My topic is the concept of information needed in the study of language and mind. It is widely acknowledged that knowing the meaning of an ordinary declarative sentence, or the content of a representational mental state, involves knowing which things it represents as being which ways. Knowing this gives one knowledge of the truth conditions of the sentence or state, which are ways the world must be in order to conform to how it is represented. Intensional semantics provide precise models of truth conditions, which are approximations of meaning and content. But *models that imperfectly approximate is all they are*. Meanings and cognitive contents are *not* truth conditions; which are severely limited even as models. In order to continue to progress in semantics plus the philosophy of mind and language, we must overcome these limitations by identifying what information really is.

Pieces of information are propositions. The two leading conceptions are the structured conception from Frege and Russell, and the truth-conditional conception from intensional semantics. Both suffer from intractable problems.¹ Rather than listing the problems, I will sketch a new view based on the old idea that propositions are neither things we *interpret* nor things we *use* to carry information;

¹ See chapter 1 of Soames (2015), chapter 3 of King, Soames, and Speaks (2014), chapters 2, 3, and
instead, they are the interpretations we give and the information our uses of sentences carry.²

This traditional idea, on which I want to build, must be distinguished from its frequent companion, which takes the intentionality of propositions to be explanatorily prior to the intentionality of agents. On that view, agents who entertain propositions cognitively represent things as bearing certain properties because the propositions they entertain do. Unfortunately, we have no understanding of what such primitively representational entities are, of what cognizing them amounts to, or of how or why our cognizing them results in our representing things as bearing properties. Faced with these mysteries, I start at the other end, with the obvious fact agents represent things as being various ways when they think of them as being those ways. Next I solve for two unknowns. What kind of entity P and relation R can play the roles of propositions and entertaining by guaranteeing that agents who bear R to something of kind P represent things as being some way? If we find such P and R, we can explain the intentionality of things of kind P by deriving it from the intentionality of agents who bear R to them. If for A to bear R to p* just is for A to represent o as being hot, then p* may be deemed true iff o is hot.

When we frame things this way, an answer to the question “What are propositions and what is it to entertain one?” jumps out. Propositions are

² The view sketched below is developed in detail in Soames (2015).
repeatable, purely representational, cognitive act-types or operations; to entertain one is not to cognize it but to perform it. When I perceive or think of o as red, I predicate redness of o, which is to represent o as red. This act-type represents o as red in a sense similar to the derivative senses in which acts can be insulting or irresponsible. Roughly put, an act is insulting when for one to perform it is for one to insult someone; it is irresponsible when to perform it is to neglect one’s responsibilities. The same sort of derivative sense of representing is needed to assess the accuracy of an agent’s sayings or cognitions. When to perceive or think of o as P is to represent o as it really is, we identify an entity, a particular perception or thought, plus a property it has when the cognition is accurate. The entity is a proposition, which is the cognitive act-type of representing o as P. The property is truth, which the act has iff to perform it is to represent o as o really is.

Although to entertain the proposition that o is red is to predicate redness of o, and so to represent o as red, it is not to commit oneself to o’s being red. We often predicate a property of something without committing ourselves to its having the property, as when we imagine o as red, or merely visualize it as red. Hence, predication isn’t inherently committing. Nevertheless, some instances of it, e.g. those involved in judging or believing, are either themselves committing, or essential to acts that are. In this, the act-type predicating redness of o is like the act-type traveling to work, which, though not inherently effortful, has instances, like biking to work, that are. To judge that o is red, is to predicate redness of o in an committal manner, which involves forming, or activating already formed,
dispositions to act, cognitively and behaviorally, toward o in specific ways. To believe o to be red is to be disposed to judge it to be.

To see o as red, which is to visually predicate redness of o, occupies an intermediate position. Although not inherently committing, it often generates dispositions to judge or believe o to be red that are inherently committing. Just as organs like the heart have biological functions that ground norms of proper functioning, so certain mental states have distinctive cognitive functions grounding normative evaluations. The function of beliefs in our cognitive psychology is provide representations of the world on which we can reliably base action of all sorts – cognitive and otherwise. Since actions based on true beliefs (either directly or through a chain of reasoning) are typically more successful in advancing our goals than those based on false beliefs, belief is a truth-normed attitude. Because of this, to believe something false – e.g. that o is red when it isn’t – is to make a mistake. Since merely seeing o as red – i.e. assimilating o’s visual appearance to appearances of red things -- isn’t itself a mistake, the non-committal predication common to all such visual predications isn’t so-normed. This is compatible with the fact that such predications typically justify perceptual beliefs because they are reliably caused by light reflected from red things reaching our eyes.

