Recent Work on Propositions

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Abstract

Propositions, the abstract, truth-bearing contents of sentences and beliefs, continue to be the focus of healthy debates in philosophy of language and metaphysics. This article is a critical survey of work on propositions since the mid-90s, with an emphasis on newer work from the past decade. Topics to be covered include a substitution puzzle about propositional designators, two recent arguments against propositions, and two new theories about the nature of propositions.

1. Introduction

It’s obviously not going to be possible to cover everything in the literature on propositions since the mid-90s, so I’ve chosen topics that have received the most attention, along with some that seem to me worthy of more attention. These choices were inevitably influenced by my own views about propositions, which I might as well get out in the open here at the beginning. I believe that propositions exist, that they are designated by ‘that’-clauses, and that, broadly speaking, they are structured entities with something approximating, although not identical to, sentence structure. As we’ll see, every one of these views has been challenged in recent work. One of my aims in this article is to defend this general conception of propositions against these challenges.

In Section 2 I discuss a substitution puzzle about propositional designators that threatens the view that ‘that’-clauses designate propositions. Section 3 covers two arguments against the existence of propositions, due to Michael Jubien and Thomas Hofweber. Section 4 is concerned with two new theories about propositions, Stephen Schiffer’s pleonastic account and Jeff King’s theory of propositional structure. Schiffer’s account is a challenge to the view that propositions are structured, and King’s to the view that propositional structure is distinct from sentence structure. I’ll conclude with some brief remarks about possible areas of future research.

Before moving on to these specific topics it will be worthwhile to step back and comment on the general direction taken by research on propositions over the past few decades. Spurred by the power and success of the intensional semantics framework, in the 70s and 80s the debate about
propositions was dominated by attempts to identify propositions with sentence intensions, i.e., unstructured sets of truth-supporting circumstances such as possible worlds or situations. This approach to propositions turned out to be an Achilles heel for intensional semantics. As Mark Richard put it, the problem was that identifying propositions with sentence intensions ‘require[s] the attitudes to have a particular sort of closure under logical consequence, which they clearly don’t have’ (10). This motivated the search for more fine-grained entities to serve as the contents of sentences and beliefs. Along with the rise of the theory of direct reference, the result was renewed interest in a broadly Russellian conception of propositions on which propositions are structured entities whose parts and structure mirror the parts and structure of sentences. Despite the efforts of philosophers like Robert Stalnaker and Max Cresswell to shore up the intensional approach, the structured propositions view now dominates. In recent years the main battle line has been drawn between those philosophers who accept the structured propositions view and those for whom propositions are primitive, unstructured entities. The latter views are motivated in large part by the difficulties for giving precise accounts of the constituents and structure of structured propositions. Much of the recent work on propositions centers on these difficulties. (Along with, of course, continuing debates about whether propositions exist at all). In the light of these developments I am not going to revisit the intensional account of propositions in this survey, although, as with anything else in philosophy, the fact that the debate has moved on should not be taken as an indication that it has been settled.

2. Propositional Designators: A Substitution Puzzle

Many issues about propositions, including their existence, turn on the success of a widely held relational analysis of attitude reports, according to which: (i) ‘believes’ and other attitude verbs express relations between subjects and propositions, (ii) ‘that’-clauses designate propositions, and (iii) an attitude report of the form ‘A v’s that p’ is true just in case A stands in the v’ing relation to the proposition designated by ‘that p’. This analysis of propositional attitude sentences supports a relational analysis of the attitudes themselves, the idea that belief, etc. are relations to propositions. This relational analysis of the attitudes in turn provides a central raison d’être for propositions. If belief is not a relation to a proposition then propositions lose much of their point. Any threat to the relational analysis of attitude reports is therefore also a threat to the existence of propositions.

One recent such threat comes from a substitution puzzle about propositional designators, e.g., ‘that Hillary is a senator’ and ‘the proposition that Hillary is a senator’. In some cases these designators can be substituted for one another without any effect on grammaticality or truth-conditions:
1 a. Bill believes that Hillary is a senator.
   b. Bill believes the proposition that Hillary is a senator.
2 a. Bill asserted that Hillary is a senator.
   b. Bill asserted the proposition that Hillary is a senator.

But in other cases this kind of substitution can produce something syntactically ill-formed:

3 a. Bill hopes that Hillary will be a senator.
   b. *Bill hopes the proposition that Hillary will be a senator.
4 a. Bill said that Hillary will be a senator.
   b. *Bill said the proposition that Hillary will be a senator.

Or it can lead to bizarre changes in truth-conditions:

5 a. Bill fears that Hillary will be a senator.
   b. Bill fears the proposition that Hillary will be a senator.
6 a. Bill expects that Hillary will be a senator.
   b. Bill expects the proposition that Hillary will be a senator.

