

**Propositions as
Cognitive Event Types**

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**Chapter 6
*New Thinking about Propositions***

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Propositions as Cognitive Event Types

The conception of propositions I defend is based on the recognition that although propositions are needed to play the central roles assigned to them in theories of language, thought, and perception, they can't do so as they traditionally have been conceived.¹ Thus, we need a new conception of what propositions are.

The Role of Propositions in Language, Thought, and Perception

Traditionally, propositions have been taken to play three interconnected roles: bearers of truth and falsity, objects of attitudes like belief and assertion, and meanings, or semantic contents, of sentences. Sentences are used to talk and think about things. For this to be so, they must represent those things as being various ways – as being *so-and-so*, as being *not such-and-such*, as being *either such-and-such or so-and-so*, and the like. To represent things as being a certain way is to impose conditions that must be satisfied, if those things are to be as they are represented. Since a use of a sentence is true when things are the way they are represented to be, and false when they are not, these conditions are truth conditions. For a use of a sentence to be true or false is for *what it is used to assert or express* to be true or false. Since propositions are what is asserted or expressed, they are what, in the first instance, represent things as being one way or another, and so have truth conditions.

The meaning of sentences is explained through their connection with propositions. Sentence meaning is information conventionally associated with a sentence that constrains the propositions the sentence is used to assert or express across varying contexts. To put the same point another way, the meaning of a sentence provides the building blocks that combine with different contextually relevant information to yield the propositions the sentence is used to assert

¹ The conception in this chapter elaborates, extends, and modifies the one introduced in Soames, *What is Meaning*, Princeton and Oxford: Princeton University Press, 2010.

or express in different contexts. Sometimes little or no supplementary information is required to reach these propositions. Sometimes, no proposition is expressed without it. Sorting out the contributions made by conventionally-encoded versus contextually-varying information to the propositions asserted or communicated by a use of a sentence is the business of semantics and pragmatics. A rough and ready criterion distinguishing the two is this: the meaning of an expression is information about it that an ideally rational agent would have to know in advance – independent of the varying information available in different contexts – in order to reliably grasp what uses of sentences containing it assert, express, or convey.

Since propositions are pieces of information that are asserted or expressed, they are the primary bearers of truth conditions, which are inherited by sentences or utterances that express them. As explained in chapter 3, the fundamental connection between truth, meaning, and propositions is expressed by the simple schema (1) (where ‘S’ is a metalinguistic variable over sentences, and ‘P’ is a schematic letter replaceable by sentences).

1. If the sentence S of L means that P, then S is true iff P.

Roughly put, for S to mean that P is for S to express the proposition that P, and for S to be true is for the proposition S expresses to be true. Hence, the apriori obviousness of instances of (1) is reducible to that of the corresponding instances of (2).

2. The proposition that P is true iff P

Different sentences can, of course, express the same propositions, which may be assumed, asserted, known, or believed. What are propositions, and what is the relation of *expressing* that sentences or utterances bear to them? A naturalistic account must avoid characterizing propositions as inhabitants of a Platonic third realm beyond mind and matter, with no explanation of how we come to bear attitudes to them, as well as how are acquainted with,

and come to know things about, them. It would be nice to be able to regard talk of *the propositions expressed by sentences* as simply talk about sentences at a level of abstraction that groups them together in terms of their representational features. However, since propositions have a life beyond language, this can't be the whole story. One challenge facing any plausible theory of propositions is to make good on their independence from language without turning them into eternal, unchanging representational contents that somehow become attached to sentences by an otherworldly expressing relation. This is one of the challenges I will address.

These general remarks about the role of propositions in theories of language hold whether or not the language under investigation contains singular terms referring to propositions, quantifiers ranging over them, operators operating upon them, or predicates taking them as arguments. Whether or not a language contains such expressions, propositions are needed to explain the uses to which speakers of the language put it. In other words, propositions are needed to state the goals of semantic and pragmatic theories for any language. Of course, when natural languages like English are involved, they are also needed within semantics proper as referents of *that*-clauses, arguments of attitude verbs, referents of some names and uses of indexicals, members of the domains of some quantifiers, and so on.

Propositions are also crucial to cognitive theories. To think about something is to think about it as being a certain way. So propositions, which represent things as being one way or another, are the contents of many cognitive states – such as one's *belief*, *doubt*, or *uncertainty* that the economy will recover soon. Each of these attitudes is a relation in which an agent stands to a proposition. Although the picture generalizes, it is complicated by syntactic variation among verbs designating relations to propositional objects expressed by their complement clauses. One axis of variation divides verbs according to whether these clauses are finite (tensed) or non-finite

(infinitival). Further variation among verbs taking finite clauses separates those that also take complex noun-phrase objects such as *the proposition / claim / statement that the Earth is round*, and *the proposition / claim / statement that Martin asserted*. Attitude verbs that take both finite clauses and complex nominal objects include *assert, believe, know, deny, accept, reject, doubt, assume, refute, prove, establish*; verbs that take finite clauses but not complex nominal objects include *say, think, judge, see, perceive, desire, hope, expect, anticipate, suppose, hypothesize, imagine*; verbs that take finite clauses plus a few restricted complex nominal objects -- but not *the proposition / claim that S* -- include *predict* (that / the result that), *regret, realize* (that / the fact that); verbs that take both finite and non-finite clauses include *believe, expect, assume, suppose, imagine, desire, prefer, wish*. There are also verbs like *want* that take only non-finite clauses. Despite this variation, it is plausible to suppose that these verbs have readings in which they express cognitive relations that hold between agents and propositions. If so, each should correspond to a cognitive state-type with propositional content.

Propositions are also central to our understanding of perception. Seeing and hearing are relations between an agent and something else, often an object or event. These perceptual states also represent the agent's immediate environment, or things in the environment, as being certain ways. Imagine seeing a poster on the wall *as red* – in one case because it is red and the lighting is normal, and in the other case because it is illuminated by light that makes it appear red, even though it is white. If one's phenomenal experience in the two cases is the same, then one's visual experience *represents the poster as red* in both cases, even though it is actually red in only one. The fact that one's perception represents it in this way is independent of whether or not one forms the perceptual belief that it is red – which one might do in either case, both cases, or neither. So we can specify the content of the perception, and evaluate its veridicality, whether or

not the agent forms a belief with that content. The agent's perception is *veridical* – i.e. accurate or truthful – iff the poster is the way that perception represents it to be – i.e. iff it is red. This suggests that although *what one perceives* is typically an object or event, *the content of one's perception* is a proposition or set of propositions representing things as being certain ways. Since, perception, like cognition, is representational, it is a bearer of propositional content.²

In this way, we come to see propositions as the common thread tying together language, thought, and perception. Their essential feature is that they represent things as being certain ways, and so have truth conditions, which allow them to serve as contents not just of sentences, but also of thoughts and perceptions. Perceptual and cognitive contents are also among the things we use language to think and talk about. The fact that the same propositions can simultaneously function as linguistic, perceptual, and cognitive contents provides us with a systematic way of doing this. In the simplest case, we choose a sentence that expresses a proposition *p* that is part of the content of the perceptual or cognitive state we wish to characterize. Using a complement clause (e.g. a *that* clause in English) to designate *p*, we characterize the cognitive or perceptual content as having certain properties and standing in certain relations, e.g. to agents. In this way, we use sentences to express complex cognitive contents that represent other cognitive or perceptual contents as satisfying various conditions.

As important as it is to recognize the commonality in linguistic, cognitive, and perceptual content, it is also important not to overlook their differences. Propositions are (or at least can be) bite-sized bits of information; they are the minimal units of their representational type. Individual sentences are thus their natural vehicles. Visual perception, the content of which is

² A temporal element is needed for the content of a perceptual state to be a complete proposition -- typically the time at which the perceptual experience occurs. Since that moment isn't *seen* it may not be strictly be part of the content of one's (purely) visual experience. Thus, we may need a slightly broader conception in which perceptual and cognitive experiences are temporally supplemented. Thanks to Francois Recanati for raising this issue.

inherently holistic, stands at the other end of the spectrum. Although individual propositions can be abstracted as constituents of that content, the content of a visual state is most closely approximated by a network of propositions the elements of which are counterfactually connected to one another. Removing or changing one may be impossible without drastically modifying the rest, and hence the overall picture. The contents of belief and other cognitive states stand somewhere between atomistic language and holistic visual perception. Although belief reports are typically atomistic, the propositions correctly said to be believed are often parts of larger cognitive structures that exhibit some of the holism and counterfactual interconnection exhibited by perceptual states. Finally, the atomistic character of language -- with propositions assigned to sentences (or utterances) one by one -- is balanced by the vast syntactic and semantic resources that language puts at our disposal. As individual sentences become more abstract in content, and more syntactically and semantically complex, they come to express many propositions that cannot be constituents of the contents of any perceptual state, and -- due to our cognitive limitations -- that cannot be cognized by us except when presented linguistically. A good account of propositions should make room for all of this.

Before leaving perception, a further point should be noted. Perception, like cognition, is, I think, a cognitive activity in which we *do* something that results in the world being represented in one way or another. Think of Wittgenstein's duck/rabbit example, or of an Escher drawing of a complex geometric structure. In the former case, a curved line can look either duck-shaped or rabbit-shaped. First we see it one way, then another. Once we realize that it can be seen both ways, we may try, with varying degrees of success, to move at will from a perception with one representational content to a perception with the other. The same is true when an Escher drawing of a building with a set of stairs that appears at one moment to be descending, and at

another to be ascending. Similar experiences can be had in specially constructed rooms designed to create perceptual anomalies. To see what is before us first one way, and then the other, is to first predicate one property of what we see, and then to predicate a different property of it. Somehow perception makes properties and relations available to us to put together in different predicative patterns. How we see things – the predication we make – is usually automatic, unconscious, and so better described as a kind of cognitive *operation* than as a species of *intentional action*. But sometimes our experience makes multiple properties or relations available for predicating of the same things, either unconsciously or with a degree of conscious control – in which case our predications occasionally qualify as intentional. Either way, the important point is that putting together representational structures in perception and cognition is always a cognitive operation of some kind.³ The simplest cases are those in which we predicate properties or relations of things that are given to us in perception or cognition, and thereby entertain a simple proposition, like the proposition that o is red, or that o_1 is bigger than o_2 .

Toward a Theory of Propositions

We now have two guiding ideas about propositions.

- (i) They are pieces of information that represent things in the world as being certain ways; thus they have truth conditions. Since the proposition that o is red represents a certain object as red (while doing no further representing) it is true iff o is the way it is represented to be – red.
- (ii) To *entertain* a proposition in perception or cognition is to do something; to entertain the proposition that o is red is to *predicate* redness of o , and thereby to *represent* it as red.

