

Propositions as Structured Entities

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Belief in propositions no longer brings about the sorts of looks it did when Quine's affinity for desert landscapes held sway in the Anglo-American philosophical scene. People are doing work in the metaphysics of propositions, trying to figure out what sorts of creatures propositions are. In philosophers like Frege, Russell, and Moore we have strong shoulders upon which to stand. But, there is much more work that needs to be done. I will try to do a bit of that work here. In the paper, I will probe the notion that propositions are *structured* entities, and that it is useful to think of their structure as resembling the structure of the sentences which express them. First, I will speak briefly to the issue of why one might find it rational to believe that propositions exist. In the second part of the paper, I will argue that we should think of propositions as having structure. In the last section, I will examine the nature of the structure of propositions. I will consider a recent account given by Jeffrey King of the nature of the relation that unifies constituents. I conclude by sketching my own view of the relation that holds between propositional constituents in virtue of which they compose a proposition.¹

I Why Believe in Propositions?

Propositions are taken to be abstract entities that are a) the primary bearers of truth and falsity, b) the objects of our propositional attitudes, and c) the referents of "that-

¹ I mean to make no mereological claims here. Some think that it is non-sensical to apply mereological notions to abstract objects. Others like Lewis defend its coherence.

clauses" of the sort that appear in, e.g., modal and propositional attitude contexts.² The characteristics presented in a)-c) serve as reasons for thinking that there are propositions. Clearly, some sort of entity must be the bearer of truth and falsity. Typical candidates include beliefs, sentence tokens, and sentence types. However, there are worlds in which there are no (non-divine, at least) beliefs and no sentence tokens, and yet there are truths and falsehoods in these worlds. Furthermore, it seems quite plausible to think that sentence types come to exist and get their semantic properties from the collective activities of linguistic communities, and as a result sentence types would be neither true nor false, indeed would not exist at all, were there no language users. Again, clearly there are worlds in which there are no (non-divine, at least) language-users, and yet in these worlds there are truths and falsehoods. So, at least in some worlds neither sentence tokens, sentence types, nor beliefs are the bearers of truth and falsehood.

Attributes b) and c) clearly are closely tied. If I say that I believe that Socrates is wise, "that Socrates is wise" appears to be functioning as a denoting term. We can see this by the fact that it is appropriate to move from an assertion of this sentence to an existential introduction of the form " $\exists x$ (I believe (x))." Furthermore, most would agree that my Dutch-speaking friend Dennis and I can believe the same thing. Dennis and I have a hard time communicating, though, since I speak no Dutch and he no English. So, what we're believing isn't a sentence token or type (which language would it be in if it were?). Even if we suppose that there is a language of thought, and this language is "Mentalese," (as opposed to a speaker's native language as Harman and others think), and mental sentences are the objects of belief, there still will be a problem. He and I, even if

²There may well be reason for thinking that some states of affairs can be the objects of some attitudes. For instance, I may fear my being fired, or I may imagine my being fired.

our Mentalese sentences are syntactically and semantically identical, *don't* believe the same thing; our mental sentences are distinct entities.

Furthermore, what we believe is either true or false (or otherwise, e.g. indeterminate). If propositions are the bearers of truth and falsehood, then we have reason to believe that propositions are the objects of our attitudes.

It is considerations like these that lead philosophers to think that there are propositions. But these sorts of considerations might be thought to tell us little to nothing about what propositions are like. So, what is a proposition?

II Propositions With Structure

Typically, propositions are taken to be one of three sorts of entities. First, they sometimes are thought to be set-theoretic entities, either functions from worlds to truth values or sets of worlds. I will not address this view as to the nature of propositions here for reasons of space. This sort of view has been addressed, to my mind, convincingly elsewhere.³ If one wishes, one may take the conclusions of my arguments to be conditional on the falsity of this view of propositions. Second, one might think that propositions are simple, *sui generis* sorts of abstracta (see Bealer 1998). This view I will consider in this section. Or third, one may think that they are structured sorts of abstract entities. Minimally, a structured proposition is composed of more primitive entities that serve as the semantic contents of token utterances like proper names, definite descriptions, and predicates. Typically, these constituents are taken to be things like properties, relations, and concrete individuals.⁴ The constituents will be related to one

³ See Scott Soames (1987).

