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Propositions

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Propositions are traditionally taken to be entities that satisfy A1 - A3.

- A1. Some things are asserted, believed, and known. These attitudes relate those who assert, believe, or know something to that which they assert believe, or know.
- A2. The things asserted, believed, and known are bearers of truth and falsity.
- A3. Propositions -- the things satisfying A1 and A2 -- are expressed by sentences. The proposition expressed by S can be designated by the expressions [the proposition that S], [the statement/claim/assertion/belief that S], or simply [that S].

Since different sentences may be used to assert the same thing, or express the same belief, and different beliefs or assertions may result from accepting, or assertively uttering, the same sentence, propositions are not identical with sentences that express them. Intuitively, they are what different sentences, or utterances, that "say the same thing," or express the same belief, have in common. The metaphysical challenge posed by propositions is to identify entities fitting this picture that can play the roles demanded of them in our theories.

One such theory is semantics. In semantics, propositions are needed as contents of (certain) sentences, objects of attitudes, entities quantified over ('Bill questioned several propositions Mary asserted') and referents of certain names ('Logicism', 'Church's Thesis', 'Goldbach's Conjecture') plus demonstratives ('That's true'). Propositions are also needed to state the goals of semantics, which include specifying the contribution of semantic contents to what is asserted and believed by speakers. In theories of mind propositions are contents of perceptual and cognitive states that represent the world as being certain ways, and so have truth conditions. As with sentences, the states and their propositional contents aren't identical. Thus, our question becomes 'What are these things, propositions, that different, but representationally equivalent, sentences and cognitive states have in common?'

One natural, though ultimately unsatisfactory, answer is that what they have in common is simply their truth conditions. On this view, propositions are not things that have truth conditions; they are the truth conditions that sentences and cognitive states have. The main problem with this idea is that sameness of truth conditions is not sufficient for sameness of assertion, belief, or semantic content. Semantic theories that pair a sentence S with the set of metaphysically possible world-states at which S is true don't provide enough information to allow one who knows the theories to understand what S means, or to identify the beliefs expressed, or assertions made, by uses of S. This negative result persists even if we relax the requirement that the world-states – thought of as maximal properties attributed to the universe – be restricted to those that genuinely could have been instantiated, and allow, in addition, metaphysically impossible world-states that can coherently be conceived to be instantiated, and can't be known apriori not to be. This result is generalized in Soames (1987, 2008b) to all theories satisfying (i) –(iii), no matter what they choose as circumstances at which sentences are evaluated for truth.

- (i) Semantic contents of some singular terms, including indexicals and variables, are their referents relative to contexts and assignments.
- (ii) $\begin{bmatrix} P & Q \end{bmatrix}$ is true at a circumstance E iff both conjuncts are true at E.
- (iii) $\begin{bmatrix} \exists x Fx \end{bmatrix}$ is true at E iff Fx is true of some object o at E

Since (i) is well-motivated and (ii)-(iii) are central to theories of truth at a circumstance, we can't identify the propositions expressed by sentences with sets of circumstances at which they are true, no matter how fine-grained the circumstances. In short, although propositions are indispensable, they can't be extracted from truth-conditional theories. Rather, they are what the truth conditions of sentences are derived from. Thus, we need an independent theory of propositions.

THE REALIST THEORIES OF FREGE AND THE EARLY RUSSELL

The realist theories of Gottlob Frege (1892a, 1918) and the early Bertrand Russell (1903) provide a starting point. According to both, propositions are meanings of sentences, bearers of truth, and objects of the attitudes. Since they are meanings, Frege and Russell took them to be structurally complex entities the constituents of which are meanings of the constituents of the

sentences that express them. This assumption, though natural, led to what they found to be an unfathomable mystery. Just as sentences aren't collections of unrelated expressions, but rather have a structural unity that distinguishes them from mere lists, and is responsible for their representational character, so propositions aren't collections of unrelated expression meanings, but rather have a unity that distinguishes them from mere aggregates of their parts, and allows them to represent the world. This unity is what Frege and Russell found mysterious.

