is true of an active sentence and its passive counterpart. Consider the following sentences:

4LF.




5LF.




Some standard assumptions to make about the passive sentence are that the passive suffix *EN* both absorbs accusative case and the external (agent) θ role; and that 'by' is semantically vacuous.[34] If that's correct, then neither *EN* nor 'by' makes any semantic contribution to the semantic value of its mother node. That means that the semantic value of 'bit' gets passed up to the higher V node and the semantic value of 'Hank' gets passed up to the PP node, giving us two cases of trivial semantic composition. Assume that the semantic value of 'bit', the relation of *biting*, combines with Molly at the lower VP node

[34] Some also think that 'by' assigns the agent θ role to 'Hank' but that won't be relevant to us here.

in 5LF yielding the relational property of *biting Molly*, which is assigned to the lower VP node so that that VP node encodes saturation. Then the higher VP node encodes ascription and so ascribes this property to Hank. But this means that 4LF and 5LF have the following in common: lexical items a,b, and c of some language L whose semantic values relative to c and f are Hank, Carl and the *biting* relation (respectively) occur at the terminal nodes of a syntactic tree R, where Molly and the *biting* relation are associated with the daughters of a node n that is interpreted in L as encoding saturation and so has as its associated semantic value relative to c and f the property of *biting Molly*; and Hank and the semantic value associated with n relative to c and f are associated with the daughters of a higher node n' in R, which immediately dominates n and encodes ascription in L. Then we can say that in virtue of the existence of the sentence 4LF or 5LF, the following fact exists, which I now claim is the proposition that expressed by both 4LF and 5LF: there is a language L, context c, assignment f and lexical items a,b, and c of L whose semantic values relative to c and f are Molly, Hank and the *biting* relation (respectively) that occur at terminal nodes in a syntactic tree R, where Molly and the *biting* relation are associated with the daughters of a node n that is interpreted in L as encoding saturation and hence has as its semantic value relative to c and f the property of *biting Molly*; and Hank and the semantic value associated with n relative to c and f are associated with the daughters of a higher node n' in R, which immediately dominates n and encodes ascription in L. Call this proposition *HBM*.

Just as in the case of 2LF and 3LF, we can we can retell our story about how speakers have cognitive access HBM in virtue of deploying sentences of their language

(4LF and 5LF) and what their interpreting the propositional relation of this fact in the relevant way consists in.

That my account of propositions is able in the way described to have the pairs 2LF and 3LF, and 4LF and 5LF, respectively, express the same propositions is, I think, a very good result. There are some sentence pairs with closely related meanings that differ syntactically where I am happy to say they don't express the same proposition. 'John solved the problem.' and 'It was John who solved the problem.' are an example. But in the case of 2LF and 3LF, and 4LF and 5LF, respectively, the claim that the members of the pairs express different propositions does seem to strain credulity. Fortunate, then, that I don't have to make that claim.

## References


Caplan, Ben and Chris Tillman, 2013, 'Benacerraf's Revenge' *Philosophical Studies*, 166 (1), 111-129

Chomsky, Noam, 1996, *The Minimalist Program*, MIT Press, Cambridge, MA

Hanks, Peter, 2015, *Propositional Content*, Oxford University Press

Heim, Irene and Angelica Kratzer, 1998, *Semantics in Generative Grammar*, Blackwell Publishing, Malden, MA

Kayne, R., 1994, *The antisymmetry of syntax*, MIT Press, Cambridge, MA

Keller, Lorraine Juliano, 2013, 'The metaphysics of propositional constituency', *Canadian Journal of Philosophy*, Volume 43, Issue 5-6

King, Jeffrey C., 1995, 'Structured Propositions and Complex Predicates', *NOUS* 29:4 (1995) 516-535

King, Jeffrey C., 2007, *The Nature and Structure of Content*, Oxford University Press, New York

King, Jeffrey C., 2009, 'Questions of Unity', *Proceedings of the Aristotelian Society* CIX, Part 3, 257-277

King, Jeffrey C., 2013a, 'On Fineness of Grain', *Philosophical Studies* 163 (3), 763-781

King, Jeffrey C., 2013b, 'Propositional unity: what's the problem, who has it and who solves it?', *Philosophical Studies* 165 (1), 71-93

King, Jeffrey C., Scott Soames and Jeff Speaks, 2014, *New Thinking About Propositions*, Oxford University Press, New York.

Merricks, Trenton, 2015, *Propositions*, Oxford University Press

Stalnaker, Robert, 1984, *Inquiry*, The MIT Press, Cambridge, MA

Stalnaker, Robert, 2012, *Mere Possibilities*, Princeton University Press, Princeton, NJ.