According to these two ideas, both *the proposition* that o is red and *the agent* who sees or thinks of o as red *represent* it as being red. Surely, these facts – that the proposition represents and that the agent does too – are related. Presumably, one is the basis for the other. Which is

³ Thus, in what follows it should be understood that when I speak of “acts of predicating” properties of things I am not assuming that such “acts” are intentional.

fundamental? Is the fact that the agent represents *o* as red explained by (a) the fact that the agent has a certain attitude to the proposition that *o* is red, plus (b) the fact that the proposition -- in and of itself and without interpretation by us -- intrinsically represents *o* as red? Or is it the other way around? Is the fact that the proposition represents *o* as red explained by the fact that for an agent to entertain it is for *the agent* to represent *o* as red? The traditional answer is that propositional representation is primary and the agent's representation is to be explained in terms of it. In *What is Meaning?*, I argued that this approach is unsustainable. Here I will elaborate a theory based on the opposite approach. The guiding ideas are (i) that the perceptual and cognitive activity of agents is the conceptual basis of all representation and (ii) that propositions are representational in virtue of the relations they bear to this representational activity.

The key move is to define what propositions are in a way that makes the derivation of their representational properties from the representational activities of agents plausible. Think again about the proposition that *o* is red. It is the content of an occurrent perceptual or cognitive state whenever the agent predicates *being red* of *o*. Whenever an agent does this, a concrete event occurs, at a specific time and place, in which the agent predicates this property of that object. This suggests that the proposition that *o* is red is simply the minimal event type in which an arbitrary agent predicates *being red* of *o*. This event-type is representational because every conceivable instance of it is one in which an agent represents something as being a certain way. *What it represents* is what is representationally common to all such instances. Since every such instance is one in which *o* is represented as being red, we speak, derivatively, of the proposition itself representing *o* as red. Since nothing else is representationally common to all conceivable instances of the proposition, representing *o* as being red exhausts its representational content. Otherwise put, to *entertain* the proposition that *o* is red is to predicate redness of *o*, which is to

do something that results in an instance of the event type that the proposition is. The representationality, and hence truth conditions, of the proposition are due to the representational features of these possible instances. The proposition represents *o* as red, and nothing further, because what it is to entertain it is simply to predicate redness of *o*, and so to represent *o* as red.

From this we derive its truth conditions: the proposition is true iff whatever (namely *o*) it represents to be a certain way *is* that way (red); it is false iff *o* isn't red. These conditions can be modalized. For every metaphysically or epistemically possible world-state *w* the proposition that *o* is red is true at *w* iff at *w*, *o* is red – which is just to say that for each such world-state, if it were instantiated, then the proposition that *o* is red would be true iff *o* were red. Thus, we explain how it is that the proposition that *o* is red has its truth conditions essentially. Otherwise put, to *entertain* the proposition that *o* is red is to predicate redness of *o*, which is to do something that results in an instance of the event type that the proposition is. The representationality, and hence truth conditions, of the proposition are due to the representational features of these possible instances. The conditions under which it is true (at *w*) are those in which the object *o* is (at *w*) the way it is represented to be by any agent who entertains it (at any epistemically or metaphysically possible world-state). Since it is conceptually necessary and sufficient to entertain the proposition that one represent *o* as being red, the proposition represents *o* as being red (without representing anything further), and so is true iff *o* is red.

In this way, we solve the real problem of *the unity of the proposition* that defeated Frege and Russell -- which, as I argued in chapter 3, also defeats (along with other problems) the possible-worlds conception of propositions. As indicated there, the problem is to explain how propositions manage to represent the world, and so have truth conditions from which the truth conditions of sentences, utterances, and cognitive states can be inherited. While traditional

accounts correctly recognize that propositions must have their intentional properties *inherently* -- *independent of any need for further interpretation by us* -- such accounts err in taking this to mean that their intentionality can't be *explained* by the relation they bear to the actual and possible cognitive activity of agents. The conception of propositions as cognitive event types saves us from this error by identifying the intentionality-explaining relation that propositions bear to agents, not with *being interpreted by us* (to mean so and so), but with *having instances in which we represent things (as being so and so)*. Since the proposition *that o is red* is the event type in which an agent predicates redness of o, it *represents* o as being red because *all conceivable instances of it* are events in which *an agent does so*. The intentionality of the event type is *inherent* to it in the sense that the event-type couldn't be what it is without bearing its intentional properties, even though it does so by virtue of a relation it bears to agents. Being inherently intentional, it can be the interpretation of sentences and utterances, without itself being the sort of thing for which an interpretation is needed.

Complex Propositions and Attitudes

Entertaining a proposition is the most basic attitude we bear to it. It is the attitude on which the others are, in one way or another, based. For example, to *judge* that o is red is to predicate redness of o while affirming or endorsing that predication. To *believe that o is red* is to judge, or be disposed to judge, that it is. 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 treating the proposition that o is red as something one knows. There are, of course, more complex attitudes, like denying, refuting, proving, and more. Rather than discussing these, I will go into further detail about what it is to entertain complex propositions.

To entertain the proposition *that it is not true that o is red* is (i), to predicate redness of o, and thereby to entertain the proposition that o is red (ii), to negate the property *being true*, and (iii) to predicate the resulting property *not being true* of that proposition. This can be done by thinking “That’s not true,” referring to the result of the initial predication – provided that one can so refer. Many, but not all, agents capable of entertaining the original proposition can do this. There is nothing inherent in the ability to entertain p that guarantees that one can think thoughts *about* p. The minimal form of acquaintance with propositions is the ability to cognitively or perceptually represent the world by predicating properties of objects, thereby generating tokens of event-types corresponding to those predications. To gain a more robust form of acquaintance one must be able to make propositions targets of predication. This requires the ability to focus on the concrete events in one’s cognitive life, recognize their similarities, and group together those bearing relevant similarity relations into units or types. Since the proposition *that o is red* is an event type in which one predicates redness of o, one who can focus on particular events in one’s cognitive life and reliably group together those in which one predicates this property of this object is in a position to make the proposition that is the event type of which they are instances an object of thought. Given the means both of *thinking of o as red*, and of becoming aware in this way of so doing, one can then make further predications about the proposition that o is red, which was the content of one’s initial thought. For example, one may think, “That’s not true,” thereby predicating untruth of the proposition that is the type of cognitive event one has just experienced.

So far, I have mentioned two operations involved in proposition formation, negating properties and predicating them of objects. In addition to negating properties, agents also conjoin them. We entertain the proposition *that o is red and round* by conjoining *being red* and *being*

round, and predicating the result of *o*. In these cases, functions are applied to properties. In others they are applied to objects, or to other functions. Thus, cognitively primitive agents don't need to predicate properties of propositions to believe *that o isn't green* or *that o is red and round*. Think of the function *Neg* as 2-place relation in which the identity of its first argument determines the second. When *P* is a property, *NegP* is a property uniquely true of the property which is *P*'s negation. An agent acquainted with *NegP* can predicate the property it determines of an object. Property conjunction is similar.

What about conjunctive and disjunctive *propositions*? One way of approaching the problem would be to start with relations *R&* and *RV*. Predicating these of *a*, *redness*, *b*, and *roundness* represents *a as red and b as round* (and only this), and *a as red or b as round*, respectively. To perform this predication is [to do something that approximates entertaining](#) the conjunctive and disjunctive propositions *that a is red and b is round*, and *that a is red or b is round*. To believe the [propositions one entertains](#) is to be disposed to endorse [the](#) predications. To believe their negations is to believe propositions in which one negates *R&* and *RV* to get the relations $\sim R\&$ and $\sim RV$, which are then predicated of the relevant arguments, just as *R&* and *RV* were. None of these beliefs requires making propositions predication targets. By taking *R&* and *RV* to be 2-place relations each argument of which is an n-place property followed by an ordered n-tuple, one can embed propositions formed using them under *R&* and *RV* themselves, thereby making [the equivalent of](#) full truth-functional cognition possible for agents that can't, for whatever reason, reflect on their own cognitive acts or experiences.

[However, we don't have to rest content with this approximation of more familiar thoughts about truth-functional cognition.](#) *R&* and *RV* are complex relations predicated of pairs of n-tuples of the constituents of arbitrary pairs of propositions, where each such proposition is

itself the predication of a property or relation of its other constituents. Using this model, one can, for each truth functional compound of propositions, generate an equivalent proposition that is itself a predication of such a pair of n-tuples. However, we can also generate propositions that are genuinely truth-functional compounds of other propositions. Let p be a proposition that represents things as *being so-and-so* (and nothing more) and q be a proposition that represents things as *being such-and-such* (and nothing more). Next consider a certain *disjunctive operation* the application of which to p and q represents *things as being so-and-so or things as being such-and-such* (and nothing more). To entertain this proposition is to entertain p, to entertain q, and to operate on them in this way – where operating on them *isn't predicating* anything of them. Let the result be a disjunctive proposition. Conjunctive propositions can be treated in the same way. So can negations of propositions; when p represents *things as being so-and-so*, to negate p is to represent *things as not being so-and-so*. On this model, all propositions involve predications at some level, but some propositions are properly characterized as *operations* on constituents that themselves are, or depend on, predications. In what follows, I will sometimes ignore this complication, e.g., when speaking of entertaining an arbitrary proposition as predicating a property of certain things. In all such cases, a more complicated statement involving predicating a property of those things or operating on them can be supplied, without affecting the larger point at issue.

We are now ready for a more general sketch of propositions. The simplest are those in which properties are predicated of objects. Complex propositions may involve other operations such as conjoining, disjoining, and negating properties or propositions, as well as operating on, for example, a two-place relation R to form the reflexive, one-place property *self-R-ing*. They may also involve applications of functions to objects, or to properties (or propositional

functions). In addition, some complex propositions involve the ascription of higher-order properties to lower-order properties (or propositional functions) as in quantification. Propositions of any sort may also be arguments of further predications, which we find in modal propositions and attitude ascriptions. For example, the proposition *that necessarily it is not the case that Kripke is Kaplan* is the event type of (i) predicating identity of the pair of Kripke and Kaplan (ii) predicating untruth of, or applying the negation operation to, the event type of which the previous predication is an instance, and (iii) predicating being necessarily true of the complex event type of the which the second predication or operation is an instance. The proposition that John believes that Kripke is Kaplan is the event type of (i) predicating identity of the Kripke and Kaplan, and (ii) predicating the belief relation of the pair consisting of John and the event type of which the first predication is an instance.

Further detail is provided by the following illustrations. The proposition that Cicero is wise is the event type of predicating *being wise* of Cicero; the proposition that he is eloquent and wise is the event type of first conjoining *being eloquent* and *being wise*, and then predicating the result of Cicero; the proposition that Tully shaved Cicero is the event type of predicating the shaving relation of Cicero and Cicero; and the proposition that he shaves himself is the event type of operating on the shaving relation to get the property *being one who shaves oneself*, and predicating it of Cicero. The proposition *that 6 cubed is greater than 14 squared* is the event type of applying the cubing function to the number 6 and the squaring function to 14, and predicating *being greater than* of what results from these applications. Functional application is also at work with Fregean definite descriptions, which are singular terms formed from attaching ‘the’ to a formula. ‘The’ denotes a function f_{the} that maps a propositional function g onto the unique object to which g assigns a true proposition, if there is one; otherwise f_{the} is undefined.