What about attitudes like doubting or presupposing that don’t aim at truth? Surely, what one doubts or presupposes may be true or false, just as what one believes may be. Since what is believed by x may be doubted by y and presupposed (for the sake of argument) by z, the objects of the truth- and the non-
truth-normed attitudes are the same. For these objects to be common to both sets of attitudes just is for entertaining them to be common to both sets. Since propositions are act-types, and since any act-type is identical with the act-type performing it, entertaining a proposition is the act – because it is the proposition -- in terms of which other attitudes are defined. What distinguishes the different attitudes are different cognitive orientations toward the same propositions, which are different ways of entertaining those propositions.

This is the basis of a naturalistic epistemology of propositions. Since believing p doesn’t require cognizing p, any organism that can perceive or think of things p represents as being certain ways can believe p, whether or not it can cognize p itself or predicate properties of propositions. Knowing things about propositions requires the further ability to distinguish one’s cognitive acts from one another. One who can do this can ascribe attitudes to oneself and others, and predicate properties of propositions. Focusing on their cognitions, cognitively self-conscious agents identify distinct propositions as different thoughts, which leads them to conceive of truth as a form of accurate representation.

So far I have spoken only of propositions that predicate simple properties of objects. We may also negate, conjoin, and disjoin properties, predicating the resulting complex properties of things. Propositions can also be negated, conjoined,

3 Other attitudes that are arguably both propositional and non-truth-normed include hoping, as in ‘I hope that Sam will win’, dreaming as in ‘I dreamed that pigs fly’, imagining as in ‘I imagined there being mice in the bathtub’, and questioning/wondering as in ‘Mary questioned/wondered whether arithmetic is complete’.
and disjoined. Since agents lacking the concepts of truth and falsity may, presumably, believe negations and disjunctions, to negate a proposition p cannot be to predicate not being true of p, and to disjoin p and q can’t be to predicate not being jointly untrue of them. Nor, if this is right, is it plausible to suppose that negating and disjoining propositions involve predicing other properties of propositions.  

Rather, negating and disjoining should be thought of as operations, of certain sort, on properties or propositions. First consider operations on properties. I assume that many cognitively unsophisticated agents who can’t identify propositions and predicate properties of them, but who can predicate a property P of x, can also do something cognitively (add a cognitive element) that transforms their predication of P into predication of the property not P. Similarly, many unsophisticated agents who can predicate properties P and Q of x, can do something cognitively to transform their individual predications into a predication of being P or Q of x. We can describe them as applying the negation and disjunction operations to properties to generate compound properties, provided we don’t take their doing to require them to think about, and predicate properties of, either the operations (thought of as functions) or the operands (thought of as arguments of functions). Surely some unsophisticated agents can predicate negative and disjunctive properties of things

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4 See pp. 119-122 of Soames (2010).
without being able to predicate properties of properties, let alone predicating properties of functions that map properties onto properties.

Thinking of the relevant cognitive operations in this way provides the basis for two ways of understanding truth-functional cognition.

**One Way of Understanding Truth-Functional Cognition**

*Disjunction:* To disjoin the propositions *that a is F* and *that b is G* is (i) to perform a cognitive operation on them that generates the properties *being such that a is F* and *being such that b is G*, (ii) to disjoin these properties, generating *being such that a is F or being such that b is G*, and (iii) to predicate it of a and b. This complex act is the proposition *that a is F or b is G*.

*Negation:* To negate that proposition is (i) to perform a cognitive operation on it that generates *being such that a is F or b is G*, (ii) to negate this property, generating *not being such that a is F or b is G*, and (iii) to predicate this of a and b. This complex act is the negation of the proposition *that a is F or b is G*.

This account depends on properties, *being such that so and so*, that are, inherently, instantiated either by everything or by nothing. If one worries about such properties, one can tell an alternative story.

**An Alternative Account of Truth-Functional Cognition**

*Disjunction:* To disjoin the propositions *that a is F* and *that b is G* is to perform an operation on them to produce *a proposition* that represents the pair a,b as standing in the 2-place relation $\lambda xy \ (R xy)$ predication of which of the pair represents a as *being F* or b as *being G*.