Bill might both fear and expect that Hillary will be a senator without having any deranged fears or expectations about an abstract object.

The problem for the relational analysis comes from the fact that it assimilates the logical form of attitude reports to that of extensional sentences with two-place predicates, e.g., ‘Bill kissed Hillary’. Since these sentences allow substitution of co-extensive singular terms, the relational analysis implies that the same substitutions should go through for attitude reports. In other words, the relational analysis implies that we should be able to freely substitute ‘the proposition that Hillary is a senator’ for ‘that Hillary is a senator’ in propositional attitude sentences. Examples like (3) to (6) show that this is not always the case.

Some philosophers take the substitution failures to refute the relational analysis and then offer alternatives. According to Michael McKinsey, ‘believes that’ should be analyzed as an operator that joins with a sentence to form a one-place predicate expressing a property of subjects. Friederike Moltmann advocates a version of Russell’s multiple relation theory of judgment on which ‘believes’ expresses a many place relation between a subject and the objects and properties mentioned in the accompanying ‘that’-clause. Both approaches face serious problems. Against McKinsey, ‘believes that’ is not a syntactic constituent of attitude reports and should not be assigned an independent interpretation. The complementizer ‘that’ joins with the sentence that follows it, not with ‘believes’. Moltmann’s view faces the same problem that led Russell to give up the multiple relation theory, namely that ‘believes’ must express a relation to something capable of being true or false and hence cannot express a relation to a disconnected collection of propositional constituents. To fill this out a bit, consider a multiple relation theory of negation, i.e., the view that the
logical form of ‘a is not F’ is ‘Not (a, F)’. This is clearly unsatisfactory. Only something true or false can be negated, and the pair of a and F is not the sort of thing that can have a truth-value. The same goes for belief sentences. However we analyze ‘S believes that a is F’, it had better turn out that S is related to something capable of being true or false.4

McKinsey’s and Moltman’s reactions to the substitution failures are fairly radical. The other end of the spectrum is occupied by Stephen Schiffer, who sees no threat to the relational analysis. In the course of defending what he calls the ‘face-value theory’, essentially the relational analysis, Schiffer claims that ‘there is no good reason to suppose these failures of substitutivity constitute counter-examples to the claim that the that-clauses involved in them refer to propositions’ (Things We Mean 95). In support of this, he provides another case in which co-extensive terms are not substitutable salva veritate:

7  a. The Italian singer Pavarotti never sings Wagner.
   b. *The Italian singer the greatest tenor never sings Wagner. (Things We Mean 93)

There’s no challenge here to the view that ‘Pavarotti’ and ‘the greatest tenor’ designate the same individual.5 Similarly, according to Schiffer, no one should take cases like (3) to (6) to challenge the view that ‘that’ and ‘that proposition that p’ designate the same proposition. Schiffer takes this line half-heartedly, however, remarking that ‘I would feel more confident about my conclusions if I knew the principled distinction that explains the asymmetry between “believes” and “hopes” et al.’ (Things We Mean 95).

Most philosophers have settled somewhere in between these two extremes by proposing various partial rejections or modifications of the relational analysis. Kent Bach retains the first two commitments of the relational analysis but gives up (iii), holding that the truth of a belief report only requires a subject to believe some proposition suitably related to the proposition designated by its ‘that’-clause. It’s not clear from his discussion, though, how this is supposed to help with the substitution failures, which, in fairness to Bach, only come up as a side-note in his rejection of (iii). Marc Moffett also targets (iii), proposing a modification for those verbs that give rise to substitution failures. Using a distinction between ‘singular’ and ‘descriptive’ predication, Moffett holds that in those cases where substitution fails, ‘A v’s that p’ is true just in case A stands in the v’ing relation to a fact or condition corresponding to the proposition that p. He focuses primarily on knowledge attributions; for Moffett, ‘Bill knows that Hillary is a senator’ is true just in case Bill knows the fact corresponding to the proposition that Hillary is a senator. To motivate this, however, Moffett has to make a dubious association between knowledge attributions and generic sentences like ‘Gold is expensive’ or ‘The potato contains thiamin’.
Terence Parsons and Nicholas Asher propose modifications to (ii) by allowing ‘that’-clauses to sometimes designate entities other than propositions. Parsons argues that when a ‘that’-clause is embedded under a factive verb it designates a fact. Asher adds to this by allowing ‘that’-clauses to designate possibilities when embedded under verbs like ‘fears’. But as it has been frequently pointed out, sentences like ‘Everything Bill believes, Hillary knows’, and ‘Bill fears something that Hillary knows’ strongly suggest that ‘believes’, ‘knows’, and ‘fears’ all express relations to the same sort of entity.