The proposition *that the G is H* is the event type of applying f_{the} to g , and predicating *being H* of whatever results from that application. The proposition *that all Gs are H* is the event type of (i) applying the function f_{all} to g , yielding the property *being true of all objects to which g assigns a truth*, and (ii) predicating this property of *the propositional function h*.⁴ More generally, the proposition *that some G is so and so* – expressed by the sentence $[(\text{Some } x: Gx) (\dots x \dots x \dots)]$ -- is the event type in which one predicates the property *being true of some object to which g assigns a truth* (which results from applying f_{some} to g) to a certain semantic value associated with $(\dots x \dots x \dots)$. Which value? Consider the proposition p_o expressed by the formula relative to an assignment of object o to ‘ x ’ (which, for simplicity, I stipulate to be the only variable with free occurrences in the formula). P_o will be an event type consisting of a sequence of event types involving predications and other cognitive operations, where event types i and j in the sequence involve operations on o corresponding to the free occurrences of ‘ x ’ in the formula.⁵ Let $f_{\text{so-and-so}}$ be the function that assigns to any object o' the proposition $p_{o'}$ that differs from p_o only (if at all) in that the i th and j th event types in the sequence of event types that comprise $p_{o'}$ involve cognitive operations on o' (rather than o). The proposition *that some G is so and so* -- expressed by $[(\text{Some } x: Gx) (\dots x \dots x \dots)]$ -- is the event type in which *being true of some object to which g assigns a truth* is predicated of the propositional function $f_{\text{so-and-so}}$. The same basic mechanism accounts for propositions expressed by sentences involving lambda abstraction, as well as those

⁴These functions are properties, not ordered sets. An n -place function is an $n+1$ -place property R such that $o' = o^*$, if $R o_1 \dots o_n o'$ and $R o_1 \dots o_n o^*$. The cubing function is a 2-place property that combines with n to determine a property *being the product of n times n times n* . This determines the subject of the predication in *the proposition that n cubed is odd*. With Fregean definite descriptions, the function f_{the} is a 2-place property that combines with an argument g to determine a property *being an object that is unique in determining a true proposition when taken as argument of g* . This, determines the subject of predication in the proposition *the F is G*. With quantification, applying the function f_{all} to g , gives us the property *being true of all objects to which g assigns a truth*, which is the property predicated (rather than merely determining that property). These points are connected with distinctions made in the final section of this chapter.

⁵ When both occurrences of ‘ x ’ are in the same simple clause, event type $i =$ event type j .

containing anaphora of arbitrarily long distance.⁶

At this point, a word must be said about how I am using the verb ‘predicate’. I begin here with the account previously given in *What is Meaning?* According to that account, the verb ‘predicate’ needed by the conception of propositions as cognitive-event types is analogous to the *intensional transitive* ‘look for’. If Bill is looking for Maria, and Maria is Mary, who, in turn, is the chief of police, then Bill is looking for Mary, but it doesn’t follow (on one reading) that he is looking for the chief of police. It also doesn’t follow from that fact that he is looking for the fountain of youth that there is such a thing. Analogously, if Bill *predicates P of x*, and x is identical to y, which, in turn, is the unique F, then Bill predicates P of y, but it doesn’t follow that he predicates P of the F. It also doesn’t follow from the fact that he predicates P of the F that there is an F.⁷ Like an intensional transitive (which expresses a cognitive relation between an agent and a content) the verb ‘predicate’ expresses a cognitive relation between an agent, a property, and a content. So, if we treat definite descriptions as singular terms, the proposition that the king of France is wise will be the event type *predicating being wise* of the king of France, even though there is no king. *The truth of the proposition depends on there being something of which being wise is predicated, but its existence doesn’t.* (This account of the content of ‘predicate’ will suffice until the final section of this chapter when it will be modified to accommodate special examples considered there.)

More can be said about the existence conditions of propositions and other event types. First, *if an event type E has instances that exist, then E exists.* For example, since I can (directly) refer to Socrates even though he no longer exists, if I do so refer, then a concrete event e exists

⁶My use of propositional functions, rather than complex properties, is merely a convenience. I take no stand on which way of filling out the theory is to be preferred.

⁷ ‘P’ is here used as a variable over properties, while ‘F’ is used as a schematic predicate letter.

that is an instance of the minimal *event type* in which one refers to Socrates -- *which must also exist*. Ditto for the (minimal) event type in which one predicates *no longer existing* (directly) of Socrates -- which is the proposition that Socrates no longer exists. Since, in certain cases, one can also (directly) refer to merely possible individuals, there exist propositions – event types of predicating properties of those individuals – the “constituents” of which have never existed and never will.⁸

To understand this, one must not confuse failing to refer with referring to a non-existent. ‘The present king of France’ fails to refer, and so has no referent; ‘Socrates’ has a referent, just one that doesn’t exist. The view endorsed is *not* Meinongian – there is no such thing as the golden mountain, whether existent or non-existent. This non-Meinongian view eliminates an alleged problem for Millians: namely, that if one of the so-called “constituents” of a singular proposition fails to exist then the proposition also fails to exist. This false claim relating the existence of a proposition to the existence of its constituents comes from thinking of propositions in the wrong way. When a proposition is the event type of predicating a property of an object *o*, *o* may be a constituent of the proposition – in the sense that the proposition is defined in terms of *o* – without *o*’s existence being necessary for the existence of the proposition.

Although this is progress, it doesn’t provide solutions to all problems posed by so-called “empty” names. For example, *if the name ‘Vulcan’ fails to refer (as opposed to picking out a real, existing character in a story/theory/legend)*, then, since the content of a name is its referent, we can’t correctly characterize any agent as “predicating a property of Vulcan” – in which case, either the sentence ‘Vulcan is a planet’ fails to express a proposition, or it expresses one that is

⁸ For more on referring to, or quantifying over, the non-existent, see Nathan Salmon, “Existence,” *Philosophical Perspectives*, 1, 1987, 49-108; Scott Soames, “Actually,” in Mark Kalderon, ed., *Proceedings of the Aristotelian Society*, supplementary volume, 81, 2007, 251-277, reprinted in Soames, *Philosophical Essays*, Vol. 1: *Natural*

radically incomplete. By contrast, we can correctly characterize an agent as “predicating a property of the present king of France,” because that claim relates the agent, not to an individual, but to the meanings of ‘the’ and ‘present king of France’. Thus, sentences containing the (Fregean) description express propositions.⁹

Here is another plausible principle about the existence conditions of propositions if (i) R is an n-place property for which there have been events in which an agent predicates R of things, and (ii) $o_1 \dots o_n$ are objects for each of which there have been events in which an agent thinks of or refers to it, then (iii) there exists a proposition p which is the (minimal) event type of targeting $o_1 \dots o_n$ and predicating R of them – *even if no one has ever performed that predication, and hence there exist no instances of p*.¹⁰ Consider the analog with sentences. If R is an n-place predicate that has been used by an agent, and $t_1 \dots t_n$ are names, each of which has been used, then the sentence type $[R t_1 \dots t_n]$ exists -- *even if it has never been uttered or inscribed*. If we take sentences to be complex event types in which agents produce auditory, visual, or tactile tokens, then the principle needed to guarantee the existence of the usual infinity of sentences of English will be an exact analog of the one suggested for propositions as event types. On this view, since propositions and sentences are complex event types that involve the performance of certain basic acts, their existence is guaranteed by the existence of events in which those acts are performed.

Language: What it Means and How we Use it, Princeton and Oxford: Princeton University Press, 2009; and pp. 128-129 of Soames, *Philosophy of Language*, Oxford and Princeton: Princeton University Press, 2010.

⁹ Although Fregean definite descriptions are singular terms in some possible languages, I do not assume that definite descriptions in English are Fregean. Rather, I take them to be generalized quantifiers.

¹⁰ In a complete account, this principle – which covers only atomic propositions – would be extended to include complex propositions as well. The idea behind the extension is this: Let the event-type p be a proposition; let the basic acts the performance of which define the sequence of event types that make up p be targeting a given object o, predicating a particular simple property p, applying a certain function f, targeting a specific argument g, negating something, conjoining a pair of things, etc.; then p will exist if each of those acts has been performed.

In this way, we come to recognize the existence of many propositions that have never been entertained. Still, one might worry, if propositions are event types, some propositions won't exist that should. One might have supposed that for each molecule in the universe, the proposition that it is a molecule exists and is true. Since many molecules have never been thought of or referred to by any agent, nothing guarantees the existence of these propositions. This would be a problem if propositions had to exist to be true. But they don't. Although many properties require things that have them to exist, some don't. An individual can have the properties *being dead*, *being referred to by me*, and *being admired by someone* despite not existing. Similarly, a pair of individuals – Plato and Aristotle – can instantiate the relation of non-identity without existing. By the same token, a proposition can represent something as being a certain way, and so be *true* because the thing is that way, whether or not the proposition exists. Thus, there is nothing to prevent the nonexistent proposition that *m* is a molecule from *being true*. Since we can quantify over the merely possible, we can quantify over possible propositions, and say that if *p* predicates *being so-and-so* of *o*, then *p* is true (at world-state *w*) iff (at *w*) *o* is so-and-so, whether or not *p* exists (at *w*). Propositions that *couldn't* be entertained by any agent might require a further story, as do *metaphysically impossible* objects generally, but even here it is not obvious that there are irresolvable difficulties. Perhaps we will have to draw a line excluding propositions that couldn't *conceivably* be entertained by any agent, but if so, would that really be a loss?

Although a proposition *p* can be *true* at a world-state *w* without existing at *w*, *p* can't be *entertained* at *w*, *accepted* at *w*, *asserted* at *w*, *denied* at *w*, or *judged* at *w* to be true without existing at *w*. To bear any of these attitudes to *p* at *w* an agent must entertain *p* at *w*. Since in each case, this involves producing an instance of the event type that *p* is, bearing any of these

attitudes guarantees the existence of *p*. So, apart from a few minor complications -- e.g. to believe *p* doesn't strictly require one to have entertained *p*, but only to be *disposed* to bear the judging relation to *p* -- when we really need the existence of propositions as objects of attitudes they are (near enough) guaranteed to exist.

Some Attractions of the View

That is the basic view, which also nicely compliments an attractive version of *deflationism* about truth. According to the conception of propositions as event types, the proposition *that o is red* predicates redness of *o*, and so represents *o* as red, while the claim *that the proposition that o is red is true* says, in effect, that *o* is as the former proposition represents it to be. Not only are these claims obviously equivalent, any warrant for accepting one is warrant for accepting the other. Deflationism about the truth of propositions is a natural addition. According to this view (i) *p* and the proposition *that p is true* are necessary and apriori consequences of one another, (ii) any warrant for believing, asserting, or assuming one is warrant for taking the same attitude toward the other (subject to certain minor complications), and (iii) theses corresponding to (i) and (ii) also hold for the negation of *p* and the proposition *that p is not true*.¹¹ Since parallel theses about sentences don't hold, sentential truth is not deflationary. Rather, nondeflationary sentential truth is defined in terms of deflationary propositional truth. A sentence is true just in case it (semantically) expresses a proposition that is true -- where for a sentence to express a truth requires certain conventions to hold among language users.