*Negation:* To negate this proposition is to perform an operation on it to produce a proposition that represents the pair as standing in the relation $\lambda xy \ (\neg R xy)$.

I won’t here try to choose between these two accounts of truth functionality.5

Next consider intensional operations on propositions. Performing the cognitive operation of *necessitation* on a proposition that intrinsically represents *o as being F* gives us the proposition that represents o as *being such that necessarily it is F*. In

5 These alternatives are more fully elaborated in Soames (forthcoming).
addition, applying the necessitation function to the property being F yields the property being necessarily F; so applying it to truth yields being necessarily true, which can be predicated of any proposition. This requires making propositions the objects of thought.

Propositions are also made objects of thought when one entertains attitude ascriptions like the proposition that John believes that Kripke isn’t Kaplan. This proposition is the act of predicating belief of a pair of arguments the first of which is John and the second of which is the proposition that Kripke isn’t Kaplan, which is identified by entertaining it – i.e. by negating the identity relation and predicking not being identical of Kripke and Kaplan.

Propositions expressed by quantified sentences can be treated as predicating properties of either complex properties or propositional functions. I will here use propositional functions for ease of exposition. On this model, the proposition that all Gs are H is the act of (i) applying the all-function to the propositional function g to get the property being true of all objects to which g assigns a truth, and (ii) predicating this property of the propositional function h.

There are several types of predication. To directly predicate P of x is to have x in mind as the thing represented to have P. Complex singular terms require the relation mediate predication holding between an agent, a property, and a function-argument pair f-plus-y. To meditately predicate P of that pair is to directly predicate determining something that has P of the pair. One who does this indirectly predicates P of the value of f at y. Thus, the proposition that 6 cubed is greater
than 14 squared is the act of taking 6 as argument of the cubing function, taking 14 as argument of the squaring function, and mediately predicating being greater than of the two function-argument pairs. One who does this indirectly predicates being greater than of the cube of 6 and the square of 14.⁶

The account extends to Fregean definite descriptions, where we use the distinction between direct and indirect predication to resolve Russell’s puzzle involving the sentences in (1).

1a. 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.

In setting up the puzzle, Russell assumes, for reductio, that the description ‘the first line of Gray’s Elegy’ has meaning in isolation – i.e. that some entity M is its meaning.⁷ For our purposes we may take the phrase to be a Fregean definite description the meaning of which determines its referent, identified in (1a). Since this referent isn’t the meaning of the description, (1c) is false. Since, by hypothesis, the description means M, (1b) must be true. But, Russell argues, it can’t be. Since the name ‘M’ and the description ‘the first line of Gray’s Elegy’ contribute the same constituent to propositions (1b) and (1c), those propositions are identical. The puzzle is to explain what goes wrong.

⁷ Russell (1905).
The answer, for Russell, can’t be that the meaning of ‘M’, which it contributes to proposition (1b), is something other than its referent. But then, he thought, there is no avoiding absurdity, since the two proposition have the same structure and the same constituents. Thus he wrongly concluded that Fregean descriptions and other complex singular terms are impossible. His error came from not realizing what propositions are. Since they are cognitive acts, their constituents are, strictly speaking, the sub acts that make them up. These can be different even though the objects and properties on which the acts are directed – ‘the first line of Gray’s Elegy’, the function-argument complex M, and the 2-place meaning relation – are the same. Entertaining (1c) involves mediately predicating being what the descriptive phrase means of M; entertaining (1b) involves directly predicating this of M. Since these sub acts are different, propositions (1b) and (1c) are different. (1b) is true because it represents M as having a property is assumed to have. (1c) is false because it incorrectly represents what M determines – ‘the curfew tolls the knell of parting day’ – as being what the description means.8

I should say that in speaking of propositions as acts, I don’t mean they are always intentional or conscious. They aren’t. But they are doings in which things are cognized as being one way or another. How a proposition represents things is read off the doings with which it is identified, from which we derive its truth conditions. The proposition that o is red predicates redness of o and so represents o

8 For discussion see Salmon (2005), chapter 7 section 5, chapter 8 section 2.3, and chapter 9 section 5.5 of Soames (2014a) as well as chapter 2 of Soames (2015).
as being red, which is what any conceivable agent who entertains it represents. It is true at world-state w iff were w actual, things, in this case o, would be as the proposition represents them, in this case red. Since o may be red at w whether or not the proposition exists or is entertained at w, the proposition doesn’t have to exist or be entertained in order to be true.