⁴ Again, the relationship need not be construed mereologically; on my view it's not mereological. Also, complex propositions may have propositions as constituents.

another in a manner that at the very least will allow us to understand the truth conditions of the proposition if we know the constituents of the proposition and the way they are related. Many structured proposition theorists think that the structure of a proposition expressed by a sentence mirrors that of the syntax of the sentence, or of the syntax of the sentence if it is laid out in its logical form.

For now, though, I want to consider the approach on which propositions are simple sorts of abstract entities.

How does the *sui generis* view of propositions fare against a structured account? Not very well, I think. In fact, I think that there are at least five reasons to prefer a structured account over a view on which propositions are *sui generis*, simple sorts of entities.

First, as I just noted, on a structured propositions account we are able to give an account of the truth conditions of propositions wholly in terms of the constituents of the proposition and the sort of relation they stand in to one another. For example, when is the proposition expressed by my utterance "Socrates is snubnosed" true? It is true iff the entity that exemplifies the content of "Socrates" also exemplifies the content of "is snubnosed." (Note that we also have an explanation of how propositions are *representational*, here, as well. This comes out in spelling out the truth conditions of this proposition. It represents what it does in virtue of its having the constituents it does standing the relations to one another that they do. (I will have more to say about these relations in the next section of the paper.) The unstructured account has no account of the truth conditions of the proposition expressed by my utterance of "Socrates is snubnosed." It must take them as primitive.

Second, consider the propositions *Socrates is snubnosed* and *Aristotle is snubnosed*. These propositions have, in some sense, overlapping truth conditions. Obviously, they're not identical truth conditions, but the conditions are such that their being met has to do with an individual's being snubnosed. But do they have anything more in common? Or, can we explain why they have overlapping truth conditions? On a structured propositions account, we can say that they do have something more in common, and this something that they have in common will explain why they have overlapping truth conditions. What they have in common is, of course, is that both have *being snubnosed* as a constituent. On the unstructured account, it is a brute fact that these propositions have overlapping truth conditions, and these propositions won't exhibit the sort of commonality they will on the structured account. Intuitively, there seems to be something *more* these propositions have in common (and I intend significant commonalities here, and not something like having the property *being a proposition*) besides overlapping truth conditions, and the unstructured account can't account for this.

Third, considerations of compositionality suggest the structured account. It is all but a truism that the content that a sentence expresses depends on the content of the parts of the sentence and the syntactic arrangement of these contents. With the structured account of propositions, we have a very straightforward explanation of this fact. The contents of the constituent parts of the sentence literally are parts of the proposition, and the syntactic arrangement of the sentence is reflected in the propositional relation that holds between the constituents of the proposition. With the unstructured account of propositions, we have no straightforward explanation of compositionality.

Fourth, it certainly seems as if there are degrees of understanding or grasping a proposition. I think that the structured account might be able to go some way toward explaining how this could be. Obviously, more goes into grasping a proposition than grasping its truth conditions. What else is there to grasping a proposition? (Or if one thinks that it doesn't have anything to do with knowing its truth conditions, in what does grasping a proposition consist?) The structured account has some sort of an explanation to give here: When we grasp a proposition, we are coming to grasp its constituents and their instantiation conditions, and we are coming to grasp that they stand in certain relations to one another. Degrees of understanding of a proposition can be understood as degrees of grasping these various elements that go into grasping a proposition. And these degrees of grasping can be understood in terms of the extent to which one understands the instantiation conditions of the relations and properties involved in the proposition, and how these different instantiation conditions affect the truth conditions of the proposition. Now, I certainly don't claim to have a definitive account of what it is to have degrees of grasping of a proposition. But I do think that the structured account has much more in the way of an explanation to give than does the unstructured account. The structured account can explain this by way of degrees of grasping the constituents of the proposition and degrees of grasping the way they "fit together." The unstructured account, on the other hand, seemingly has no explanation forthcoming of how it is that we can more or less fully grasp a proposition.