Here is how the problem is put in Russell (1903: 49-50).

"Consider, for example, the proposition "A differs from B." The constituents of this proposition, if we analyze it, appear to be only A, difference, B. *Yet these constituents, thus placed side by side, do not reconstitute the proposition. The difference which occurs in the proposition actually relates A and B, whereas the difference after analysis is a notion which has no connection with A and B.* [my emphasis] It may be said that we ought, in the analysis, to mention the relations which difference has to A and B, relations which are expressed by *is* and *from* when we say A is different from B. These relations consist in the fact that A is referent and B relatum with respect to difference. But A, referent, difference, relatum, B, is still merely a list of terms, not a proposition. *A proposition, in fact, is essentially a unity, and when analysis has destroyed the unity, no enumeration of constituents will restore the proposition. The verb, when used as a verb, embodies the unity of the proposition, and is thus distinguishable from the verb considered as a term, though I do not know how to give a clear account of the precise nature of the distinction." (my emphasis)*

Certainly, there is more to the proposition that A differs from B than the fact that its constituents are A, B, and difference. There is also the manner in which the constituents occur. Presumably, this has something to do with the fact that the proposition *predicates* difference of A and B, and so *represents A as being different from B*. Since a list doesn't predicate anything of anything else, it isn't representational.

Is this problematic? Consider sentence (1), in which 'difference' and 'identity' are nouns, 'different' is an adjective that combines with the copula to form the predicate, and 'from difference' is a prepositional phrase modifying the predicate.

1. $[_{S} [_{N} \text{ Difference}] [_{VP} [_{V} \text{ is different} [_{PP} [_{P} \text{ from}] [_{N} \text{ identity}]]]]$

The constituents of the Russellian proposition expressed by (1) are the relations identity and difference, the latter occurring twice. Understanding (1) involves understanding its words, which provide the proposition's constituents, plus understanding its syntactic structure, which indicates what is predicated of what. Just as one who understands the sentence recognizes one expression as predicate and two others as arguments, so, it might be argued, one who entertains the proposition recognizes from its structural configuration which constituent is predicated of which. On this view, it is the *structural relations* that constituents bear to one another that carry the information about predication that *unifies* the proposition, and gives it representational content.

But how, exactly, does the arrangement of its constituents show that the proposition predicates difference of difference and identity? Consider some candidates for this proposition.

2a. < difference, <difference, identity> >

b. { {difference}, { difference, { {difference}, { difference, identity } } }

c. <<identity, difference>, difference>

d. {{{identity}, {identity, difference}}, {{ {identity}, {identity, difference}}, difference }}3a.



3b.

Although any of these structures could serve as a formal model of the proposition expressed by (1), none could be that proposition. The proposition *represents difference as being different from*

identity, because it *predicates* difference of the other two. Since there is nothing in (2), (3), or any similar formal structure, which, *by its very nature*, indicates that anything is predicated of anything, such structures are neither intrinsically representational nor capable of being true or false.

We could, if we wished, *adopt* rules that would allow us to read off information about predication from the structures, and so *interpret* them. But this wouldn't make them traditional propositions. Such propositions *aren't* things we *endow* with meaning by providing them with interpretations; they *are* the meanings, or interpretations, we take sentences to have. The real problem is Russell's pair of assumptions: (i) that propositions are intrinsically representational, independent of us, and (ii) that they are the sources from which cognitive states and sentences inherit their intentionality. To adopt these assumptions is to try to explain something relatively clear and obvious by appealing to something mysterious and incomprehensible. The clear and obvious fact is that agents do predicate properties of things, and when they predicate *being different* of things they – the agents -- represent those things as being different. The purported explanation is that these agents entertain an abstract structure which - intrinsically, and independent of any relation it bears to us - *predicates* difference of the things, and so represents them that way. The problem with this "explanation" is that we have no idea of how a treestructure, n-tuple, set-theoretic construction, or any similar abstract structure could, in and of itself, predicate anything of anything. Because of this, traditional Russellian propositions are the incomprehensible posits of an explanatory program that doesn't explain. As such, there is no reason to believe in them.