This conception explains how an organism without the concept of a proposition or the ability to cognize one can know or believe one. It also explains how self-conscious agents acquire the concept, and come to know things about propositions by monitoring their own cognitions. In addition to solving the problem of propositional unity, _i.e. of how propositions are representational_, it gives a plausible account of what it is for a proposition to be _the meaning_ of a sentence. For S to mean p in L is, to a first approximation, for speakers of L to use S to perform p. Thus, one who understands the sentence ‘The earth is round’ uses the name to pick out the planet and the predicate to ascribe _being round_ to it. Since to do this _is to perform_ the act that is the proposition expressed, one’s use of the sentence _is_ one’s entertaining the proposition. Since no other cognition is needed, understanding what S means in L doesn’t require _knowing that_ S stands in some theoretical relation R to its meaning p. Nor does it require having any concept of a proposition or a language.

In addition to these advantages, there is also an objection, _Propositions can’t be acts because they aren’t things we do_. It is absurd to claim that the proposition that the earth is round something I have often done. _To think otherwise, it is_
claimed, is to make a category mistake. In what follows, I will argue that it’s not a mistake -- in part because the “intuition” that propositions can’t be things we do is based on an identifiable error, and in part because cognitive propositions are needed to play proposition-role in our theories of language and mind.

In thinking about the theoretical role of propositions it is useful to begin with a comparison. Think of the methodology behind the Frege-Russell conception of numbers; numbers are whatever they must be to explain our arithmetical knowledge.⁹ Had the Frege-Russell conception met that explanatory goal, it would have been irrelevant that it conflicts with our intuition that people aren’t members of members of numbers. Just as the explanatory standard was correct for numbers, so it is correct for propositions. In both cases, we know many facts about the target entities without knowing what they are. If asked to pick out the entity that is the number 7 or the proposition that the sun is a star, common sense draws a blank. Thus, the search for explanation is all we have. The key difference in the two cases is that we can explain the relations we bear to propositions and the knowledge we have of them.

This is the cognitive conception’s foundational advantage. Its empirical advantage for theories of language and information is equally important. Unlike arithmetic, which didn’t depend on the logicist reduction, empirical theories in which propositions figure are affected by what we take propositions to be. The

⁹ This methodology is discussed in Soames (2014b.)
crucial fact about the cognitive conception is that it provides us with *cognitively distinct* but *representationally identical* propositions. Because these propositions represent the same things as being the same ways, they impose identical truth conditions on the world. Because they are cognitively distinct, they impose different conditions on minds that entertain them. This opens up new explanatory opportunities.

Consider (2) and (3).

2a. Russell tried to prove (the proposition) that arithmetic is reducible to logic.
   b. Russell tried to prove logicism.
3a. Mary believes that Russell tried to prove that arithmetic is reducible to logic.
   b. Mary believes that Russell tried to prove logicism.

Let ‘logicism’ be a Millian name for the proposition L that *arithmetic is reducible to logic*, designated by the directly referential *that*-clause. Although L is what the two terms contribute to the representational contents of (2) and (3), (2a) and (2b) express different propositions, and (3a) and (3b) can differ in truth value. If Mary picked up the name ‘logicism’ by hearing it used to designate some thesis in the philosophy of mathematics that Russell tried to prove, (3b) may be true, even if she has no clue what he thought about arithmetic, in which case (3a) is false. Although propositions (2a) and (2b) each require one who entertains it to predicate the property *trying to prove* of Russell and L, only (2a) requires one to identify L as the second predication target of that property by entertaining L. Thus *to perform, i.e. to entertain, proposition (2a) is to perform, i.e. entertain, (2b), but not conversely.* From this, the different truth conditions of (3a) and (3b) follow. Because
propositions are cognitive act-types, they can place different constraints on how an agent cognizes an item, even when they predicate the same property of the same things.¹⁰

Next consider (4) and (5).

4a. I am in danger. *Said by SS*
b. SS is in danger.

5a. I believe that I am in danger. *Said by SS*
b. SS believes that SS is in danger.