Fifth, the structured view gives us a way of specifying the difference between narrow and wide content in a proposition. Narrow content will be those properties and relations that compose the proposition that are such that their being expressed by an

utterance aren't dependent on the context of utterance (in the relevant sense). So this will include purely qualitative properties. The wide content of a proposition consists of those abstracta expressed by terms whose content is context-dependent (e.g. the contents of terms like "now," and "I"). Neither the narrow content nor the wide content of an utterance by themselves suffice for a complete proposition; it is only when the narrow and wide content of an utterance are taken together that we get a complete proposition expressed. So each sort of content might be thought of as a function from the other sort to a proposition. This is at odds with views of content on which wide content is that content which is "truth-conditional" and narrow content (though perhaps quite important for, say, explaining behavior) doesn't possess truth conditions. On this view, it is the entire proposition which is composed of both narrow and wide contents which is truth-conditional, and which gets assigned a set of truth conditions.

Thus, it seems to me that there are strong reasons to prefer a view on which propositions are structured to one on which they are simple entities.⁵ It remains to be seen, though, exactly what sorts of creatures structured propositions are. The remainder of the paper will be focused on this question.

III The Nature of Structured Propositions

When we ask about the nature of structured propositions, there are two initial questions that one would think to ask: What sorts of things serve as the constituents of propositions; and what is the nature of the relation that "unifies" them into one entity

⁵ A structured account also might be thought to help in characterizing analyticity; one may take talk about "concept containment" and translate it directly into talk about constituents of propositions recurring in other relevant "parts" of the proposition. I'll have more to say about this later when I look at various sorts of propositional relations.

such that together they compose a proposition? Almost every believer in structured propositions thinks that objects like relations and properties serve as constituents of propositions. The controversial candidates for constituenthood are contingently-existing objects, and, in particular, physical objects. Direct reference theorists typically claim that the referent of rigid terms, even when these terms refer to contingently-existing objects, are constituents of propositions expressed by sentences in which the rigid terms appear.⁶

Though a number of philosophers have spoken of the constituents of propositions, relatively few have had much to say about the unifying propositional relation. Russell is famous for pointing out that there must be such a relation in 1903 in The Principles of Mathematics, only a few years later to abandon the view that such a relation exists, and thus the existence of propositions.⁷ But Russell didn't have much to say about the nature of this relation, even while insisting that it must exist. I don't think that we should fault Russell here, though; one is quick to discover that it is not at all easy to say much about the relation (though it can be done).

One philosopher who has given a characterization of the propositional relation is Jeffrey King (King 1994).⁸ In King (1994), he invokes the notion of a *semantic*

⁶ A direct reference theorist need not believe in propositions, or, she might think that the semantic contents of rigid referring terms are the haecceities of the objects to which they refer.

⁷ See Jubien (2001) for a contemporary defense of what is essentially Russell's Multiple Relation Theory (the view on propositions that Russell later adopted (beginning in 1910)).

⁸ In King (1995), he gives a more complex analysis of the sentential relation. He says "the propositional relation binding together the constituents of a proposition is composed of the relation binding together the lexical constituents of a vehicle expressing it (i.e. the sentential relation of the vehicle) and the relations connecting the lexical constituents to their [semantic contents]" (1995, 522). I don't understand what King is after here. Relations aren't the sorts of things that are composed of anything; rather, they are *sui generis* sorts of entities. Second, I'm not even sure how to understand the claim even if I

interpretation (SI) from Chomsky's Extended Theory. Generally, the SI of a sentence differs from the surface syntax of a sentence, and importantly, is revelatory of the semantics of the sentence in question. Some such notion has to be right; it clear that the logical form of some sentences (where the logical form of a sentence is the syntactic form most revelatory of the semantic content of the sentence) differs from the surface grammatical structure of the sentence.

Consider the sentence

(1) Frank drinks wine.