However, at this point we are faced with a puzzle. Why, if *p* and the claim that *p* is true are so symmetrically related, are we inclined to think that the proposition that snow is white is

¹¹See Soames, "Understanding Deflationism," *Philosophical Perspectives*, 17, 2003, 369-83, also in Soames, *Philosophical Essays: Vol. 2: The Philosophical Significance of Language*, Princeton: Princeton University Press, 2009.

true *because* snow is white, while resisting the thought that snow is white *because* the proposition that snow is white is true? Well, why is the proposition that snow is white true? It is true because (a) it represents snow as white, and (b) snow is white. Since the fact that it represents snow as white is no part of the explanation of why snow is white, we rightly reject the claim that snow is white *because* the proposition that snow is white is true. Since the fact that snow is white *is* part of the explanation of the fact that the proposition is true, we say that the proposition is true *because* snow is white. The present conception of propositions contributes to this solution by explaining what this talk of propositional representation amounts to, in terms of how agents who entertain it represent things.

The second attractive feature of this conception is that it provides a naturalistic account of the epistemic relations we bear to propositions. Unlike the Platonic epistemology required by traditional theories of propositions, the present account demystifies our acquaintance with, and knowledge of, propositions by taking both to be grounded in concrete cognitive experience. The explanation starts with the idea that we predicate properties of objects in cognition and perception, thereby entertaining propositions. This is done before we have the concept *proposition*. Focusing on similarities and differences in our experience, we eventually acquire the concept, making propositions objects of thought and subjects of predication. This allows us to acquire the notion of truth, in part by being given numerous examples -- “the proposition *that o is red* is true if o is red, the proposition *that o is red* isn’t true if o isn’t red,” etc. -- and in part by coming to recognize the general point that a proposition is true iff things are as it represents them to be. Given truth, properties can be conceptualized as *things true of other things*. With the concepts *truth*, *property*, *proposition* and *modality* (what could be but isn’t) under our belts, we can characterize world-states as ways for things to be – maximally informative properties that the

world could have had. Such a world-state w can be defined as the property of making true a set w^* of basic propositions that tell a complete world-story. A proposition p is true *at* w iff p is an apriori consequence of w^* . So, we can come to know that p is true at w by deriving p from w^* . As for the actual world-state $@$, we can come to know p to be *true at* $@$, given knowledge of p , by noting that since p is true, it must be true *at this very world-state* – the one that is instantiated.¹²

The third advantage of the cognitive event-type conception of propositions is that it opens the door to demystifying the relationship between propositions and the sentences that express them. Just as propositions are event types in which agents perform certain representational cognitive operations, so sentences may plausibly be taken to be event types instances of which are utterances and inscribings -- thought of as concrete events occurring at particular times and places in which agents produce auditory, visual, or tactile tokens endowed with semantic and syntactic properties. On this picture, since both sentences and propositions are event types, they can share common instances: e.g., cases in which the event that is one's referring to (targeting) o and predicating P of o is the event of one's using expression E to refer to (target) o and expression F to predicate P of o . The cognitive acts or operations --*referring to (targeting) o* and *using E to do so* -- are different, as are the acts or operations of *predicating P of o* and *using F to do so*. Thus, *the event type p* that consists of one's performance of the *propositional* acts or operations (of referring and predicating) differs from *the event type S* that consists of one's performance of the *sentential* acts or operations (of using E to refer and F to predicate) -- even though some instances of one are also instances of the other. *When an event is an instance of both a sentential and a propositional type, there is no extra inner event of "grasping the proposition" over and above*

¹² See Soames, "Actually," and chapters 5 and 6 of *Philosophy of Language* for fuller explanations.

using the sentence meaningfully. So, when S expresses p, one who understands S can entertain p by tokening S. For some propositions, this may be our only feasible way of entertaining them. In such cases what distinguishes p from S is the *possibility* that an event could be an instance of one but not the other. More generally, the heretofore mysterious *expressing* relation holding between a sentence and a proposition may be grounded in something like the *by* relation that holds between two things that are done when an agent can do one of those things (entertaining the proposition) by doing the other (uttering or inscribing the sentence).

The fourth advantage I will mention here is the prospect for illuminating otherwise puzzling semantic phenomena. Here is an example.¹³

- 3a. Russell defended the proposition that arithmetic is reducible to logic.
- b. Russell defended logicism.
- 4a. Mary believes that Russell defended the proposition that arithmetic is reducible to logic.
- b. Mary believes that Russell defended logicism.

‘Logicism’ is a Millian proper name for the proposition *that arithmetic is reducible to logic*, which is also designated by the directly referential *that*-clause. Nevertheless sentences (3a) and (3b) express different propositions, and the truth of (4a) guarantees the truth of (4b), but not vice versa. ‘Logicism’ and the *that*-clause contribute the same proposition L to those expressed by the sentences in (3) and (4). *But the clause somehow also contributes something else to the propositions expressed*. The view of propositions as cognitive event types explains what and why.

According to it, understanding sentence (3b) and entertaining the proposition it expresses requires one to think of L, and to predicate *having defended* of the pair consisting of Russell and L. Since one can think of L simply by possessing the name ‘logicism’, without knowing much about its referent, one who is competent with the name, and accepts sentence (3b), can entertain,

¹³ This example is discussed in Mark Richard, “Articulated Terms,” *Philosophical Perspectives*, 7, 1993, 207-30; and Soames, “What are Natural Kinds?,” *Philosophical Topics*, 1 and 2, 2007, 329-42.

and even believe, the proposition it expresses without being able to state, or informatively identify, L. By contrast, in order to understand sentence (3a) and entertain the proposition it expresses, one must first predicate *being reducible* of the pair consisting of arithmetic and logic – thereby entertaining the proposition L expressed by the *that*-clause. Next, one predicates *having defended* of the pair of Russell and L. This difference carries over to (4a) and (4b), with the result that the truth of the former requires the truth of the latter, but not vice versa. *Because propositions are event types that involve thinking of things and predicating properties of them, two propositions can place different constraints on how an agent thinks about their common predication targets, even if the truth conditions of the two propositions result from predicating the very same properties of the very same targets.* Although (3a) and (3b) predicate the same thing of the same targets, the former is an event type in which the propositional coordinate must be cognized by entertaining it, while the latter is an event type that doesn't require this. The difference in truth value between (4a) and (4b) is sensitive to this.

In this way, taking propositions to be cognitive event types brings together the two related but distinct aspects of linguistic and cognitive content. On the one hand, such content faces the world – imposing conditions that must be satisfied, if the world is to conform to the way it is represented to be. On the other hand, this content also faces the mind, imposing conditions on what it takes for an agent to entertain it. Whereas the worldly aspect of content has long been accommodated in semantics, it has been difficult to do justice to the mental aspect of content when integrating the two. The conception of propositions as representational cognitive event types provides us with a natural way of achieving this. Being representational, the truth conditions of propositional event types– in virtue of which they “face the world” – are essential to them. Being event types in which one performs cognitive acts or operations, propositions can

impose different conditions on the cognitive operations it takes to entertain them, even when they are representationally identical in the sense that their truth conditions are derived from predicating the very same properties of the very same things. The fact that we need to recognize propositions that do differ in this way strongly supports a metaphysics of propositions that explains how this is possible.

New Light on Attitudes De Se versus Attitudes De Re

Having the right metaphysics of propositions also opens up a new line of research on a central problem in semantics and cognitive science involving what have been called *de se* attitudes.¹⁴ Although these attitudes initially appear to be special cases in which an agent asserts, believes, or knows an ordinary proposition, every attempt to identify that proposition has proved problematic. Here is a sketch of one well-known version of the problem.¹⁵

- (i) Pushing his cart down the aisle at the supermarket, John Perry notices a trail of sugar leading around the corner to the next aisle. Looking up at the anti-theft mirror attached to the ceiling, he sees the somewhat distorted image of a shopper leaving a trail coming from a torn bag at the bottom of his cart. Perry says to himself “He is making a mess,” and tries to find and inform the man. Pushing his cart faster and faster through the aisles leads to more and more sugar, but not to the messy shopper – until, in a flash of recognition, *Perry comes to realize that he is the messy shopper*, which he expresses by exclaiming “I am making a mess.”
- (ii) What did Perry say, and come to know (that he didn’t know already)? It can’t be the ordinary singular proposition that predicates being one who is making a mess of him – since he came to know that when he saw (but didn’t recognize) his own image in the mirror. It can’t be the metalinguistic proposition that *the sentence “I am making a mess” is true in my context*, since that too is a singular proposition that Perry should already have known by virtue of knowing that *the sentence ‘I am a mess’ is true in his [pointing as his reflection in the mirror] context*. The propositional object we are looking for also can’t be the descriptive proposition that the man with the torn bag at the bottom of his cart is making a mess, since Perry already knew that too. Might it be the proposition that *the man named ‘John Perry’, who teaches philosophy at Stanford, got his PhD at Cornell, and grew up in Nebraska is making a mess?* That’s not likely either, since the

¹⁴ For classic discussion, see David Lewis, “Attitudes *De Dicto* and *De Se*,” *The Philosophical Review*, 88, 1979, 513-543.

¹⁵ John Perry, “The Essential Indexical,” *Nous*, 13, 1979, 3-21.

essential problem would remain even if Perry had forgotten his name, misremembered some details of his biography, or even had amnesia.¹⁶ Similar objections can be mounted against other candidates for the crucial proposition that he came to know and assert in his moment of epiphany. Nor will it help to include reference to that moment, since the problem of identifying propositions expressing genuine first-person knowledge, belief, or assertion arises in a new form when we try to identify the proposition we come to know when, in a moment of insight, we exclaim at time *t* “My word, the meeting starts now,” having known all along the ordinary singular proposition that the meeting starts at *t*.

The fundamental problem illustrated in this scenario arises (in part) from the common, but often implicit, assumption A.

- (A) All there is to a proposition is its representational content; hence propositions the truth conditions of which arise from predicating precisely the same properties of precisely the same things are identical.

One reasonable (though not theoretically neutral) description of all *de se* cases is that they turn on systematically different ways of believing/asserting representationally identical things – in particular on believing or asserting *in the special first person, or immediate present tense*, way versus believing/asserting in a person-time neutral way. Although believing/asserting in the first way is generally thought to guarantee believing/asserting in the second way, the converse doesn't hold. *De re* cases are those in which we have the latter without the former. In the presence of (A), this means that the agent's *de se* epiphany can't be a matter of coming to assert, believe, or know any proposition not already asserted, believed, or known. Thus the conventional wisdom about the supermarket example has been that there is no proposition that Perry came to assert, believe, and know that he hadn't already asserted, believed, and known.