Since (4a) and (4b) express representationally identical but cognitively distinct propositions, (5a) can be false even if (5b) is true. This happens when I believe of someone I see on closed-circuit TV – who is in fact me – that he is in danger of being attacked, without believing that *I* am in danger.¹¹ To capture this, we distinguish predicating property P of an agent A identifying one’s predication target by cognizing it in the 1st-person way from predicating P of A however cognized. Since to do the first is to do the second, but not conversely, the act-types are different. Since the same property is predicated of the same agent, they are cognitively distinct but representationally identical propositions. In this way, we capture the fact that my epiphany – *My gosh, I am in danger* – involves coming to believe a truth I hadn’t previously believed, even if my believing it is just my coming to believe, in a new way, something already believed.¹²

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¹⁰ Chapters 2 and 4 of Soames (2015).

¹¹ For classic examples and discussion see Perry (1977, 1979) and Lewis (1979).

¹² Detailed analysis is given on pp. 46-56 of Soames (2015).
(6a) and (6b) extend the point.

6a. The meeting starts now! Said at $t$

6b. I only just realized that the meeting starts now! Said at $t$

Just as for each person $p$ there is a 1st-person way of cognizing $p$ no one else can use to cognize $p$, so, for each time $t$ there is a “present-tense” way of cognizing $t$ at $t$ that can’t be used at other times to cognize $t$. With this, we can extend the new account of examples like (4) and (5) to temporal examples like (6).\(^{13}\)

Linguistic cognition is another source of representational identity without cognitive identity. Learning a language involves learning how to use its sentences to entertain, i.e., to perform, the propositions they express. One who understands the sentence ‘Plato was human’ uses the name to pick out the man, the noun to pick out humanity, and the phrase ‘was human’ to predicate the property of the man -- thereby performing the proposition $p$ that the sentence semantically expresses. Since using the sentence to predicate humanity of Plato is itself a purely representational cognitive act-type, it too counts as a proposition $p^*$.\(^{14}\) Since to entertain $p^*$ is to entertain $p$, but not conversely, they are cognitively distinct but representationally identical.

Next consider (7).

\(^{13}\) For complications see pp. 56-60 of Soames (2015). The account is extended to uses of ‘actually’ to designate the world-state of the context of use on pp. 60-66 of Soames (2015).

\(^{14}\) Although it is not semantically expressed by the sentence (see pp. 76-77 of Soames (2015)), it is one of the propositions entertained whenever the speaker uses the sentence with its semantic meaning, it is one of the propositions believed when one who understands the sentence sincerely accepts it, and it is one of the propositions asserted by standard utterances of the sentence in contexts in which it is understood.
7a. Carl Hempel was a famous philosopher.

b. Peter Hempel was a famous philosopher.

c. x was a famous philosopher (with Mr. Hempel assigned as value of ‘x’)

Let p be semantically expressed by (7c). Let pc be identical to p except for requiring one to identify Mr. Hempel as predication target by cognizing him via the name ‘Carl Hempel’, while pp requires cognition via the name ‘Peter Hempel’.

Utterances of (7a) assert both pc and p; utterances of (7b) assert pp and p. With this, we reconcile Frege’s insight that one who accepts (7a) may believe something different from one who accepts (7b) with Kripke’s insight that the propositions believed are representationally identical.

Next, consider the names, ‘Hesperus’ and ‘Phosphorus’, the representational content of which is their referent. These names are special in that understanding them requires having some standard information. Those well enough informed to employ them are expected to know that speakers who use them typically presuppose that ‘Hesperus’ stands for something visible in the evening while ‘Phosphorus’ stands for something visible in the morning. One who mixes this up misunderstands the names. With this in mind, consider A’s utterance of (8) addressing B, each presupposing that both understand the names.

8. Hesperus is Phosphorus

A asserts not only the bare singular proposition that predicates identity of Venus and Venus, but also the corresponding proposition entertainable only by identifying Venus via the two names. Although this proposition merely represents Venus as being Venus, B extracts more information from A’s assertion. Presupposing that A
understands the names, B reasons that A knows he will be taken to be committed to the claim that the object that is both Hesperus and visible in the evening is the object that is both Phosphorus and visible in the morning. Knowing that A expects him to so reason, B correctly concludes that A asserted the descriptively enriched proposition.\textsuperscript{15}

The extra assertive content carried by A’s remark arises from the linguistically enhanced proposition asserted, the presupposition that A and B understand the names, and the descriptive information that comes with this understanding. The conversation then continues as in (9).