In my opinion the most promising approach to the substitution failures is due to Jeff King (‘Designating Propositions’; Nature and Structure of Content), who proposes a modification of (i) by positing an ambiguity in the verbs that give rise to the substitution failures. First, King argues that cases like (3) and (4) have purely syntactic explanations and hence can be safely ignored. That leaves cases like (5) and (6), where substitution produces changes in truth-conditions. King argues that the attitude verbs in these cases are ambiguous, with different readings triggered by the syntactic category of the complement. For example, ‘fears’ expresses different relations depending on whether it embeds a ‘that’-clause versus a noun or determiner phrase. Intuitively, the idea is that fearing that such-and-such is a different sort of relation than fearing the such-and-such. On the other hand, verbs like ‘believes’ and ‘asserts’ are not ambiguous, thus allowing for the substitutions in (1) and (2).

Aside from McKinsey and Moltmann, all of these approaches to the substitution failures preserve the idea that, at least in some cases, ‘that’-clauses designate propositions and attitude verbs express relations to propositions. In that respect, they ward off the threat to the existence of propositions. Of course, that’s only going to look like an advantage to those philosophers who are sympathetic to propositions, which many philosophers are not.

3. Recent Arguments against the Existence of Propositions

3.1. The Benacerraf Problem and Propositional Representation

In his paper ‘What Numbers Could Not Be’ Paul Benacerraf argued that numbers cannot be reduced to sets because there is no principled reason for choosing between the many equally good ways of carrying out such a reduction. It has recently been noticed that the same problem applies to reductions of propositions. The problem arises in stark form for Russellian theories that identify propositions with ordered sets of objects, properties and relations.6 The proposition that Bill kissed Hillary, for example, can be identified with any of the following:

8 a. <Bill, kissing, Hillary>
     b. <<Bill, Hillary>, kissing>
Each of these, and many more, has an equal claim to being the Russellian proposition that Bill kissed Hillary and so none of them can plausibly be identified with that proposition.

This is not just a problem for Russellians. According to Michael Jubien, the Benacerraf problem refutes any reduction of propositions to anything. In a possible worlds framework, for example, propositions can be identified either with functions from worlds to truth-values or with sets of possible worlds. But as Jubien insists, ‘a set of worlds is simply not a function from possible worlds to truth values’ (49). So the possible worlds approach presents us with two metaphysically distinct candidates to play the role of propositions, with no principled reason in favor of either candidate.

Another strategy is to identify propositions with mereological sums. To use Jubien’s example, the proposition that all canines are dogs could be identified with the mereological sum of the property of being canine, the property of being a dog, and the relation of subextensiveness. To distinguish this from the proposition that all dogs are canines, however, we need to find some way of encoding order onto a mereological sum, e.g., by adding an additional second-order property, such as the property of being the property of being canine. But this runs headlong into the Benacerraf problem, since there are lots of ways of using mereology to encode order onto a mereological sum. Jubien thinks the problem generalizes. Any reduction on which propositions have constituents is going to need some way of imposing order on these constituents, but any one scheme for imposing order will be just as good as any other.

If so, the only remaining option is to give up on reduction and treat propositions as metaphysical primitives. A number of philosophers take this route, e.g., George Bealer and Stephen Schiffer.7 Jubien’s complaint against these views is that primitive abstract entities aren’t up to the representational task that propositions would have to perform. In Jubien’s words, the problem is that ‘it’s implausible to think that any genuine Platonic entity could represent on its own cuff’ (54). The proposition that Bill kissed Hillary is about Bill and Hillary and is true just in case he kissed her. But it can’t be an accident that this proposition has these representational features; it wouldn’t be that very proposition if it somehow had different truth-conditions. This means that a proposition cannot have its representational features conferred on it by something external, on pain of making those features inessential to the proposition. Anything worth calling a proposition must have its truth-conditions on its own, in the sense that its truth-conditions arise out of its internal make-up. According to Jubien, primitive abstract entities are not capable of this sort of intrinsic representation. Jubien supports this with the important point that ‘representation is ultimately the business of beings with intentional capacities, in short,
thinkers’ (54). This rules out attributing intrinsic representational properties to abstract primitives. If abstract primitive entities represent at all then they do so only because of the way we think about or use those entities. Their representational features can only come in from outside through our thoughts and activities, making them unsuitable to play the role of propositions. So, since they can’t be primitive and they can’t be reduced, Jubien concludes that propositions don’t exist.8