The same holds for Fregean propositions, which are also assumed to be representational independent of us. Frege differs from Russell in postulating "unsaturated" senses that are intrinsically predicative, and so always occur in a predicative role (Frege, 1892b). Although this

may sound attractive, it isn't, since it leads him to conclude that neither the sense nor referent of any predicative expression can be designated by a non-predicative expression -- and, thereby, made the subject of a further predication. This thesis -- that if Pred is a predicate, then *the sense of Pred* is unsaturated, *the referent of Pred* is incomplete, and neither can be designated by any nonpredicative expression – is self-defeating, as shown by the italicized phrases used to state it (Soames 2010a: chapter 2).

NEW CONCEPTIONS OF PROPOSITIONS

Since we need propositions in our linguistic and cognitive theories, the failure of traditional conceptions calls for a new conception that reverses explanatory priorities. Sentences, utterances, and cognitive states are not representational *because* of their relations to inherently representational propositions. Instead, propositions are representational *because* of their relations to inherently representational cognitive states, or independently representational sentences. On this view, intentionality in mind and language results from the cognitive activities of agents. There are, in the current literature, two main ways of fleshing out this idea. The first, presented in King (2007) takes the existence and representational character of sentences that express them. The second, presented in Soames (2010a), develops a conception of propositions as contents of intentional cognitive states generally -- including perception and non-linguistic belief, which are the basis of more complex, linguistically mediated, thought.

King's Conception of Propositions

We being with sentence (4), and the proposition it expresses.

4. [s [NP This] [Pred [Cop is] [Adj red]]]

The labeled bracketing in (4) displays the syntactic structure of the sentence, indicating its constituents, syntactic structure, and the order in which the constituents occur. Abstracting away from details, I use ' R_s ' to name the syntactic relation that the word 'this' stands in to the word 'red' in (4). Since 'this' is an indexical, (4) expresses a proposition only relative to a context of

utterance. Imagine a context in which 'this' is used to refer to o. According to King, the proposition – *that o is red* -- expressed by (4), relative to the context, is a structurally complex entity of which o and the property *being red* are constituents, along with R_s . He takes this proposition to be the fact designated by (4F).

4F. the fact that there is a possible context C and expressions a and b of some language L such that (i) some sentence S of L consists of a's bearing R_s to b, (ii) \underline{o} is the semantic content of a in C, and the property being red is the semantic content of b in C, and (iii) in L the relation R_s encodes the instantiation function (which is to say that sentences formed by placing an expression α in the relation R_s to an expression β are true, at a context iff the referent of α at the context instantiates the referent of β at the context).

Although this may seem like a mouthful, the idea is simple. Propositions are what sentences with the same semantic content have in common – the contents of their constituents, plus a common syntactic structure, the semantic contribution of which is the same for each sentence. In English, when a term α stands in R_s to an adjective β the property designated by β is predicated of the referent of α , which means that the sentence is true iff the referent instantiates the property. So the syntax and semantics of English, plus the existence of (4) and the context C, guarantee the truth of the italicized clause in (4F). King takes this to mean that (4F) designates *a fact*, which is the proposition (4) expresses. Thus, the existence of the proposition that o is red is guaranteed by the semantic properties of (4) at C. To get the same result for any sentence S and context C* at which S has the same semantic properties that (4) has at C, King quantifies over all possible contexts, and every sentence of every language, thereby arriving at the complex general fact that, in his view, is the proposition that o is red.