9a. If Hesperus’s orbit had been different, it wouldn’t have appeared in the evening. \textit{Said by A}

b. In that case would Hesperus still have been Phosphorus? \textit{Asked by B}

c. Of course. Hesperus would have been Phosphorus not matter what. \textit{A again}

A’s final utterance commits A to its being necessary that Hesperus is Phosphorus, but not to the absurdity that no matter what, the unique thing that was both Hesperus and visible in the evening would have been the unique thing that was both Phosphorus and visible in the morning. The difference between the descriptive enrichment of A’s use of (8) and the lack of such enrichment of A’s use of (9c) hinges on what understanding the names requires. It requires knowing that most agents who use them take, and expect others to take, ‘Hesperus’ and

\begin{flushleft}
\textsuperscript{15} My use of descriptively enhanced propositions to resolve some instances of Frege’s puzzle stems from Soames (2002, 2005a). The new ingredients here invoked -- linguistically enhanced propositions and a pragmatically expanded conception understanding -- extend the mechanisms explored in earlier work in ways explained on pp. 181-186 of Soames (2015).
\end{flushleft}
‘Phosphorus’ to stand for something seen in the evening and the morning, respectively. Presupposing this, A and B add descriptive content to A’s utterance of (8). Since taking the names to refer to things actually seen at certain times tells one nothing about when they are seen at possible world-states, A and B don’t descriptively enrich the occurrences of the names under the modal operator in the utterance of (9c).

This explanation depends on three points: (i) To cognize o via name n does not involve predating being named n of o (any more than cognizing oneself in the 1st-person way involves predating that one is so-cognized); (ii) the linguistically enhanced propositions asserted by utterances of sentences containing names are representationally identical to, but cognitively distinct from, the semantic contents of the sentences uttered; (iii) to understand an expression requires not only the ability to use it with its semantic content, but also the knowledge and recognitional ability needed to use it to communicate with others in ways widely presupposed in the linguistic community. This dynamic extends to natural kind terms, where it provides solutions to instances of Frege’s puzzle involving them.16

It also gives a twist to John Perry’s amnesiac Rudolf Lingens reading a book about himself. From his reading, he knows of Rudolf that he is named ‘Rudolf’, but doesn’t know this in a 1st-person way, and so doesn’t self-ascribe being so named. Thus he doesn’t assent to (10a) or (10b).

16 On pp. 84-93 of Soames (2015), the discussion is extended to cover uses of natural kind terms and propositional attitude reports, including those that report agents speaking other languages.
10a. I am Rudolf Lingens.

b. I believe that I am Rudolf Lingens.

He still won’t assent if he looks in a mirror and says “I am he,” thereby self-ascribing being RL but not recovering his memory. But why wouldn’t (10b) express a truth if he were to use it? After all, he does believe the 1st-person proposition that predicates being RL of himself. What he doesn’t believe until he recovers his memory is the proposition that differs from it only in requiring the second argument of identity to be identified via the name ‘Rudolf Lingens’. After he recovers his memory he would both believe this proposition and use (10b) to truly assert that he believes it.

The 2nd-person singular pronoun adds another twist. Suppose the amnesiac Otto, reading the same book over Rudolf’s shoulder, recovers his memory and says (11a).

11a. I have just realized that you are Rudolf. (Said by Otto)

There is no trouble explaining Otto’s epiphany, and how communicating it leads to Rudolf’s epiphany. But we must also explain why Otto’s remark asserts something true and nothing false. He asserts that only just now has he realized something. The just-realized proposition isn’t the semantic content of the embedded clause in the context, because Otto has long realized that Rudolf is Rudolf. It also isn’t the proposition that the person he addresses is Rudolf. Though he communicates this proposition, Otto didn’t assert that he addressed anyone. The proposition he reported himself to only recently realize predicates identity of Rudolf and Rudolf,
identifying the second argument via the name and the first argument via the 2nd-person pronoun, which Otto understands to designate the one he addresses. The point extends to Blotto’s truthful use of (11b) when speaking to Otto while pointing at Rudolf.  

11b. I have just realized that he [pointing at Rudolf] is Rudolf. (Blotto addressing Otto) 

So far I have mentioned four propositional sub acts that are different ways of identifying predication targets -- identifying a propositional constituent of a complex proposition by entertaining it, identifying an agent by cognizing it in the 1st-person way, identifying a time by cognizing it in the present-tense way, and identifying something by cognizing it linguistically. Adding these constraints on how a predication target is identified to a more abstract propositional act-type that merely specifies what the predication target is doesn’t change representational content. For this reason, I call these sub acts Millian modes of presentation.