Jubien’s argument is fascinating but too quick. The point about intrinsic representation calls out for an account on which propositions have internal structure, but whatever account of this structure we give had better not fall victim to the Benacerraf problem. It’s likely, though, that any account that makes it clear how a proposition’s structure endows it with truth-conditions will also make it evident that that particular structure is the only one suitable, thereby killing two birds with one stone. That is, we provide a principled reason for preferring one theory of propositional structure, thus solving the Benacerraf problem, by showing how that structure is uniquely capable of bestowing truth-conditions on propositions. Furthermore, to accommodate Jubien’s insight about the source of representation, the explanation of how propositional structure determines truth-conditions should depend somehow on the thoughts and activities of thinking subjects. So long as a proposition’s truth-conditions arise out of its internal constitution it will have the right kind of intrinsic representational properties, even if the explanation for how this works makes reference at some point to the activities of thinkers. Jubien is right to press the difficulty of meeting these interlocking demands, but he is too quick in adopting the pessimistic conclusion that they cannot be met.

3.2. PROPOSITIONAL QUANTIFICATION

Jubien’s argument is a direct attack on the existence of propositions. He proposes certain criteria of success for any account of propositions and then argues that nothing can satisfy those criteria. Another recent attack on propositions, due to Thomas Hofweber, is more indirect. Hofweber’s aim is to undercut one of the most commonly heard arguments for the existence of propositions. Taking its cue from Quine’s criterion of ontological commitment, the argument is that propositions exist, or, at least we are committed to their existence, because our language contains quantifiers that range over propositions. Consider the valid inferences (9) and (10):

   Hillary asserted that the Republicans will lose in 2008.
   Bill believes that the Republicans will lose in 2008.

    Hillary knows that the Republicans will lose in 2008.
    Hillary knows something that Bill believes.
The validity of these inferences is easily accounted for by treating the occurrences of ‘everything’ and ‘something’ as objectual quantifiers ranging over a domain of propositions.

Hofweber doesn’t deny the soundness of these inferences, he just doesn’t think they commit us to the existence of propositions. His view is that the quantifiers ‘everything’ and ‘something’ are polysemous, i.e., they each have two related meanings, like the verb ‘ran’ in ‘Hillary ran the marathon’ and ‘Hillary ran the election campaign’. Hofweber distinguishes between what he calls the ‘external’ or ‘domains conditions’ reading of the quantifiers and an ‘internal’ or ‘inferential role’ reading. On the external reading, ‘Something is F’ is true just in case there is an object ‘out there in reality’ (‘Puzzle about Ontology’ 271) that is F. This reading of ‘Something is F’ commits one to the existence of an F. This is not so for the internal reading. The central semantic fact about the internal existential quantifier is that from a sentence of the form ‘F( . . . t . . .)’ one can infer ‘F( . . . something . . .)’ for any term ‘t’, including those that do not refer to anything. A sentence of the form ‘F( . . . something . . .)’, where ‘something’ is read internally, can be true even if there is nothing out there in reality that is an F. Read internally, therefore, the conclusion of (10) follows from the premises but does not commit us to the existence of a proposition.

To secure this inferential role for the internal existential quantifier Hofweber holds that the internal reading of ‘F( . . . something . . .)’ is truth-conditionally equivalent to the disjunction of all sentences of the form ‘F( . . . t . . .)’. For example, ‘Bill believes something’, on the internal reading, is truth-conditionally equivalent to the infinitary disjunction of all sentences of the form ‘Bill believes that p’, where every sentence gets substituted for ‘p’. Similarly, the internal reading of ‘Bill believes everything’ is truth-conditionally equivalent to the infinitary conjunction of sentences of the form ‘Bill believes that p’. The internal readings of the quantifiers are, as far as truth-conditions go, the same as the substitutional readings. In this respect, Hofweber’s view is similar to past attempts to avoid commitment to propositions through the use of substitutional quantification (e.g., Prior; Schiffer, Remnants of Meaning).9

Now, to refute the argument for propositions it’s not enough for Hofweber just to make the distinction between external and internal quantifiers. We can even agree with him that quantifiers are sometimes best read internally, e.g., ‘Something doesn’t exist’. To undermine the case for propositions Hofweber needs to provide reasons for thinking that propositional quantifiers are internal quantifiers. As far as I can tell, the only step he takes in this direction is to point to the kinds of substitution failures discussed earlier.10 Hofweber thinks these substitution failures provide good evidence against treating ‘that’-clauses as singular terms, and if ‘that’-clauses not singular terms then we have reason for reading propositional quantifiers internally. But as we have seen, there are many ways of dealing with the substitution failures that do not give up the view that ‘that’-clauses are singular terms.
This shifts the burden of proof onto Hofweber. He can always shift it back by arguing that it’s up to the realist about propositions to show that propositional quantifiers are external. But here the friend of propositions is on pretty solid ground. The fact is, no one has ever been able to give a plausible analysis of attitude reports that doesn’t treat ‘that’-clauses as singular terms. Even Donald Davidson, a stalwart opponent of propositions, concedes the point:

There is, then, no plausible alternative to taking belief sentences as relational, and therefore no alternative to taking the content sentence . . . as a singular term which, by referring to an appropriate entity, specifies the relevant belief. (57–8)

Davidson’s remark leaves open the nature of the appropriate entities, i.e., whether they are propositions or sentences or utterances or some sort of hybrid entity. Davidson of course prefers utterances, but there’s a good case to be made in favor of propositions. This is well-trodden ground, which I’m not going to go over again here. As far as the debate with Hofweber goes, the relevant point is just that there’s no plausible alternative to treating ‘that’-clauses as singular terms. This means that there’s really no plausible alternative to viewing quantification on ‘that’-clauses in the same way we view quantification on any other position occupied by a singular term, i.e., as the familiar, external, ontologically committing sort of quantification. Contrary to Hofweber, therefore, there’s no easy way to avoid having to face the hard metaphysical questions about the nature of the entities over which these quantifiers range.

4. Two Recent Theories of Propositions

4.1. Pleonastic Propositions

Two sentences are *pleonastic equivalents* when they mean the same thing, in at least a loose sense, but one uses more words than the other, e.g.:

11 a. Hillary was elected to the Senate in 2000.
   b. Hillary’s election to the Senate occurred in 2000.
12 a. Hillary is a senator.
   b. Hillary has the property of being a senator.
13 a. Hillary is a senator.
   b. That Hillary is a senator is true.

The inferences from the (a) to (b) sentences are examples of what Schiffer (*Things We Mean*) calls *something-from-nothing transformations*. Note that by existentially generalizing on the (b) sentences we can deduce the existence of an event, a property and a proposition, respectively. Schiffer calls entities whose existence can be deduced in this way *pleonastic entities*. For Schiffer, events, properties and propositions are all pleonastic entities.
There’s more to it than this, of course. The something-from-nothing transformations have to be metaphysically valid, i.e., the premises metaphysically entail the conclusions, but not logically valid. So the logically valid (14) doesn’t count as a something-from-nothing transformation:

14 a. No rejuvenating fountain exists.
   b. The rejuvenating fountain does not exist.

This means that non-existent, Meinongian entities are not pleonastic entities. Furthermore, to rule out other unwanted cases (see the concept of a ‘wishdate’ (Things We Mean 53)), Schiffer stipulates that adding pleonastic entities to our ontology must do ‘nothing to disturb the pre-existing causal order’ (71). He borrows an idea from Hartry Field (Science without Numbers) to make this precise. Roughly, pleonastic entities are only those entities such that adding them to any theory only conservatively extends that theory when its quantifiers are restricted to things that are not entities of the relevant kind.

So far this seems fine: propositions count as pleonastic entities in Schiffer’s sense. What follows is rather surprising. From the fact that propositions are pleonastic entities, Schiffer concludes that they are very fine-grained sui generis abstract entities with no structure or constituents. What licenses this inference? The key is a thesis about the nature of pleonastic entities in general. Schiffer thinks that the natures of these entities are completely determined by ‘the something-from-nothing language games by which they’re deposited in our ontology’ (‘Language-Created’ 161). The contrast here is with things like cats, volcanoes and electrons – entities that ‘enjoy the highest degree of ontological and conceptual independence from our linguistic or conceptual practices’ (Things We Mean 60). Schiffer’s thought is that because pleonastic entities are ontologically dependent on our linguistic and conceptual practices, their natures must be completely determined by those practices.

This highlights a nagging paradox in Schiffer’s theory. As pleonastic entities, propositions are supposed to be somehow ontologically dependent on our linguistic practices, but as Schiffer himself frequently emphasizes, propositions are mind- and language-independent entities that have their truth conditions essentially and absolutely. A proposition doesn’t depend for its existence on the existence of thinkers or language and it doesn’t have any special connection to any particular language or linguistic practice. How is it, then, that propositions enjoy anything less than the highest degree of independence from our linguistic and conceptual practices? Schiffer needs there to be some kind of ontological dependence in order to justify the view that the natures of propositions are completely determined by our linguistic and conceptual practices, but he fails to make out what this dependence amounts to. He argues plausibly that our knowledge of the existence of propositions depends on our use of ‘that’-clauses, i.e., if we didn’t have ‘that’-clauses then we wouldn’t be aware of the existence
of propositions.16 But that's obviously a kind of epistemological dependence, not an ontological one.