For King, as for the early Russell, *the fact that a is G* is a complex entity that consists of a's actually instantiating G-hood. As Russell observed, *the proposition that a is G* can't be that fact, for, if it were, its very existence would guarantee its truth (Russell 1910-11: chapter 12; Soames (2010a: chapter 4). King avoids this absurdity by taking the proposition to be the fact *that a R_p G-hood* -- where R_p is the relation expressed by the formula that results from replacing the underlined occurrences of '*o*' and '*the property being red*' in the italicized part of (4F) with a pair of variables. Thus, he solves Russell's problem of explaining what "holds together" the

constituents of the proposition -- they are held together by the fact that R_p *actually relates them* – while avoiding the absurd result that in order to exist a proposition must be true.

Although this result is good, the view faces a number of challenges, including (i-iii).

- (i) Positing facts -- not as true propositions, but as discrete truthmakers carries philosophical worries that may themselves be sources of skepticism (Merricks 2007; Soames 2008a). Possibilia are also a concern. For King, propositional facts involve quantification over possible contexts, which include merely possible world-states as constituents. *But if the analysis of propositions appeals to a conceptually prior notion of a possible world-state, then the analysis of such a state can't appeal to a conceptually prior notion of a propositions are attractive (Adams 1974; Soames 2007, 2010b: chapter 5). Thus, going down King's road on propositions precludes taking other roads one may want to take on related issues.*
- (ii) King's belief in actualism which allows reference to, and quantification over, only things that actually exist brings further worries. It follows from actualism plus his analysis of propositions that in order for any proposition to exist, all world-states of possible contexts conceived of as maximal properties the universe fails to instantiate must also exist. Though the existence of some uninstantiated properties may be unproblematic, the existence of those involving particular objects e.g., *being identical with, or distinct from, o* -- seems to require those objects to exist. If, as I believe, world-states *are* properties the existence of which requires the existence of possible objects -- then the actual existence of possible world-states will require the actual existence of all possible objects (Soames 2010b: chapter 5). King takes no definite stand on this, leaving it unresolved how merely possible objects are represented by world-states (King 2007: 42-4, 57, 84). This leaves his account of propositions hostage to the fortunes of highly contentious metaphysical claims about which, one might think, the analysis of propositions should be neutral.
- (iii) Since English contains both [the fact that S] and [the proposition that S] -- which for King designate different things -- his view seems to require 'that'-clauses to be ambiguous between the readings they bear in [Pam regrets (the fact) that S] and [Pam believes (the proposition) that S]. But he neither gives any linguistic argument that this ambiguity exists, nor rebuts seeming evidence to the contrary e.g., "Pam regrets *that she is pregnant*. Although her parents don't realize *it* yet, in time they will come to believe *it*." Here, the fact regretted is described as something that will eventually be believed a proposition. How, given the supposed difference between the two, can that be?

This difficulty stems from King's Russellian perspective. Both he and Russell take a central aspect of the problem of *the unity of the proposition* to be that of explaining how its constituents – objects and n-place properties -- "hold together." Both came to think that the only available explanation is that a relational constituent of the proposition must actually relate them, which means that the proposition must be a fact in order to exist at all. When Russell came to this view, he concluded that only candidate for being identical with *the proposition* that Desdemona loved Cassio was *the fact* that Desdemona loved Cassio. Since this ruled out the possibility of falsity, he gave up propositions (Russell 1910-11: chapter 12). Although King avoids this conclusion by identifying the proposition with a *different* fact, this simply leads to the corresponding difficulty (iii).

The error in both accounts comes from taking the question "What holds the constituents of a proposition together?" too seriously. The misnamed problem of propositional unity isn't that of making one object out of many. Sets, sequences, and trees are each single things with multiple constituents of various sorts. The reason they aren't propositions isn't that their constituents keep falling out. They aren't propositions because they don't represent anything as being any particular way. The real problem for which we have, as yet, no answer is "How is it that propositions are able to represent the world, and so have truth conditions?" Nothing is gained, when answering this question, by appealing to facts. Even if we suppose that King's clause (4F) designates a complex fact F_4 , simply noting F_4 's existence provides no hint that *it* has truth conditions at all, let alone that it is true iff o is red. Of course, if it exists, then for some sentence S of some language and some possible context C, S is true at C iff o is red. But from this we can't even conclude that it makes sense to attribute truth conditions to facts, let alone that F_4 has the truth conditions claimed for it.