This “wisdom” comes in two opposing forms. According to Perry, the epiphany is not one of coming to believe or know a new proposition; it is one of coming to believe or know an old proposition in a new (first-person/present-tense) way. According to David Lewis, it involves coming to bear the primitive attitude *self-ascribing* to a certain property *P* – where this primitive

¹⁶ See also, John Perry, “Frege on Demonstratives,” *The Philosophical Review*, 86, 1977, 474-497.

attitude must not be confused with the ordinary attitude *ascribing to an individual who happens to be oneself* (which Perry already bore to P when he saw his image in the mirror). The property P is, of course, *being one who is making a mess*, which, according to Lewis, is *what Perry came to know and believe* in his moment of epiphany. Both the views of Perry and those of Lewis are revisionary, in the sense of explaining away, rather than preserving, some of our pre-theoretic thoughts on the matter. Whereas Perry's view is theoretically conservative, it flies in the face of the irresistible urge to describe the messy shopper as *coming to learn (know, believe) something he didn't know (believe) before*. Whereas Lewis's view respects our judgment about this, it does so at the cost of reconstruing all cognitive attitudes previously taken to be relations between agents and propositions -- the representational nature of which is readily explainable -- as relations between agents and properties (some gerrymandered). Unfortunately, we are given no explanation of how a property like *being one who is making a mess* can truly or falsely *represent* anything as being one way or another.

Rather than dwelling on the challenges facing these views, I will try to enlarge the space of alternatives. Since we know already from the discussion of (3) and (4) that assumption (A) is false (because representationally identical propositions can differ in the cognitive requirements for entertaining them), the tacit premise from which Perry and Lewis derive their common conclusion -- that in *de se* cases no new proposition is asserted, believed or known -- is no longer available. Without it, their conclusion no longer follows. If propositions are cognitive event types, the possibility remains that at the moment of epiphany the agent *does* come to assert, believe, and know a special *de se* proposition not previously asserted, believed, or known -- despite having previously born those attitudes to a non-*de-se* proposition with the same representational content. How might this happen?

Recall Frege's famous observation in "The Thought."¹⁷

"Now everyone is presented to himself in a special and primitive way, in which he is presented to no one else. So when Dr. Lauben has the thought that he was wounded [which he expresses using "I was wounded"], he will probably be basing it on this primitive way in which he is presented to himself. And only Dr. Lauben himself can grasp thoughts specified in this way."

The idea is that each person *p* has a (first-person) way of thinking of *p* that no one else can use to think about *p*. This idea is plausible – as is the idea that for each time *t* there is a special way of thinking about *t*, at that very time, that is not available at any other time. The difficult point for the neo-Fregean is to show that these ways of thinking of oneself or the present time are Fregean senses: one that uniquely picks out *p* and is a constituent of propositions entertained by *p* when *p* thinks about *p* in this first-person way, and one that uniquely picks out *t*, and is a constituent of propositions about *t* that are entertainable only at *t*. John Perry and David Kaplan have explained why ordinary Fregean senses of definite descriptions can't be identified with these special ways of thinking.¹⁸ Although Saul Kripke has recently argued that special "acquaintance-based senses" can be so identified, this appears to be false, as I have argued elsewhere.¹⁹ This suggests that there simply are no propositions, as traditionally conceived, that can be objects of newly acquired beliefs in *de se* cases.

¹⁷Frege, "Der Gedanke," *Beitrage zur Philosophie des deutschen Idealismus*, 1, 1918, 58-77; trans. "The Thought" by A. and M. Quinton, in *Mind* 65, 1956, 289-311; trans. "Thought," in Beaney, *The Frege Reader*, Oxford: Blackwell, 1997, 325-345, quoted at p. 333.

¹⁸ From Perry we get the example of Rip Van Winkle, who awakens on October 20, 1823 after sleeping 20 years, and thinks (wrongly) "Today is October 20, 1803." Here, the belief is about the day on which it occurs, no matter what day, if any, satisfies the qualitative temporal description Mr. Van Winkle has in mind. See Perry, "Frege on Demonstratives," *Philosophical Review*, 86, 1977, 474-497, at p. 487. From Kaplan we get the example of Castor and Pollux, raised in qualitatively identical environments to be molecule for molecule identical, and to associate the same purely qualitative descriptions with their corresponding uses of the same terms. Despite this, each refers to himself and not to the other when he uses 'I'. See Kaplan, "Demonstratives," in Joseph Almog, John Perry, and Howard Wettstein, eds., *Themes from Kaplan*, New York: Oxford University Press, 1989, 481-563; , at p. 531.

¹⁹ Kripke, "Frege's Theory of Sense and Reference," *Theoria* 74, 2008, 181-218; Soames, chapter 2 section 7 of *The Analytic Tradition in Philosophy*, Vol. 1.

But propositions are not what they have traditionally been conceived to be; they are cognitive event types. Consider the *de re* proposition entertainable by anyone who predicates *being one who is making a mess* of John Perry. Its constituents are the man Perry and the property *being one who is making a mess*. There are no special constraints on how one must think of Perry in order to entertain this proposition, beyond the ability to refer to him directly. In this respect, the *de re* proposition about Perry is analogous to the proposition (3b) that Russell defended logicism. By contrast, *if* there is a *de se* counterpart of the *de re* proposition about Perry, it is analogous to the proposition (3a) that Russell defended the proposition that arithmetic is reducible to logic. Like proposition (3a), the putative *de se* proposition must place a further requirement on how the agent cognizes the predication target. The requirement in the *de se* case is that the agent predicate *being one who is making a mess* of Perry, thinking about Perry in the first-person way. Thus, if there is a *de se* proposition that Perry came to believe at his moment of epiphany, it is one that only he can entertain.

As in the case of (3a) and (3b), the truth conditions and constituents of the *de se* and the *de re* propositions are the same. Moreover, although entertaining, asserting, believing, or knowing the former always counts as bearing the same attitude to the latter, it is possible to entertain, assert, believe, or know the *de re* proposition without bearing that attitude to *de se* proposition.²⁰ A similar story can be told about the relationship between the *de re* proposition that the meeting starts *then* -- directly referring to a precise time *t* (3 PM on a certain day) -- and the *de se* proposition that the meeting starts *now* (entertained at *t*). Here, the cognitive event type

²⁰ For example, an agent who self-ascribes F-hood and thereby believes the *de se* proposition expressed by a use of 'I am F', also counts as believing the *de re* proposition expressed by 'x is F' relative to an assignment of the agent to the variable 'x'. This is evidenced by the fact that whenever an agent A believes that A is F (*de se*) there is some individual x such that A believes that x is F (*de re*). Although it may often be the case that when A has the *de se* belief, A also believes (*de re*) the *de re* proposition he would use [t is F] to express, for some name, indexical, or

that is the *de se* proposition is identical with the event type that is the *de re* proposition, except for adding the constraint that *t* be thought of in the special present-tense way in which one thinks of the time at which one's thought process is occurring.

In this way, the conception of propositions as cognitive event types makes room for propositions that are entertainable only by subjects of those propositions, as well as those that are entertainable only at times that figure crucially in the propositions themselves. This, I contend, opens up a potentially viable alternative to both Lewis- and Perry-style accounts of the *de se*. In order to pursue it, one must, of course, answer a great many questions. Let us focus on one. How might this new alternative explain the ability of one agent to report, or have thoughts about, the *de se* attitudes of others? The first step in answering this question is to realize that although entertaining propositions expressed by attitude reports sometimes requires one to entertain a proposition expressed by its complement clause, in other cases it does not.

For example, consider a use of a sentence of the form (5a) – understood along the lines of (5b) -- to report the *de re* beliefs of every member of a certain class.²¹

- 5a. Every *F* believes that he or she is *G*.
- b. Every *x*: Fx (*x* believes that *x* is *G*)

The proposition (5 *de re*) predicates the property *assigning a true proposition to every F* of the propositional function $B_{de\ re}$ that assigns to each individual *o* the proposition (5_{Matrix/o} *de re*). That proposition, in turn, predicates the believing relation of the pair of *o* and the proposition (5_{Complement/o} *de re*) -- which itself predicates *being G* of *o* (without placing further restrictions on

demonstrative used to refer to A, this need not always be so. Whether or not it is so in a particular case depends on the semantics and pragmatics of [t is F], as used by A.

²¹ For simplicity in specifying the proposition expressed I will adopt Russell's technique of letting propositional functions stand in for complex properties, and so will take the quantified proposition to predicate a property of such a function, rather than taking it to predicate a higher-order property of a lower-order one. Nothing hinges on this. 'F' and 'G' are used as schematic letters.

how *o* must be cognized in order to be entertained). Obviously, entertaining proposition (5 *de re*) doesn't require one to entertain all propositions in which *being G* is predicated of an individual, or even all propositions in which *believing that one is G* is predicated of an individual of which *F* is true. It is enough that the reporter be able to think about, and refer to, the propositional function $B_{de\ re}$ (or the complex property it represents). Although I haven't discussed what this amounts to, no special problems are presented by examples like (5).

The same is true when (5) is understood as reporting *de se* attitudes. Proposition (5 *de se*) predicates the property *assigning a true proposition to every F* of the propositional function $B_{de\ se}$ that assigns to each individual *o* the proposition ($5_{Matrix/o}$ *de se*). This proposition, in turn, predicates the believing relation of the pair consisting of *o* and the proposition ($5_{Complement/o}$ *de se*) -- which itself predicates *being G* of *o*, *while requiring any agent who entertains it to think of o in the first-person way*. Thus, in making simple propositions like ($5_{Complement/o}$ *de se*) available, the conception of propositions as cognitive event types also makes propositional functions like $B_{de\ se}$ and complex propositions like (5 *de se*) available. Since agents may use (5 *de se*) to report or think about the *de se* attitudes of others -- *thereby entertaining, asserting or believing the proposition they use the belief ascription to express, without entertaining the de se propositions it represents others as believing* -- there is no general problem reporting or thinking about the *de se* attitudes of other agents.

Next consider (6a), in which 'he' is anaphoric on its antecedent, the name 'John Perry'.

6a. *John Perry* came to believe that *he* was the messy shopper.

The semantic effect of the anaphoric relation between antecedent and pronoun is to introduce a

variable-binding operation making (6a) equivalent to (6b).²²

6b. λx (x came to believe that x was the messy shopper) John Perry

Thus, to use (6a) on its *de se* understanding is to use it to assert the proposition (6 *de se*) in which *being an individual to which the propositional function* $B\lambda_{de\ se}$ *assigns a truth* is predicated of John Perry – where $B\lambda_{de\ se}$ assigns an individual *o* the proposition ($\lambda_{Matrix/o}$ *de se*) that predicates the believing relation of the pair consisting of *o* and the proposition ($\lambda_{Complement/o}$ *de se*). Finally, this proposition predicates *being the messy shopper* of *o*, *while requiring any agent who entertains it to think of o in the first-person way*.²³ The end result is that the proposition expressed by (6a) predicates the property *believing of oneself (in the special first-person way) that one is the messy shopper* of John Perry. As before, the *de se* proposition reported to be believed doesn't have to be entertained by the reporter.²⁴

Perry can, of course, report his own *de se* attitude using (6c), taking the complement clause to express the *de se* proposition he entertains.

6c. I believe that I am the messy shopper.

If he does this, his utterance will assert both that he believes the *de se* proposition only he can

²²This account of anaphora is defended on independent grounds in Soames, "Attitudes and Anaphora," *Philosophical Perspectives*, 8, 1994, 251-272; reprinted in *Philosophical Essays: Vol. 2: The Philosophical Significance of Language*.