Furthermore, even if we grant that the nature of propositions is fixed by our language games with ‘that’-clauses, there’s still a question about whether Schiffer is entitled to his conclusion about the nature of propositions. His idea is that when we survey these language games, in particular, the criteria of evaluation for attitude reports, we’ll see that propositions have to be very fine-grained, structure-less and non-composite. One interesting claim he makes in this regard concerns an asymmetry between attitude reports and other relational sentences. Normally, when evaluating a sentence of the form ‘aRb’ first you find the referents of ‘a’ and ‘b’ and then you evaluate the whole sentence. Schiffer thinks the order of priority is reversed in the case of attitude reports; first you evaluate ‘A believes that p’, and then you can fix the proposition designated by ‘that p’. This is one feature of the language game with ‘that’-clauses that is supposed to show that propositions are simple and sui generis. In the end, though, Schiffer’s argument against positing structure in propositions boils down to the fact that he can’t think of anything suited to play the role of propositional constituents:

Still, a stronger point can be made: the contextually determined criteria of evaluation [for attitude reports] seem not to determine anything adequate to be propositional building blocks, the referents of expressions in that-clauses. I don’t have a proof that they don’t, merely a plausibility argument which simply amounts to the fact that I can’t think of any plausible candidates together with there being no good reason why the referent of a that-clause must be a function of the referents of its component expressions. (Things We Mean 82)

Anyone who has read Schiffer’s Remnants of Meaning will feel a familiar kind of frustration with this argument. He also seems to be drawing the wrong conclusion here. Given that our language games with ‘that’-clauses fail to determine anything to be the parts of propositions, the most we can conclude is that it is indeterminate whether propositions have parts (or perhaps that the natures of these parts are indeterminate). Surely our language games with ‘that’-clauses do not positively determine that propositions don’t have parts. Schiffer’s conclusion that propositions are simple and unstructured looks like a non sequitur.

4.2. PROPOSITIONAL STRUCTURE

Supposing that propositions do have parts and structure immediately raises two questions: what, exactly, are the parts?, and, what structure holds these parts together? In a series of articles (‘Can Propositions Be Naturalistically Acceptable?’; ‘Structured Propositions and Complex Predicates’; ‘Structured Propositions and Sentence Structure’; ‘What is a Philosophical Analysis?’) and a recent book (Nature and Structure of Content), Jeff King has articulated
an interesting answer to the second question. King’s theory is an account of propositional structure, although he does assume without argument a Russelian answer to the first question, i.e., the view that propositions contain objects, properties, and relations, as opposed to Fregean senses. His work is a contribution to the structured propositions approach associated with philosophers like David Kaplan, Nathan Salmon, and Scott Soames, although his view about propositional structure is flexible enough to accommodate other accounts of propositional constituents, including the Fregean account. King has revised his theory several times since its first appearance in the mid-90s – here I am going to focus on the version in ‘Structured Propositions and Complex Predicates’, which has all the essential ideas, but the reader should see *Nature and Structure of Content* for the most up-to-date statement of the theory.

The question about propositional structure can be put as follows: what relation holds among the constituents of a proposition? To a first approximation, King’s answer is that it is the very same syntactic relation that binds together the words in the sentence that expresses the proposition. Consider the syntactic structure of the sentence ‘Bill kissed Hillary’, represented here in tree form:

Each of the words in this sentence stands in a semantic relation to a semantic value, which, following King (and ignoring tense), we can call Bill*, kiss*, and Hillary*, respectively. (For Russelians, Bill* is Bill, kiss* is the relation of kissing, and Hillary* is Hillary.) Using vertical lines for semantic relations, let’s add these semantic values to our diagram:

This is a state of affairs in which Bill*, kiss* and Hillary* bear semantic relations to words that bear a syntactic relation to one another. From this we can generate another state of affairs by getting rid of the words:
This is a state of affairs in which Bill* bears a semantic relation to some word which bears a syntactic relation to two other words that have as their semantic values kiss* and Hillary*, respectively. The only constituents of this state of affairs are Bill*, kiss* and Hillary*, which are held together by an amalgam of a syntactic relation and several semantic relations. According to King, this state of affairs is the proposition that Bill kissed Hillary.