King eventually realizes this (King 2007: 60). He responds as follows: In and of itself, F_4 isn't a proposition, and doesn't have truth conditions. However, it *becomes* one, and acquires truth conditions, when we *interpret* it in a certain way. King sees F_4 as a complex consisting in *o's* standing in the two-place relation R_p (defined above) to *the property being red*. So

understood, it can be seen as acquiring truth conditions, provided that R_p is viewed as (in his words) "*inheriting the semantic significance of* R_s ." Just as we use the syntactic relation R_s in sentence (4) to *predicate* the property designated by its second argument of the referent of its first argument, so we can *come to use* the propositional relation R_p to *predicate* the property which is its second argument of the object which is its first argument. To do so is to *endow* the formerly non-intentional F_4 with truth conditions. King thinks there was a time -- before English contained attitude verbs, 'that'-clauses, or modal operators -- when it did contain sentences like (4), plus truth-functional and quantified sentences. *Then*, sentences were used in cognition and communication, words had semantic contents, and sentences had truth conditions. But no propositions yet existed. Although the fact F_4 existed, *it wasn't yet a proposition*, because no need had arisen *to assign semantic significance to* R_p . When the need to report cognitive states was felt, some way of viewing sentences and cognitive states as sharing representational contents had to be found. Then, speakers became aware of F_4 , and implicitly assigned it a significance inherited from sentence (4). Thus it came to pass that Man created propositions (King 2007: 60-1, 65-7).

In addition to being uncomfortably speculative, this account embodies a troubling internal tension. On one hand, we are told that propositions are dependent on the *prior* existence of language, and the complex cognitive and communicative practices of those who speak it. Prior to the existence of propositions, speakers are supposed to have used language to think and communicate – which presumably involved (a) using certain expressions with the intention of referring to specific objects, (b) using other expressions with the intention of predicating them of those objects, (c) using sentences to assert things, and express beliefs, and (d) being confident one's hearers could recognize one's intentions, assertions, and beliefs. On the other hand, we are told that belief, assertion, and intention are attitudes to propositions, which did not then exist. From this it follows that the agents who used language in King's pre-propositional age must have done so *without intending, believing, or asserting anything.* How can that be?

King answers by postulating that our ancestors had what he calls "proto-intentional states," sufficient for their "pre-propositional language." But whatever these "proto-intentional states" are, they can't be relations to things – call them "proto-propositions" – that are themselves representational, or have truth conditions, lest they raise the same problems as genuine propositions do. If the postulated primitive states are not relational in this way, we need to be told: (i) how, if at all, they are representational, (ii) how -- if they are not -- they can give rise to sentences that are representational, and have truth conditions, and (iii) how -- if they both represent things as being certain ways and bring it about that the sentences of the proto-language do too – they can fail to provide propositions at the same time. King's discussion (65-7) doesn't begin to answer these questions. Thus, it remains mysterious how the sentences that, on his view, must have arisen from them could be representational, or have the truth conditions on which his account depends.

This point is tied to a final question the relevance of which should have been evident all along. What is it entertain one of his linguistically-based propositions? Apart from points already mentioned, plus an inconclusive paragraph on page 52, King says very little about this. Essentially, all we are told is that once propositions come into being, a speaker of a language that contains attitude constructions will be able to entertain propositions by understanding sentences. No language-independent way of entertaining propositions is specified. But surely, we need an account of propositions as contents of perceptual experience, perceptually based beliefs, plus imaginative, and other non-linguistic, intentional states. It is hard to see how this can come from an analysis of propositions as *inherently linguistic* facts.