If suppose for the sake of simplicity that the SI of this sentence matches that of its surface grammar, then we may represent its SI as follows,

(1_{SI}) [Frank [drinks [wine]]].

We can see a certain structure in (1_{SI}); the lexical items in (1_{SI}) stand in a certain relation to one another. Call this relation the *sentential relation*. Now, King (1994) proposes the following: The relation that holds between the constituents of the proposition expressed by (1_{SI}) just *is* the sentential relation of (1_{SI}). The constituents of the proposition expressed by (1_{SI}) are the semantic contents of the various lexical items in (1_{SI}).

King thinks that this is an attractive position. Not only do we have an account of what the propositional relation is, but it makes the acceptance of propositions relatively uncontroversial. Linguists talk about lexical items in SIs standing in relations, and so it

suppose that relations are composite entities in some sense. Is the claim then that the propositional relation is made up of the relation that holds between linguistic items and relations like *expresses* and *refers to*? I have difficulty making sense of this notion. But, even if one does make sense of King's later understanding of the propositional relation, there is a serious problem with this account. As King (1995, 523) himself points out, propositions exist contingently on this view, and this is an unacceptable consequence if propositions are to be the bearers of truth values. See Davidson (2000) for more on this.

seems plausible to think that there are relations in which they stand. We're already committed to the lexical items or groupings of them having semantic contents (whatever those contents turn out to be). So, the entities that were anathema to a generation of philosophers—propositions were *creatures of darkness*—turn out to exist, and it is plausible on naturalistic grounds to accept their existence. Thus, in one fell swoop, King has given us an account of structured propositions and very strong naturalistic grounds to believe that they exist, or so he claims.

However, it seems to me that King's account of the nature of the unifying propositional relation isn't very plausible, nor is it at all clear that he gives the naturalist good reason to think that propositions exist. What sort of entity is the sentential relation? And what is the ontological import of the apparent quantification over it by the linguist? It seems at best quite odd that the same relation which takes lexical items as relata also may take properties and relations as relata; it seems odd that the same relation which makes it the case that abstracta compose a proposition also makes it the case that lexical items compose a sentence. Some of this may go away if we think of the sentential relation as taking lexical types as relata; then at least in both cases the relation takes abstract relata. But if we're forced to admit linguistic types, the naturalist will be much less sanguine about the existence of propositions as King construes them. Also, what is the status of the sentential relation itself? Will the naturalist want to paraphrase away *prima facie* quantification over it? If so, then this argument will give the naturalist no reason to believe that propositions exist. Perhaps the naturalist will want to take the relation as a trope of some kind—some entity that is located in spacetime. But then it's very hard to see how the sentential relation could be the propositional relation. The latter

is, in the minds of most everyone who thinks that there are structured propositions, abstract. It is abstract, and the entities it relates are abstract; the entity "composed" of the constituents standing in the relation is abstract. Suppose, then, we take the sentential relation to be abstract, and its relata to be abstract—lexical types. Obviously, the more abstracta we add here, the less appealing the sentential relation--and thus the propositional relation--for the naturalist.

But, let's suppose our naturalist has been to, say, Joshua Tree National Park in the springtime when the flowers are blooming and likes that sort of desert landscape—as opposed to a vast expanse of sand dunes or the like. So our naturalist is fine with our abstract sentential relation and its abstract linguistic relata. Can we take the sentential relation to be the relation which unifies the constituents of a proposition? I don't think we can. It seems to me to be clear that they are different sorts of relations. One takes things like verbs and nouns as relata, the other takes necessarily existing entities that essentially have exemplification conditions as relata. Could the same relation take both sorts of things as relata? I can't see how this could be. The sentential relation gives rise to entities that have the properties *being grammatical* or *being ungrammatical*. Propositions aren't the sorts of creatures that may have such properties. Furthermore, the propositional relation allows for the composition of entities which are the fundamental bearers of truth and falsity. The sentential relation does no such thing. It allows for the composition of contingently-existing entities that bear truth and falsity only derivatively. So, it seems to me to be implausible to identify the sentential relation with the propositional relation.