Perception is another Millian mode, or family of modes. Agent A watches bird B, identifying the predication target of being red by cognizing B visually. Since A’s predicative act is a sub case of the general act predicating being red of B, the two acts are cognitively distinct but representationally identical propositions. So are predicating being Tom’s pet of B and doing so by identifying the predication target visually. Even if A already knows the former proposition – namely, that B is

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17 Uses of demonstratives and the puzzles to which they give rise are discussed on pp. 105-116 of Soames (2015).
Tom’s pet -- from Tom’s previous testimony, A may faultlessly respond to an utterance of (12a) by uttering (12b).

12a. That is Tom’s pet. *Said to A demonstrating B*

b. I didn’t realize it was Tom’s pet. *Said by A looking at B*

A’s assertion is *true*, because the proposition A claims not to have known, is one the entertainment of which requires B to be visually identified.¹⁸

My final Millian mode is *recognizing* the recurrence of an item already cognized.¹⁹ When one has cognized x before in predicating being F of x and one now predicates being G recognizing x as recurring again as predication target, one doesn’t need further premises to predicate being both F and G of x. To recognize recurrence is to immediately and noninferentially connect the information carried by one cognition with information carried by others. Ubiquitous in cognition, *recognition of recurrence* connects elements both within individual propositions and across multiple propositions we entertain. It occurs within a proposition when the agent’s *identification* of one predication target consists simply in the agent’s intention to predicate the property of an object already identified as a distinct argument of predication. This occurs most commonly in propositions expressed by uses of sentences containing pronouns anaphorically dependent on previously occurring names in the sentence, or in propositions expressed by uses of sentences

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¹⁸ Complicated and philosophically interesting cases of puzzles involving perceptual cognition and attitude reports of perceptual contents – including those found in Nagle (1974) and Jackson (1986) – are discussed on pp. 96-105 of Soames (2015).

¹⁹ This important cognitive phenomenon is discussed at length in Fine (2007) and Salmon (2012).
containing repetitions of what is, and is presumed to be, occurrences of the same name. This sort of linguistic recurrence is capable of generating trios of cognitively distinct but representationally identical propositions of the sort indicated by P1-P3.

P1. The act of predicating R of the pair of objects o and o, identifying o once and taking it to play the role of both arguments by virtue of its recurrence.

P2. The act of predicating R of the pair of o and o involving separate identifications.

P3. The act of predicating R of pair, no matter how the pair of arguments is identified.

Since I can fail to believe P1 while believing P2 and P3, I can use (13a) to say something true without saying anything false, even if (13b) is false and a = b.

13a. I don’t believe that a R a.
   b. I don’t believe that a R b

The empirical results (1-13) plus the foundational results discussed earlier are my positive case for the cognitive conception of propositions. I now turn to rebutting a common objection. Why, if propositions are things we do, does it seem absurd to say so? Well, what is a proposition? What, in particular, is the proposition that Seattle is sunny, or that there is a red dot on the wall in front of me? In bringing these to mind, one thinks of Seattle and the wall as being certain ways. One needn’t judge them to be those ways, one may merely entertain the propositions. Sometimes one may conjure up images, but even then one knows that the proposition entertained isn’t the particular image in one’s mind, but something more general. Still, there is something in the visual model to which we wrongly tend to cling. Just as seeing a wall with a red dot is a phenomenally robust form of
being aware of it, so, we may incautiously think, visualizing the wall is a phenomenally poorer form of awareness of a mental image that represents it, while entertaining a proposition about the wall is a minimal, or phenomenally empty, form of awareness of something that represents the wall as being a certain way. It isn’t.

We are wrongly encouraged to think otherwise by the parallels, (i) and (ii), between our talk about perception and our talk about propositional attitudes.

(i) Just as ‘see’ is a two-place predicate relating agents to things seen, so ‘entertain’ and ‘believe’ are two-place predicates relating them to propositions entertained and believed.

(ii) Just as standing in the relation expressed by ‘see’ requires agents to be aware of things involved in the perception, so standing in the relations expressed by ‘entertain’ and ‘believe’ requires them to be aware of things involved in the attitudes.

The error is to jump from (i) and (ii) to (iii), when in fact it is (iv) that is true.