The Cognitive Realist Account of Propositions

This observations leads to a second attempt to ground the intentionality of propositions in the cognitive states of agents (Soames 2010a). Like King's approach, it applies to propositions expressed by sentences. Unlike his approach, it is not centered in language, but applies to cognitive states generally. We begin with the idea that to entertain a simple proposition is to predicate something of something. To entertain the proposition that o is red is to predicate redness of o. Although, like negation, predication is a primitive notion, it is easily illustrated. When we see o *as red*, we predicate redness of it, and so entertain the proposition that o is red. We also predicate redness of o, and hence entertain this proposition, when we form the perceptual *belief* that o is red. We do the same when we understand an utterance of 'This is red', taking the predicate to express the property redness and the subject to refer to o.

Pretend, for a moment, that the proposition that o is red is the abstract structure (4D).

4D. [Prop [Arg 0] [Pred Redness]]



Recognizing structures like these to be theorists' creations, we may temporarily *stipulate* that to entertain (4D) is to predicate redness of o. In so doing, we assign a technical meaning to the verb 'entertain' that explains what we mean by the claim that an agent entertains this abstract structure. Next, we advance (5a), from which we derive that an agent entertains the proposition that o is red iff the agent predicates redness of o.

5a. An agent entertains the proposition that o is red iff the agent entertains (4D).

Other attitudes are treated similarly. Since to *entertain* the proposition that o is red is to predicate redness of o, and since this predication is included in every attitude with that content, entertaining the proposition is one component of any attitude we bear to it. To *believe* that o is red is to predicate redness of o while endorsing that predication. To *know* that o is red is, roughly, for o to be red, to believe that o is red, and to be justified in so believing. To *assert* that o is red is to commit oneself, by uttering something, to treat the proposition that o is red as something one knows. Given these characterizations, we add (5b-d) to (5a), generating further empirical claims that bottom out, as before, in claims about the cognitive acts of agents.

5b. An agent believes the proposition that o is red iff the agent believes (4D).

c. An agent knows that o is red iff the agent knows (4D).

d. An agent asserts that o is red iff the agent asserts (4D).

More complex propositions are treated similarly. For example, to entertain the proposition that it is not the case that o is red, represented by (6), is (i), to predicate redness of o, and thereby to entertain the proposition that o is red, and (ii), to predicate *not being true* of that proposition – which, for the moment, we continue to identify with (4D). One performs this predication – of untruth to the propositional structure -- by, in effect, saying to oneself, "That's not true," referring to the result of one's initial predication.

6. [Prop[Pred NEG][Arg [Prop [Arg 0] [Pred Redness]]]]



Entertaining more complex propositions involves more complex sequences of cognitive acts.

The approach thus far depends on (i) the inclusion of information about what is predicated of what in the abstract structures we are temporarily allowing to play the role of propositions, (ii) the identification of what it is to entertain a proposition with specific acts of predication that occur in perception and both linguistic and non-linguistic thought, and (iii) the establishment of propositions as *themselves* representational bearers of truth conditions, in virtue of what is required to entertain them. What makes the proposition that o is red represent o as red, is that predicating redness of o is necessary and sufficient to entertain it. Since one who performs this predication *oneself* represents o as red, and since any agent who does this thereby entertains the proposition, we speak *derivatively* of the proposition predicating the property of the object, and so representing it as red – whether or not anyone, in fact, ever entertains it. Since

this fact about the proposition doesn't change from world-state to world-state, its truth conditions are invariant. It is true at any world-state w iff o is red at w.

At this point we confront the convenient pretense that identifies propositions with abstract formal structures like (4D). Having come this far, it is tempting to think that no further, more realistic, account of propositions is needed. The temptation springs from the idea that the function of propositions in our theories is nothing more than to identify and track the cognitive states of agents -- which are all we are really interested in. Just as in physical theory we use numbers, and other abstract objects, to specify relations that physical magnitudes bear to one another, so, in semantic and cognitive theory we use propositions to talk about the relations that intentional cognitive states bear to one another, and to the world. Since what is essential is just that we have a simple and economical way of doing this, it is tempting to imagine that one abstract conception of propositions that gets the job done is as good as another. On this instrumentalist view, there are no genuine questions, "What are propositions really?", or "What structures do agents really have before their minds?" Propositions are theoretical fictions.