²³If we conduct the analysis in terms of complex properties rather than propositional functions, the *de se* proposition (6b) predicates, of Perry, the property *being one who believes the proposition that (i) predicates being the messy shopper of one, while (ii) requiring any agent who entertains it to think of oneself in the first-person way*.

²⁴One way of developing these ideas about (5a,b) and (6a,b) in a semantic theory would be to allow two kinds of occurrences of variables – normal ones, and one's that result from adding '*' to occurrences in complement clauses that represent pronouns anaphoric on matrix subjects of attitude ascriptions. Although adding '*' would not affect the referent of the variable relative to an assignment, a complement clause $\dots x^* \dots$ containing a *ed occurrence of 'x' would express a singular proposition, relative to an assignment of *o* to 'x', that can be entertained only by the referent of 'x' relative to the assignment. The difference between *de se* and *de re* readings of attitude ascriptions in cases like (5a,b) and (6a,b) could then be captured by a difference between *ed and non-*ed occurrences of variables representing pronouns in the complement clause. In effect, pronouns anaphoric on matrix-subject antecedents will be ambiguous between *de se* and *de re* inducing occurrences of variables. By contrast, the phonologically empty syntactic constituent PRO -- as in "He expects PRO to win" (meaning "He expects to win") could be treated as

entertain, and that he believes the *de re* proposition, entertainable by all, that predicates *being the messy shopper* of him. His hearers will understand the *de re* assertion in the normal way, while also realizing that he endorses the *being-a-messy-shopper* predication thinking of its target, Perry himself, in the special first-person way. This, it may be argued, is our pretheoretic way of describing the *de se* proposition he believes, without having to entertain it ourselves.

A further twist is provided by a version of the case in which Perry's epiphany comes in two stages. In this version he is accompanied on his trip around the supermarket by his daughter, who is also intent on finding the messy shopper. At the crucial moment, her face lights up with the realization that her father is the culprit. Noticing the shock of recognition on her face, Perry mutters (7a) under his breath, wondering if she is right.

7a. She thinks that I'm the messy shopper.

This is Perry's first epiphany, in which he seems to believe a new proposition (about his daughter's beliefs) that he had not previously believed. Since it is a new belief, all the old arguments can be recycled to show that the proposition believed can't be an ordinary (non-*de se*) proposition. What proposition is it? Although 'I' occurs in the complement clause of (7a), Perry's use of (7a) surely doesn't attribute to his daughter a belief in a *de se* proposition that she couldn't possibly entertain. Nor, if Perry's use of (7a) is to express a new belief, can one maintain that his use of 'I' is purely *de re*.

There is, however, another option. Perry's new belief can be identified with the *de se* proposition expressed (from Perry's point of view) by (7b).

7b. λx (she believes x is the messy shopper) me

Understood *de se* (from Perry's perspective), (7b) expresses the proposition that is the cognitive

unambiguous, and thus as always corresponding to a *ed occurrence of a variable bound by a higher subject.

event type of predicating *being someone believed by her [his daughter] to be the messy shopper*, of Perry, *thinking of the predication target, Perry, in the special first-person way*. Here, I have used lambda abstraction to give the first-person pronoun what is, in effect, wide-scope over ‘believe’. The mechanism used to achieve this is not crucial – there are multiple ways of encoding scope distinctions for terms of various types (not just quantifiers). What is needed is simply that one’s semantic or pragmatic theory provide a principled way of applying one of them here.

This completes my preliminary sketch of the possibilities for the analysis of *de se* attitudes that are opened up by the conception of propositions as cognitive event types. By providing a natural explanation of how a proposition *p* can constrain the way one of its constituents (e.g. a predication target) must be cognized by an agent who entertains *p*, the conception makes available *de se* (first-person, present-tense) propositions distinct from those that have previously been recognized. Since these special ways of cognizing a predication target do *not*, for the reasons indicated above, involve any new predications of that target, the new propositions are representationally identical to ordinary *de-re* propositions. Of course, my sketch falls far short of a complete analysis. However, if it seems promising, the general lesson to take from it is worth emphasizing: coming to understand what propositions are can be important, not only in providing philosophical foundations for linguistic and cognitive theories, but also in enhancing their explanatory potential by providing new tools for empirical analyses.

Articulated Terms, The Worldly De Se, and the Failure of Apriority to Close Under Apriori Consequence

The next step is to combine the lesson learned from (3) and (4) -- about the difference between the propositions expressed by sentences containing proper names vs. those containing articulated terms -- with the new way of thinking about the *de se* opened up by propositions as

cognitive event types. Suppose, as I do, that a world-state is a property, attributable to the universe, of making true a set of basic propositions that tells a complete world story – e.g., the property *making it true that the earth is the third planet from the sun in the solar system, that the earth is round, that the earth is largely covered with water, that the earth is inhabited by humans and other animals, etc., etc., etc.* Imagine defining a world-state *w* by filling this out so as to provide such a complete story – where by “complete” I mean one that answers all questions relevant to a contextually determined inquiry. Let ‘*n*’ be a proper name of *w*, and let ‘*PW*’ abbreviate an articulated term ‘the property *making it true ...*’ that articulates each of the basic propositions used in defining *w*. Finally, let ‘*p*’ designate any proposition true at *w* – where for a proposition to be true at *w* is for the proposition to be an *apriori* consequence of the set of basic propositions used to define *w*.²⁵

Then consider (8).

- 8a. *p* is true at *PW*.
- b. *p* is true at *n*.
- c. *p* is true at this very world-state – said at *w* referring to *w*

The relationship between the propositions expressed by (8a) and (8b) is like the relationship between propositions (3a) and (3b). In both cases, the (a) and (b) propositions predicate the same properties/relations of the same things; in both cases the (a) proposition differs from the (b) proposition only in adding the constraint that in order to entertain it the agent must also entertain its propositional constituent (in the case of 3a), or its propositional sub constituents (in the case of 8a). Moreover, in both cases, *anyone who knows or believes the (a) proposition knows or believes the (b) proposition, but not conversely.*

²⁵ See Soames, “Actually,” summarized in chapter 6 of *Philosophy of Language*. There is, of course, no requirement that the propositions in terms of which a world-state is defined exist at *w*.

Now consider the relationship between the propositions expressed by (8b) and (8c). I have already made room for a special first-person way of thinking about, and referring to, an individual *x*, plus singular propositions about *x* that can be entertained only by *x* when thinking about himself or herself in the first-person way. I have similarly made room for a special present-tense way of referring to a time *t* – as *now*, or *this very time* -- plus singular propositions about *t* that can be entertained only by one who thinks of *t* in that way *at t*. Having done so, I introduce a parallel hypothesis about world-states which, although I neither accept or reject it, is, I think, worth further examination. The hypothesis is that there is a special world-bound way of referring to a world-state *w* – as *this very world-state* – plus singular propositions about *w* that can be entertained only by those at *w* who think about it in this special world-bound way. On this hypothesis, the relationship between proposition (8b) and proposition (8c) parallels the relationship between (i) the ordinary singular proposition that Scott Soames wrote *What is Meaning?* and the *de se* proposition that I wrote *What is Meaning?* (entertained by me in the first-person way), and (ii) the ordinary singular proposition about the present time *t* that Martha is working at *t* and the temporally *de se* proposition I express to myself by saying *Martha is working now (at this very time)*.

Remember, these special ways of thinking of things *are not* special *descriptive* ways of thinking about them. Castor and Pollux can be in qualitatively identical cognitive states when thinking about themselves in the first-person way, even though each refers to himself and not the other. Rip Van Winkle can be in qualitatively identical cognitive states at different times when thinking of, and referring to, those different times in the same special present-tense way. By the same token, the world-state to which I actually refer in the hypothesized special world-bound way -- by saying to myself “this very world-state” -- is different from the world-state to which I

refer at a world-state that is merely possible, even though my cognitive state at that world-state is identical with the one I am actually in. On the hypothesis under investigation, all of these cases involve special ways of thinking about, and referring to, things the identities of which are *not* determined by any description imposed by the agent. On the contrary, the items picked out are determined by *who the agent is, when the thoughts are occurring, and the world state at which the agent entertains the proposition*. Hence, the hypothesis maintains, including these special ways of thinking about or referring to the predication targets of propositions *do not* introduce any new descriptive content, or any new truth-condition-determining predications, into the ordinary singular propositions to which they are added.

Given all this, we can distinguish propositions (8a), (8b), and (8c). Although all are singular propositions in which *being something at which p is true* is predicated of the world-state *w*, propositions (8a) and (8c) impose constraints on how agents who entertain them must think about *w*, while proposition (8b) imposes no such constraint. Proposition (8a) requires the agent to think of *w* by entertaining the propositions that are themselves constituents of the property that *w* is. Proposition (8c) requires thinking about *w* in the special *actual-world-state way* that parallels the *present-tense way* of thinking about a time and the *first-person way* of thinking about an agent. We have seen that knowing or believing proposition (8a) guarantees knowing or believing proposition (8b), but not vice versa. The same relation holds between proposition (8c) and proposition (8b). As in the ordinary *de se* case, where knowing or believing *de se* guarantees knowing or believing *de re*, but not the other way around, so knowing or believing the *worldly-de-se* proposition (8c) guarantees knowing or believing (8b), but not conversely.

We can now connect this with an interesting result about the apriori. On the account of world-states indicated above, the propositions true at a world-state are those that are apriori

consequences of the basic propositions that define it. With this in mind, let w be the actual world-state, and let the proposition *that Plato was a philosopher* be an apriori consequence of the basic propositions defining w . We then get the following results:

- (i) The proposition *that it is true at PW that Plato was a philosopher* (corresponding to (8a)) is knowable apriori but the proposition *that it is true at this very world-state that Plato was a philosopher* (corresponding to (8c)) is not knowable apriori;
- (ii) The proposition *that Plato was a philosopher iff it is true at this very world-state that Plato was a philosopher* is knowable apriori but the proposition *that Plato was a philosopher iff it is true at PW that Plato was a philosopher* is not knowable apriori;
- (iii) It follows from (i) that the proposition *that that Plato was a philosopher is true at w* is knowable apriori. It follows from (ii) that the proposition *that that Plato was a philosopher iff it is true at w that Plato was a philosopher* is knowable apriori.²⁶ But neither their conjunction nor the proposition *that Plato was a philosopher* is so knowable.

Since we have two propositions that are knowable apriori even though their conjunction isn't, the set of apriori truths is not closed under apriori consequence. Although this result isn't new, the simple explanation of it provided by the hypothesis that *this-very-world-state* cognition parallels special first-person and present-tense cognition is, as is the recognition that this result is of a piece with those discussed in the previous two sections.²⁷ The fact that the conception of propositions as cognitive event types allows us to tie these phenomena together as three aspects of the same thing provides some reason for taking the hypothesis seriously.