King (1995, 523) seems to think that this view commits him to what I take to be a damning problem for his view—the contingent existence of propositions. He thinks that the existence of the sentential relation depends on its relating lexical items, and since these are mind-dependent, so too is the sentential relation. It's not clear to me that he needs to accept this claim about the sentential relation. That is, I'm not sure why it couldn't exist if it didn't hold between lexical items. But if he is right here, the sentential relation cannot be the propositional relation. Propositions are not dependent for their existence on the activities of language-users. Plausibly, propositions have their constituents essentially, and their constituents stand in the propositional relation they do essentially. Were there no language-users, there still would exist continuum-many propositions. Indeed, it seems quite plausible to think that propositions are the sorts of things that exist necessarily (see Davidson 2000 for more on this). But, even if King need accept the contingent existence of the sentential relation, I think his conception of the nature of the unifying propositional relation is problematic.

Can we shed any light on the nature of the unifying propositional relation? Or is it *something we know not what*—something which we have reason to believe has to exist, though we know very little about it. I think we can say something about the propositional relation. Indeed, I think that the propositional relation has a crucial role to play in explaining the truth conditions of propositions.

In fact, I think there are many different types of propositional relations. We may have two propositions with the same constituents and different truth conditions. How else might we account for the difference in truth conditions but to say that they have different sorts of propositional relations? For example, most people take the arguments

of Frege and Russell to show that nouns bound by quantifiers aren't referring terms. Indeed, it is around this idea that the predicate calculus developed. Consider the following sentences.

(2) All Husker fans are football fans.

(3) All football fans are Husker fans.

It is not unreasonable to think that the constituents of the propositions expressed by (2) and (3) are identical-- *being a Husker fan* and *being a football fan*. Yet the proposition expressed by (2) is true; while the proposition expressed by (3) is false. How can we account for this fact? We may say that the propositional relations involved with these propositions are sensitive to the "order of instantiation" of the constituents of the proposition. These propositional relations "privilege" one constituent over the other.

This isn't the case with

(4) Tommie is tough.

Suppose we take "Tommie" to express *being Tommie* and the predicate "is tough" to express *being tough*. Then we don't need to have a constituent that is "primary." The proposition expressed by (4) will be true iff *being Tommie* is coinstantiated with *being tough*. It doesn't matter if we look to the class of things that are tough "first" and see if one of them exemplifies *being Tommie*, or if we look to the thing that exemplifies *being Tommie* and see if it exemplifies *being tough*. So the propositions expressed by (2)-(4) each have their constituents united by some sort of propositional relation, we may say that the propositions expressed by (2) and (3) have a different type of propositional relation than does the proposition expressed by (4).

Similarly, some propositions have propositions as constituents.

(5) The Huskers are playing now, and Williams sacked the quarterback.

The proposition expressed by (5) has the propositions *The Huskers are playing now* and *Williams sacked the quarterback* as constituents. This conjunctive proposition will be true iff both of these propositions are true. Again, we have an entity which is a proposition, and thus has a relation which unifies its constituents. However, the truth conditions for the proposition expressed by (5) have to do with both of the relata of the propositional relation being true.

One may develop some sort of taxonomy of the different propositional relations. We may say that the propositions expressed by (2) and (3) involve the *conditional* propositional relation, the proposition expressed by (4) involves the *atomic* propositional relation, and the proposition expressed by (5) involves the *conditional* propositional relation. There are many more types of propositional relations. But the important point here is that the relation which unifies the constituents of a proposition does more than unify; it plays a role in determining the truth conditions of the proposition.

I think that we can say more about the unifying propositional relation than others have thought. On the other hand, the nature of the relation still is somewhat of a mystery. But I don't think this tells against the relation; it's no more mysterious than many other relations which we accept. Indeed, we may be able to say more about it than the causal relation (reducing causation is, as anyone who has ever tried knows, really hard). I think that the fact that we have some grasp on this relation, together with the fact that it seems quite implausible to think of propositions as *sui generis* entities (or set-theoretic entities), leaves the view that propositions are structured entities in good stead.⁹

⁹ I would like to thank

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