Although this idea may initially seem attractive, it isn't. According to the theory, entertaining a compound structure like (6) – which is supposed to represent the proposition that it is not the case that o is red -- requires agents first to refer to, and then predicate untruth of, its simple propositional constituent, which is the result of their predicating redness of o. But if agents really do refer to the proposition that o is red, and predicate untruth of it, then that proposition is no fiction. Since the representational character of (4D) is due to theorists, and so is merely conventional, neither it nor any similar structure is a proposition. This suggests a genuinely *cognitive realist* view. Since propositions are needed to track cognitive acts, they can be identified with *event types* instances of which involve those very acts. For example, the proposition *that o is red* is the (minimal) event type in which an agent *predicates redness of o*. As such, it is both intrinsically connected to the cognitive acts it is needed to track, and also something to which all agents who entertain it bear the same natural relation.

Consider a spoken utterance of the sentence 'Snow is white', thought of as an event that occurs at a particular time and place, and also as a token of the sentence uttered. So construed, sentences are event-types capable of having multiple occurrences, which are their tokens. Next imagine an utterance of the sentence followed by an utterance of "That's true." In such a case, the demonstrative may refer either to the utterance, or to the sentence uttered – illustrating that some event types can be bearers of truth value. Finally, there are events in which one doesn't utter anything, but simply thinks of snow as white, thereby predicating whiteness of it. These cognitions are events that occur at particular times and places, which are instances of a corresponding event type in which an agent predicates whiteness of snow. Just as the sentence 'Snow is white' can be identified with an event type of which utterances of it are instances, so the proposition that snow is white can be identified with an event types have truth conditions.

In addition to bearing their truth conditions intrinsically, propositions-as-event-types are things with which we are acquainted. Since the proposition that o is red is an event type in which one predicates redness of o, and since every attitude one bears to this proposition involves this predication, any agent acquainted with his own cognitive processes – in the sense of being able to make them objects of thought -- will be similarly acquainted with the proposition that o is red, by virtue of being acquainted with (and noting the similarity among) the events in his cognitive life that are instances of it. Given the means both of thinking of o as red, and of becoming aware of so doing, one can then make further predications about the content of one's thought. If, after one predicates redness of o, one says to oneself, "That's not true," one thereby predicates untruth of the proposition that is the type of cognitive event one has just experienced. This illustrates how agents are able to entertain compound propositions by predicating properties of their constituent propositions – which was the bane of the instrumentalist view.

In this way, the cognitive-realist theory inherits the virtues of that view, without its deficiencies. Like that view, it provides entities needed as contents of sentences, bearers of truth, and objects of the attitudes. But while the instrumentalist view sees nothing beyond the

unavoidably arbitrary formal structures -- like (4D) and (6) -- that *play the role of propositions*, the realist account views these structures as merely useful devices that represent *the real propositions to which agents bear natural cognitive relations*. The labeled trees provided by linguistic and cognitive theories encode the structure and sequence of cognitive acts that are necessary and sufficient for entertaining the real propositions these structures represent – where entertaining a proposition is performing the acts needed to token the event-type that it is.

This account addresses the most vexing problems to which traditional propositions give rise. Unlike the Platonic epistemology traditionally required by theories of propositions, the cognitive-realist account takes knowledge of propositions to be knowledge of events that make up one's cognitive life. It also avoids the pseudo-problem of "the unity of the proposition," which -- though usually posed as that of explaining how the constituents of propositions "hold together" -- serves to mask the real problem of explaining how propositions can be representational, and so have truth conditions. The traditional view makes this problem insoluble by taking the representational nature of propositions to be intrinsic, unanalyzable, and independent of us. By locating the representational character of propositions in their intrinsic connection to inherently intentional cognitive events, the cognitive-realist account offers a solution.

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