Semantic Relationism

Another case in which there may turn out to be a productive interplay between a satisfying metaphysical conception of what propositions are and an empirically-informed

²⁶ From (ii) we get the apriority of the proposition *that λy [Plato was a philosopher iff it is true at y that Plato was a philosopher] this very world-state*, which guarantees the apriority of the proposition *that λy [Plato was a philosopher iff it is true at y that Plato was a philosopher] w* , which guarantees the apriority of the proposition *that Plato was a philosopher iff it is true at w that Plato was a philosopher*.

²⁷ A version of this result is explained and established in chapter 6 of Soames, *Philosophy of Language*. The failure of closure of apriority under apriori consequence does not upset the claim that for a proposition to be true at w is for it to be an apriori consequence of the basic propositions defining w . Failures of closure always involve propositions about world-states, which aren't among the propositions that define world-states.

account of the kinds of propositions needed in semantics and cognitive science comes from Kit Fine's fascinating work in *Semantic Relationism*.²⁸ Although he doesn't give a metaphysics of propositions there, he does argue that we must recognize a class of *coordinated propositions* that place special constraints on how an agent is required to think of their predication targets in order to entertain them. It is central to his conception that these propositions share the structure, constituents, and truth conditions of their *uncoordinated* counterparts, which lack special constraints on how their predication targets are cognized. Though his theory doesn't apply to examples like (3a) and (3b), what he says about the difference between coordinated and uncoordinated propositions is importantly similar to what I have said about (3a) and (3b). This raises the question of whether the conception of propositions as cognitive event types is capable of accommodating Fine's coordinated propositions.

Above, I noted that the proposition that Tully shaved Cicero is the event type of predicating the shaving relation of Cicero and Cicero, and that the proposition that he shaves himself is the event type of reflexivizing the shaving relation to get the property *being one who shaves oneself* and predicating it of Cicero. According to Fine, the (coordinated) proposition that Cicero shaved Cicero is different from both of these. Expressed in my terms, it is the event type of predicating the shaving relation of Cicero and Cicero, *thinking of the two as the same*. What is it to do this? It is not to predicate the shaving relation *while assuming that the individual one's predication represents as shaver is the same as the individual one's predication represents as being shaved*. To predicate a relation of a pair, one must think of the relation and the pair; one doesn't also have to make a higher-order judgment about what one's predication represents. Surely there are agents who predicate properties of things, and thereby have propositional

²⁸ Kit Fine, *Semantic Relationism*, Malden, MA: Wiley-Blackwell, 2007.

attitudes, without bearing attitudes to propositions about their own cognitive activities. Given the importance for thought and action that Fine takes coordination to have, he would, I am confident, not wish to exclude such agents from the benefits of bearing attitudes to coordinated propositions.

Nor can the coordinated proposition be the event type in which one predicates shaving of Cicero and Cicero, *while judging Cicero to be identical with Cicero*. The content of that judgment can't be the *uncoordinated* proposition that Cicero is Cicero (which is just the proposition that Cicero is Tully). Nor can it be the *coordinated* proposition, since that would involve using coordination to explain coordination. So Fine must take *thinking of the members of a pair as the same* to be primitive, understanding that to predicate shaving of Cicero and Cicero while bearing this attitude to them is different from predicating *self-shaving* of Cicero, and also that predicating *being F* of o, and *being G* of o while *taking them to be the same* is different from predicating *being F and G* of o.²⁹

Suppose, for the sake of argument, that there is such a primitive attitude of taking things to be the same. Since it is a kind of cognition, it may seem that there must be propositions the entertaining of which requires one to cognize things in this way. Are there really such propositions? This question can be taken in two ways: (i) Is there a need within semantics and cognitive science to recognize such propositions? (ii) If there is a need, does the conception of propositions as cognitive event types make room for them? Elsewhere I have argued that the

²⁹This is Fine's view. On page 59 he says: "But the coordinative aspect of the coordinated content of a sentence, such as 'Cicero wrote about Cicero' is entirely lacking in any special descriptive or truth conditional character and relates entirely to how its truth conditions...are to be grasped [entertained]. It is a significant feature of the traditional Fregean view that there can be no difference in what it is to grasp [entertain] the sense of an expression without there being a difference in how the sense has application to [or represents] the world.... But under the relational view, these two aspects of sense come completely apart. *There is no difference in what it takes for the sentences "Cicero wrote about Cicero" and "Cicero wrote about Tully" to be true, even though there is a difference in their coordinated content.*"

case for coordination in natural language semantics (and cognition) remains inconclusive (at best).³⁰ Thus question (i) remains open. Here, I will confine myself to saying a word about (ii).

Surely, there are limits on what cognitive acts or operations propositions can encode. Thinking of a certain tune while predicating redness of an object is a (complex) cognitive activity of some sort, as is predicating a relation of a pair, while feeling affection toward its members. Presumably, the event types of doing these things are not propositions because one of their cognitive components is orthogonal to how the agent represents things to be. By contrast, propositions (3a) and (3b) differ -- despite the fact that *their truth conditions* arise from predicating the same relation of the same things -- because the condition placed on a predication target in (3a) is that it be entertained, which is itself a cognitive activity in which certain things are represented to be a certain way. Since the cognitive activities that make up (3a) are all representational, it is a genuine proposition that differs from (3b). This suggests that whether there are (or could be) Finean coordinated propositions depends on whether the putative attitude of *taking objects to be the same* is appropriately representational.

How should we think about it? It may help to ask about cases in which one takes non-identical objects *to be the same*. Certainly non-identical objects can *appear* the same way identical objects do, and so, one would think, provoke *the same cognitive responses*. Are we then to suppose that there are propositions we can entertain only by predicating something of a pair of non-identical things, mistakenly *taking them to be the same*? Suppose an agent mistakenly takes Cicero and his brother (each of whom shaves the other but neither of whom shaves himself) *to be the same*, while predicating the shaving relation of them. If this sequence of cognitive acts is encoded by a genuine “coordinated” proposition, what is its truth value? To say it is *true* ignores

³⁰ Soames, “Two Versions of Millianism,” in Michael, O’Rourke, ed., *Topics in Philosophy*, Vol. 10: *Reference and Referring*, Cambridge: MIT Press, forthcoming.

the fact that entertaining it *requires* one to be disposed to mistakenly judge non-identical things to be identical, and so to think of them as related in a way they are not – which seems very much like representing them falsely or incorrectly. To say that the putative proposition is *not true* is a non-starter if, as I have indicated, the truth conditions of a proposition are derived from what it predicates of what (which in Fine’s system is reflected by the requirement that coordinated propositions share the truth conditions of their uncoordinated counterparts). For this reason, it is unclear that there are (or could be) propositions in which non-identical objects are coordinated – which, in turn, casts some doubt on the existence of propositions in which identical objects are coordinated. I am not sure whether this doubt can be overcome. If it can, then the conception of propositions as cognitive event types doesn’t, as far as I can see, create any further difficulties for Fine’s view. Thus, I tentatively conclude that the metaphysics of propositions offered here provides important philosophical grounding for Fine’s general conception of representationally identical but cognitively distinct propositions without raising any new problems for his particular conception of coordinated propositions that it doesn’t already have.

Structure, Cognition, and Predication: A Final Amendment

The conception of propositions as cognitive event types differs from other accounts of structured propositions in two ways. First, the structure of a proposition is provided by the truth-condition-determining cognitive operations performed on its constituents by an agent who entertains it. Second, in addition to constituents and structure in this sense, some propositions impose further constraints on how its constituents are cognized by the agent. The structural operations considered in this chapter have been limited to functional application (which provides structure to some propositional constituents), operations on propositions (which give us truth-functional compounds) and predication (which provides propositional structure). I close by

deriving a further important lesson about predication from a notorious historical example. The example comes from what Russell took to be the central argument of “On Denoting,” which led him in the spring of 1905 to his celebrated theory of descriptions.³¹ The conclusion of the argument is that complex singular terms are impossible, so no language, natural or artificial, can contain definite descriptions as singular terms. One of the key examples he used in coming to this conclusion was (9), in which ‘M’ is used as a Millian name for *the meaning of the* description of ‘the first line of Gray’s Elegy’ (taken to be a singular term).

- 9a. The first line of Gray’s Elegy is ‘The curfew tolls the knell of parting day’.
- b. ‘The first line of Gray’s Elegy’ means M.
- c. ‘The first line of Gray’s Elegy’ means the first line of Gray’s Elegy.

Since, by hypothesis, ‘M’ and ‘the first line of Gray’s Elegy’ mean the same thing, Russell reasons that propositions (9b) and (9c) must have the same structure and constituents, and so be identical. But they can’t be; for if the description really does mean M, (9b) must be true, while (9c) must be false -- since it says that the meaning of the description is the thing it designates (the sentence ‘The curfew tolls the knell of parting day’).³²

At this point, Russell appeals to R.

- R If definite descriptions are meaningful singular terms, (i) they must express meanings that denote unique objects satisfying them (if such objects there be), and (ii) these meanings can occur in propositions only in the role of presenting their denotations as the ultimate subjects of predication in the propositions. Therefore, these meanings can never be subjects of predication in any proposition in which they occur.

³¹ Russell, “On Denoting,” *Mind* 14, 1905, 479-493. The argument comes from “On Fundamentals,” written in June 1905, first published in Russell, *Foundations of Logic*, London: Routledge, 1994. Exposition and criticism of the argument, along with an account of its role in leading Russell to his theory of descriptions is found in chapters 7 and 8 of *The Analytic Tradition in Philosophy*, Vol. 1. See also Richard Cartwright, “On the Origins of Russell’s Theory of Descriptions,” in *Philosophical Essays*, Cambridge: MIT Press, 1987, 95-133, and Nathan Salmon, “On Designating,” *Mind*, 114, 2005, 1069-1133.

³²I here assume that (9b) unambiguously expresses the true proposition indicated above, and that (9c) unambiguously expresses the false proposition there indicated. I will return to question of ambiguity below.

Accepting R leads Russell to deny that (9b) is true and to conclude that there is no *true* singular proposition in which *being what 'the first line of Gray's Elegy' means* is predicated of anything. From here it is a short step to the conclusion that no one can *know of* anything that it is what the description means. But surely, Russell thinks, in order for an expression E to mean something it must be possible to know of *what E means* that E means it. Thus, he concludes, it is impossible for meaningful definite descriptions (of any language) to be singular terms. (The argument generalizes to all complex singular terms formed by combining a function symbol with one or more terms serving as arguments – e.g. '3²'.)

Since Russell's conclusion is clearly false, and R is the likely culprit, we need a conception of propositions that provides an explanation of why it is false. Although purely technical moves could be made, no conception of propositions I know of provides a plausible explanation of why this should be so. I believe that the conception of propositions as cognitive event types can do better. Let us start by taking proposition (9a) to be the event type of (i) thinking of the function f_{the} and the function g (that assigns an object a truth iff it is a line in Gray's Elegy preceding all others), (ii) combining f_{the} and g into a single constituent in which g is understood to play the role argument-of- f_{the} , and (iii) predicating the identity relation of the pair consisting of 'the curfew tolls the knell of parting day' plus the result of applying f_{the} to g . Let it be part of the theory that the constituent $f_{the}\text{-}plus\text{-}g$ is the meaning of the definite description. Let it also be part of the theory that this constituent occurs in the propositions expressed by each of the sentences (9a,b,c). Since 'the curfew tolls the knell of parting day' is uniquely determined by $f_{the}\text{-}plus\text{-}g$, proposition (9a) comes out true. Similar reasoning gives us the falsity of (9c). What about proposition (9b)? It seems that it should be the event type of (i) predicating *means* of the pair 'the first line of Gray's Elegy' and $f_{the}\text{-}plus\text{-}g$. However, since these are also the

(major) constituents of proposition (9c), the assumption that in both cases the same relation is predicated of the same arguments requires the two propositions to have the same truth value.³³

This is what leads to Russell's false conclusion. So far, the problem is still with us.