(iii) Just as standing in the relation expressed by ‘see’ requires one to be aware of the things seen, so standing in the relation expressed by ‘entertain’ and ‘believe’ requires one to be aware of the propositions entertained and believed.

(iv) Although standing in the relation expressed by ‘see’ to an object o that is seen requires one to be aware of o, standing in the relation expressed by ‘entertain’ or ‘believe’ to a proposition p merely requires one to be aware of the things p represents and the ways p represents them.

The error of opting for (iii) rather than (iv) is a main source of idea that propositions can’t be cognitive acts. It’s obvious that one can perform an act without making it the object of awareness, and also that forming cognitive and behavioral dispositions when doing so need not involve thinking of the act. Since this is what entertaining and believing propositions are if propositions are cognitive act-types, the objector’s
commitment to (iii) leads him to conclude that the cognitive conception is absurd. But it isn’t absurd; (iii) is false and (iv) is true.

Why then are we strongly inclined to think otherwise? In answering this question, I invite you to imagine an agent who entertains the proposition that Seattle is sunny, focusing on the concrete event token which is his entertaining it. That token isn’t the widely disbelieved proposition he takes himself to have entertained. Rather, he would say, the proposition is *that type of thing*. What type? The correct answer is that it is whatever type best plays the proposition role in our theories. But its not the answer an ordinary agent would give. All he can say about the type (i.e., the proposition) is that it is *the thought he just had* – which is true provided he doesn’t succumb to the seeing-in-the-mind’s-eye temptation of taking the thought to be what he focuses on whenever he says “Seattle is sunny” to himself.

If he does succumb, he is likely to object when told that the thought he entertained was his act of entertaining it. Having succumbed he will object because he wrongly thinks that entertaining a thought always involves focusing on it. Thinking this, he will protest, “Obviously *what I was focusing on* when I whispered “Seattle is sunny” wasn’t *my act of focusing on it*.” To which we respond: *Of course, there was no act that was both what you focused on and your focusing on it. There couldn’t have been. In fact, however, you performed two acts. Just as you can perform a physical act while focusing on what you are doing, so you can perform one cognitive act while performing a second act that involves focusing on*
the first. What you focused on when entertaining the proposition that Seattle is sunny was Seattle, which isn’t an act. But if, in response to our question, What is that proposition?, you self-consciously attended to what you were doing (entertaining, i.e. performing, the proposition) while you were doing it, then you did, in addition, focus on the act of predicating being sunny of Seattle. You had two cognitions at once.

One was the act of predicating being sunny of Seattle — which is the proposition that Seattle is sunny -- the other was your focusing on that act while performing it. Your error was in conflating the two into an imagined single act of entertaining x by focusing on x. Rightly rejecting that as absurd, you wrongly rejected the idea that the proposition entertained wasn’t the act predicating being sunny of Seattle. Eliminating the minds-eye temptation, eliminates the objection. With this we explain both how unsophisticated agents can bear attitudes to propositions without being able to cognize them and how self-conscious agents identify them. We also explain the errors responsible for the spurious “intuition” that propositions can’t be things we do.

I close with a pair of questions: What are questions expressed by interrogative sentences? What are directives expressed by imperative sentences? Although I won’t try to answer them here, I will mention some natural constraints that arise from the cognitive conception of propositions. If propositions are cognitive acts or operations, questions and directives should also be. C1 to C5 constrain the possible choices.

C1. Like propositions, questions and directives should be cognitive acts.
C2. Just as propositions are semantic contents of some declarative sentences, so questions and directives should be semantic contents of some interrogative and imperative sentences.

C3. Just as propositions are objects of propositional attitudes reported by attitude ascriptions, so questions and directives should be objects of attitudes reported by ascriptions like those in (14) and (15).

14. The boss asked whether the window was closed.
15a. The boss advised that I close the door.
   b. The boss requested that I close the door.
   c. The boss instructed that I close the door.
   d. The boss ordered that I close the door.
   e. The boss command that that I close the door.

C4. Since the semantics of declaratives, interrogatives, and imperatives are closely related, questions and directives should be closely related to propositions.

C5. Since neither questions nor directives are true or false, they are not propositions.

References


____, (forthcoming), “Yes, the search for explanation is all we have.” *Philosophical Studies*; also available at “Online First: http://link.springer.com/article/10.1007/s11098-016-0636-0