One intriguing feature of this account is the way King uses it to address the issue about how a proposition’s representational features arise out of its internal constitution. For King, the problem is to explain how a propositional state of affairs, like the one depicted above, represents a non-propositional state of affairs, e.g., the state of affairs in which Bill kissed Hillary. His solution is that the syntactic relation in the proposition represents or ‘encodes’ the relation of instantiation, a higher order relation that holds between objects, properties and relations. In terms of our example, the semantic values Bill*, kiss* and Hillary* are bound together by a syntactic relation that encodes the instantiation relation. In this way, the whole proposition represents the state of affairs in which Bill and Hillary (in that order) instantiate the kissing relation. The basic idea is that a propositional state of affairs, $\alpha$, represents another state of affairs, $\beta$, because the constituents of $\alpha$ represent the constituents of $\beta$ and the relation binding together $\alpha$ represents the relation binding together $\beta$. There’s an unmistakable affinity here with Wittgenstein’s picture theory of meaning in the *Tractatus*.17

King’s theory is by far the best developed theory of propositional structure on the market – what I’ve said here doesn’t do it justice. But even with this rough sketch it’s possible to bring out two problematic features of the view. One is the way in which propositions turn out to be ontologically dependent on the existence of languages. Syntactic and semantic relations surely only came into existence with the invention of language. Given the role these relations play in his account, King is committed to saying that before there were languages there were no propositions. Since propositions are the bearers of truth, it follows that nothing was true before there were languages. Furthermore, given the standard truth-schema for propositions, i.e. ‘The proposition that $p$ is true if and only if $p’$, not only was nothing true before there were languages, nothing was even the case (for all $p$, not-$p$). These are *prima facie* very damaging problems, which King is aware of and which he responds to at length (*Nature and Structure of Content* 67–79).

The other problem for King is the way in which the individuation of propositions is held hostage to syntax. An important detail in King’s theory is that the syntactic relations in propositions are LF (Logical Form) syntactic relations.18 LF is a technical notion from post-1970s Chomskyan syntax.19 In these theories a sentence is represented as a collection of syntactic structures, each serving a different role. LF is the level of syntactic representation relevant for semantic interpretation; all semantically significant grammatical structure, e.g., quantifier scope relations, has to be represented at this level. To capture this structure LF is subject to all sorts of purely
syntactic rules, which have consequences for King about how propositions are individuated. For example, through the consistent application of these syntactic rules, the sentence ‘Everyone kissed everyone’ will most likely be assigned two distinct LF structures. If so, King would be forced to say that this sentence expresses two distinct propositions. This is an unwelcome encroachment of syntax on semantics. The concept of a proposition does not belong to syntax, and the assignment of propositions to sentences should have some autonomy from the rules governing syntax. King’s theory eliminates this autonomy by building syntactic structure directly into propositions. King is sensitive to the fact that he individuates propositions very finely (Nature and Structure of Content 95–101), but he doesn’t seem bothered by the way in which he grants syntax control over the assignment of propositions.

5. Conclusion: Future Directions

I’d like to conclude with some brief and open-ended remarks about two possible directions for future research. The first concerns something John Perry has called the ‘classificatory concept’ of propositions, which is based on an analogy between propositions and physical magnitudes like weight, height and temperature.20 Consider:

15 a. Bill weighs 225 pounds.
   b. Bill measures 6 feet 2 inches.
   c. Bill has a temperature of 98.6°F.

We use these sentences to give physical descriptions of Bill by relating him to abstract objects, a weight, height, and temperature, that occupy positions in systems of such objects. This works because these systems of abstract objects correspond in systematic ways to the empirical properties we’re using them to describe. The analogy with propositions and propositional attitudes is obvious. We use propositional attitude reports to give psychological descriptions of a subject by relating her to a proposition that occupies a position in a system of propositions whose logical structure corresponds to the structure of the attitudes. Many philosophers take this analogy to be most revealing about the nature of the attitudes, but it may also tell us something about the nature of propositions. For example, we might find that simple, unstructured entities, like Schiffer’s pleonastic propositions, won’t allow us to make sense of the relations that propositions must bear to one another in order for them to play their classificatory role.

A second direction for future research concerns the nature of questions. There is a growing recognition among philosophers that a distinction has to be made between propositions and the contents of interrogative ‘wh’-clauses.21 For example, (16a–b) clearly have different truth-conditions, since (16a) is false and (16b) is true:
16 a. Bill knows that Hillary is a governor.
   b. Bill knows whether Hillary is a governor.

The best way of accounting for this difference is to hold that the ‘that’- and ‘whether’-clauses designate different things. Following common practice in linguistics, let’s call the entity designated by a ‘wh’-clause a question, to distinguish it from the proposition designated by a ‘that’-clause. Now we can ask: what is a question? A popular view in linguistics is that a question is a partition on the space of possible worlds. But that won't allow for distinctions in content between interrogatives with necessarily true answers, e.g., ‘Does 12 equal 5 plus 7?’ and ‘Is first-order logic undecidable?’, since each corresponds to the same partition. This is an exact analog of the fineness of grain problem for the sets-of-possible-worlds account of propositions, and it illustrates one way in which issues about questions and propositions run in parallel. In other words, what we’ve learned about propositions has a lot to tell us about the nature of questions. It’s not at all unlikely that work on questions will have a reciprocal influence on our thinking about propositions.