The conception of propositions as cognitive event types does, correctly, block the conclusion that propositions (9b) and (9c) are identical. The case is analogous to (3a) and (3b) – with 'M' in (8b) playing the role of 'logicism' in (3b). Applying that lesson here, we see that one who entertains proposition (9c), but *not* one who entertains proposition (9b), *must* think of f_{the} , and of g , and combine them into a function-argument structure to be used to determine the predication target. However recognizing this difference is *not* enough, since nothing I have said up to now explains how proposition (9b) can be true (which it must be), while proposition (9c) is false. Since the two propositions have the same major constituents, and since a difference in the way that one of those constituents is cognized in the two propositions *can't*, by itself, affect their truth values, they must also differ in *structure*.

The structure of a proposition is the manner in which its constituents are related to one another. Since propositions are cognitive event types, the structural relationships in which their constituents stand to each other are *not* relationships in which things occupying certain positions in an n-tuple stand to those occupying other positions; nor are they relationships that certain nodes in an abstract tree structure bear to other nodes. Although nothing prevents using formal constructions of these or other sorts to model propositional structures, the structures being modeled are something else. The structural relationships between the constituents of a

³³ The major constituents of a proposition p are those in terms of which its truth conditions are directly defined. Sometimes a major constituent of p itself has constituents that are sub constituents of p in a weaker sense; they are elements that have to be cognitively accessed in the process of identifying, and putting to use, the major constituent of which they are constituents. The constituents of the argument of *defending* in proposition (3a) are sub constituents of that proposition, but not of proposition (3b); the functions that are constituents of M are sub constituents of proposition (9c), but not of proposition (9b). See chapters 8 and 9 of *The Analytic Tradition, Vol. 1* for further discussion.

proposition are given by the roles the constituents play in the sequence of cognitive operations performed by an agent who entertains it – roles like *being predicated* (of certain things), *being targets* (of certain predications), *being applied* (to certain arguments), *being arguments* (to which certain things are applied), as well as *being sub constituents* of larger constituents which may themselves play these roles, or of propositions that are constituents of larger propositions. This is the sense in which propositions (9b) and (9c) must differ in *structure*.

The required difference is a difference in the sense in which the relational property *being what 'the first line of Gray's Elegy' means* is predicated of its argument in the two propositions. In (9b) it is *directly predicated* of the complex that is the meaning of the description; in (9c) it is *indirectly predicated* of whatever is determined by that complex (which is the referent of the Fregean description). In order for the relation *direct predication* to hold of an agent A (who entertains a proposition p), a property F (to be predicated of something) and an item x (of which F is predicated), A must have x in mind as the thing to be represented as having F. By contrast, the *indirect predication* relation holds between A, F, and an item x *which is the kind of thing (e.g. a function-argument complex) that determines something else (e.g. a value)*. In order for this relation to hold, A must have x in mind, and intend to represent whatever, if anything, is determined by x as having F. The *direct predication* is veridical iff x has F; the *indirect predication* is veridical iff there is something uniquely determined by x and that thing has F.

Let 'Pred_d' and 'Pred_i' express the relations *direct predication* and *indirect predication*, respectively, and let 'T' be a schematic letter to be replaced by a singular term. When I say something of the form (10), the proposition I express is one that directly predicates Pred_d of the triple consisting of A (or p), the property so-and-so, and *the referent*, if any, of T.

10. Agent A (or proposition p) *directly predicates* property so-and-so of T.

When I say something of the form (11), the proposition I express is one that directly predicates Pred_i of the triple consisting of A (or p), the property so-and-so, and *the content* (meaning) of T.

11. Agent A (or proposition p) *indirectly predicates* the property so-and-so of T.

With these understandings, (12a) is true, while (12b) is false, because what entertaining (9b) requires is having M in mind and intending to represent it – not whatever, if anything, it determines (namely, the description ‘the first line of Gray’s Elegy’) – as *being what the description means*.

12a. Proposition (9b) *directly predicates* being what ‘the first line of Gray’s Elegy’ means of M.

b. Proposition (9b) *indirectly predicates* being what ‘the first line of Gray’s Elegy’ means of M.

By contrast, (13a) is false because entertaining (9a) *doesn’t* require having ‘The curfew tolls the knell of parting day’ in mind and intending to represent it as having the property *being identical with ‘The curfew tolls the knell of parting day’*;³⁴ (13b) is true, because what entertaining (9a) does require is having M in mind and intending to represent whatever, if anything, M determines – the value of f_{the} at g – as having the property in question (which may or may not involve having any idea of what object is determined).

13a. Proposition (9a) *directly predicates* being identical with ‘The curfew tolls the knell of parting day’ of the first line of Gray’s Elegy.

b. Proposition (9a) *indirectly predicates* being identical with ‘The curfew tolls the knell of parting day’ of the first line of Gray’s Elegy.

Examples (14a) and (14b) are like (13a) and (13b).

14a. Proposition (9c) *directly predicates* being what ‘the first line of Gray’s Elegy’ means of the first line of Gray’s Elegy.

14b. Proposition (9c) *indirectly predicates* being what ‘the first line of Gray’s Elegy’ means of the first line of Gray’s Elegy.

³⁴ Remember, to predicate a property of something one *doesn’t* have to think that it really has the property.

(14a) is false because entertaining (9c) doesn't require having 'The curfew tolls the knell of parting day' in mind and intending to represent it as having one property or another; (14b), on the other hand, is true (even though proposition (9c) is, of course, false). Finally, notice that (15a) expresses a falsehood, while (15b) expresses a truth about the proposition expressed by (9d).

- 9d. The denoting complex identified by Soames in the final section of chapter 6 of *New Thinking about Propositions* is what 'the first line of Gray's Elogy' means.
- 15a. Proposition (9d) *directly predicates* being what 'the first line of Gray's Elogy' means of the denoting complex identified by Soames in the final section of chapter 6 of *New Thinking about Propositions*.
- 15b. Proposition (9d) *indirectly predicates* being what 'the first line of Gray's Elogy' means of the denoting complex identified by Soames in the final section of chapter 6 of *New Thinking about Propositions*.

The distinction between direct and indirect predication replaces my earlier univocal characterization of predication as being a 3-place relation between an agent, a property, and (as I put it) "a content." Though indirect predication has some of the features I mentioned in connection with that characterization, neither direct nor indirect predication has all of them. Thus, my earlier use of 'predicate' must be recast in terms of these two new notions. To that end, one should understand claims made in previous sections by sentences of the form (16a) in which 'T' is replaced by a Fregean definite description, or other function-argument singular term, as making the claim expressed by (16b).

- 16a. Agent A (or proposition p) *predicates* the property so-and-so of T
 b. Agent A (or proposition p) *indirectly predicates* property so-and-so of T

In all other cases, claims made by sentences of the form (16a) that I have used earlier should be understood as claims involving *direct predication*.

This reconstrual requires making explicit something I have so far taken for granted without comment. When an n-place predicate is paired with n arguments -- some of which may

be Millian and some non-Millian -- we must think of the predication as proceeding in stages. This technique, familiar from Montague, treats the proposition expressed by a sentence of the form

(17) A loves B

as arising first by combining the two-place relation *loves* with the content/referent of the term replacing 'B', and then predicating the resulting one-place property of the content/referent of the term 'A'.³⁵ When 'B' is replaced by a Millian singular term the content and referent of which is *x*, the resulting one-place property is *loving x*, which may then be predicated directly, or indirectly, of the referent or content of the term that replaces 'A', depending on whether that term is Millian or non-Millian. When 'B' is replaced by a non-Millian singular term – e.g. something the content of which is a complex consisting f_{the} combined with an argument *g* – the resulting one-place property is *loving whomever is the value of f_{the} at *g** – which may, of course, also be predicated directly, or indirectly, of the referent or content of the term that replaces 'A'. Thus the operation, call it “reduction,” that maps an *n*-place relation plus an argument to the relevant *n*-1 place relation subdivides into *direct* and *indirect* reduction, on analogy with *direct* and *indirect* predication.

Although this sketch of propositions as cognitive event types is far from complete, I hope to have given some idea of its promise and flexibility. What makes the conception natural for resolving Russell's problem involving (9b,c) is that the distinction required to solve the problem – between what an agent who entertains proposition (9b) *intends to represent* as having a certain property vs. what an agent who entertains proposition (9c) *intends to represent* as having that

³⁵ Richard Montague, “The Proper Treatment of Quantification in Ordinary English,” in J. Hintikka and J. Moravcsik, eds., *Approaches to Natural Language*, Dordrecht: Reidel, 1973; reprinted in Richmond Thomason, ed., *Formal Philosophy: Selected Papers of Richard Montague*, New Haven: Yale University Press.

property – is a *cognitive* difference encoded in the cognitive acts that provide the structure of the event types with which propositions are identified. By contrast, what made the problem seem insoluble to Russell in 1905 was his conception of propositions as platonic objects the intentional properties of which are prior to, and independent of, the agents who entertain them. Thinking of propositions in this way, and asking himself the question “What does M do in the proposition expressed by (9c) that it doesn’t do in the proposition expressed by (9b)?”, he naturally answered “Nothing!” – which led him astray. Although the purely platonic conception of propositions has lasted for a very long time, we are now, I hope, beyond that. Armed with a more accurate conception of propositions, we pose the crucial question differently -- “What do *agents* use M to do when entertaining the proposition expressed by (9c) that they don’t use it to do when entertaining the proposition expressed by (9b)?” Since the answer to this question is obvious, what had been a problem ceases to be.³⁶³⁷

³⁶ I return to the question of whether sentences (9b) and (9c) are ambiguous. Sentence (9b) is not; it can’t express the false proposition that (9c) does because entertaining the latter requires one to cognize the constituents of M, whereas no proposition expressed by sentence (9b) does. Nor does it make sense to suppose that (9b) expresses a proposition the truth conditions of which are the same as those of the false proposition expressed by (9c) even though it doesn’t require cognizing the constituents of M. It is less clear whether (9c) has a reading in which it can express the true proposition that (9b) unambiguously expresses. People do say things like ‘*red*’ means *red*, and ‘*on the counter*’ means *on the counter*. Whether these are legitimate uses or mistakes is not entirely clear to me. But if they are correct, then there may be a similar use of (9c) in which it expresses a truth – indeed, the proposition that results from adding to the proposition expressed by (9b), the requirement that the constituents of M be cognized.

³⁷ I am indebted to Brian Bowman for helpful comments on this chapter.