Short Biography

Peter Hanks’s research is in philosophy of language, metaphysics and the history of analytic philosophy, with a focus on the nature of propositions and the semantics of propositional attitude reports. He received a B.A. in philosophy from Princeton and a Ph.D. in philosophy from the University of California, Berkeley. He is currently an Assistant Professor in the Department of Philosophy at the University of Minnesota, Twin Cities. His published work has appeared in *Philosophical Studies*, *Synthese*, *Noûs*, *Erkenntnis*, *Dialogue*, and *The Encyclopedia of Philosophy*. He is currently working on a theory of structured propositions that abandons Frege’s distinction between content and force.

Notes

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1 See Soames’s ‘Direct Reference, Propositional Attitudes, and Semantic Content’ for a detailed statement of the problem.

2 Why ‘designate’ and not ‘refer’? Some philosophers use the term ‘reference’ in a strict sense on which proper names and demonstratives have referents but definite descriptions do not. The relational analysis is neutral about whether ‘that’-clauses refer in this strict sense – that’s why I’m avoiding the term ‘refer’. The term ‘designate’ is more general, covering any of the semantic relations that singular terms bear to their extensions. Note that I’m using ‘singular term’ here to cover proper names, definite descriptions, and any other expression whose extension is an individual. One worry about the relational analysis, which I’m not going to be able to address, concerns the syntactic differences between ‘that’-clauses and other singular terms. ‘That’-clauses are complementizer phrases, a kind of syntactic constituent very different
from noun and determiner phrases. These syntactic differences may be substantial enough to count against any semantic approach that treats ‘that’-clauses as singular terms.

3 See Parsons.

4 The objection is due to Wittgenstein. See my ‘How Wittgenstein Defeated Russell’s Multiple Relation Theory of Judgment’.

5 Thomas Hofweber (‘Schiffer’s New Theory of Propositions’ 216), points out that the failure of substitutivity in this case has a syntactic explanation, i.e., it is ungrammatical to apposite a definite description inside another definite description, and for that reason cannot dispel the puzzle about cases like (5) and (6) where the substitution failure looks like a semantic phenomenon.

6 For example, Salmon; Soames.

7 I’ll return to Schiffer’s theory later in the article. Bealer’s view is interesting but pre-dates the mid-90s and so doesn’t quite count as recent for the purposes of this survey.

8 This places a burden on Jubien to say something about the analysis of belief reports and belief. Like Moltmann, he opts for a version of Russell’s multiple relation theory. Again, though, the multiple relation theory faces the same problem that Wittgenstein used against Russell almost a hundred years ago.

9 There are differences between Hofweber’s internal quantifiers and substitutional quantifiers but we don’t need to get into these details. See his ‘Inexpressible Properties and Propositions’.


11 See Schiffer, Remnants of Meaning ch. 5; Soames, Beyond Rigidity ch.7.

12 See Schiffer, ‘Replies’.

13 See Things We Mean 56–7, for the exact definition.

14 Cf. Thomasson.

15 For example, see Things We Mean 14.

16 ‘Language-Created Language-Independent Entities’ 160–1; Things We Mean 62.

17 See Nature and Structure of Content 27, n.4, where King acknowledges the debt to Wittgenstein.

18 King’s propositions should not be confused with Interpreted Logical Forms (see Larson and Ludlow, Larson and Segal). Unlike ILFs, King’s propositions do not contain words. Conversely, unlike King’s propositions, ILFs do not contain properties or relations, only objects and words. There are also more fundamental differences. The ILF view is an attempt to analyze propositional attitude reports within a Davidsonian semantic framework in which sentences are interpreted via the derivation of T-sentences in a Tarskian truth-theory. In the Davidsonian framework there are no objects assigned to sentences as semantic values, and in that sense there are no propositions. ILFs should therefore not be thought of as propositions. Rather, ILFs are objects used within a truth-theory to derive T-sentences for propositional attitude reports. King works within an entirely different structured propositions framework, in which a sentence is interpreted by being assigned a structured proposition as its semantic value. That’s why King’s account, unlike the ILF theory, is properly thought of as a theory of structured propositions.

19 See May; Hornstein; Szabolcsi for more on LF in Chomskyan syntax.

20 Many philosophers have noticed the analogy, e.g., Churchland; Field, ‘Postscript’; Stalnaker; Dennett; Davidson; Matthews 1994, 2007; Perry; Sainsbury, although there’s no consensus about what lesson to draw from it.

21 Two recent examples are Braun; Schaffer.

22 See my ‘Content-Force Distinction’ 144–9.

23 See Groenendijk and Stokhof.

Works Cited

Recent Work on Propositions


