CHAPTER 9

Cognitive propositions in realist linguistics

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The paper presents a cognitive conception of propositions as semantic contents of (some) declarative sentences. The conception expands solution spaces for previously intractable empirical problems in natural-language semantics and pragmatics, while also explaining how an agent who is unable to cognize propositions can know or believe them, and how sophisticated agents acquire the concept and believe things about them by monitoring their own cognitions. Finally, an account is given of what it is for a sentence to mean that p in a language that doesn't require having thoughts about p or L. Nevertheless, semantics isn't psychology; agents with different psychologies can speak semantically identical languages, while those with the same purely internal states (embedded in similar immediate environments) can speak different languages. Cognitive semantics can be realist and naturalistic without being a branch of psychology.

Keywords: semantics; hyperintensional; representational content; cognitive content; recognition of recurrence

1. Introduction

To be a realist about linguistic theories is to take them to be about real linguistic entities – the words, phrases, sentences, structures, and their properties that together make up languages. These, not fine-grained realizations of languages in speakers or populations are the subject matter of linguistics. Whenever it is possible for agents with different psychologies to speak the same language, individuated by the semantic, syntactic, and phonological properties of its expressions, the psychological respects in which agents differ don't individuate their languages. Linguistic realism contends that language individuation by linguistic properties is to a considerable extent extra-psychological. It is *not* part of linguistic realism, as I understand it, that broadly psychological facts have no role to play. I will illustrate with semantics.

Semantic realism requires meanings and semantic contents that standard versions of intensional semantics don't provide. At best those theories offer empirically inadequate models. To replace them with semantically real things, we must first recognize the artificiality of what we have been given. A semantic theory of L interprets its well-formed expressions, including sentences, explaining how interpretations of some relate to those of others. By the interpretation of an expression, I mean its semantic content, which is different from *what one who speaks the language understands when one understands it.* I will return to this distinction after saying more about *propositions*.

2. Propositions

2.1 Propositions in intensional semantics

Propositions are objects of attitudes, primary bearers of truth conditions, contents of some cognitive and perceptual states, meanings of some sentences, and semantic contents, at contexts, of others. They are not sets of truth-supporting circumstances. Nor, of course, are sentence meanings functions from contexts to such sets. Elsewhere I have argued that the coarse-grainedness problem for propositions as sets of truth-supporting circumstances can't be solved by substituting epistemologically possible states, logically possible states, or situations for metaphysically possible world-states (cf. Soames 1987, 2008b). Nor can it be solved by invoking so-called diagonal propositions, either pragmatically *a la* Stalnaker (1978) or semantically *a la* Chalmers (1996) (cf. Soames 2005, 2006). This is one reason why the truth-theoretic entities we have been given can't play the roles that have typically been assigned to them.

But it is only one reason. Another is that meanings, i.e. interpretations, don't, on pain of regress, require *further* interpretation. *But without interpretation by us, sets of truth-supporting circumstances don't represent anything as being any way,* and so don't have truth conditions (cf. Soames 2010a). Is the set containing just world-states 1, 2, 3 true or false? Since it doesn't represent anything as being this way or that, it can't be either. We could, if we wished, *interpret* it as representing *the actual world-state as being in the set*, and so as being true iff no state *outside* the set were instantiated. But we could equally well interpret it as representing the actual world-state as *not being in the set*, and so as being true iff no state *inside* it was instantiated. Without interpretation by us, the set doesn't represent anything, or have truth conditions.

The *function* assigning *truth* and *falsity* to world-states is no better. Why not?

- (i) Truth is the property a proposition p has when the world is as p represents it. It is a property which, when predicated of p, gives us a claim we are warranted in accepting, believing, or doubting iff we are warranted in taking that attitude to p. This is what truth is. Since *propositions are conceptually prior to truth*, *truth can't be one of the things from which propositions are constructed*.
- (ii) The illusion that a function assigning world-states 1–3 truth and others falsity represents something as being some way comes from presupposing a conceptually prior notion of propositions in which *world-states are properties predicated of the world* and each assignment of truth value to a world-state w is correlated with *the proposition that predicates w of the world*. Since that proposition is true iff the world is in state w, functions from world-states to truth values can be associated with disjunctions of such propositions. But this doesn't justify taking those functions to be propositions because it presupposes a prior notion of propositions on which they are *not* functions.
- (iii) Taking propositions to be functions from world-states to truth values goes with taking properties to be functions from world-states to extensions. This conflicts with taking world-states to be properties, for surely a world-state *isn't* a function from world-states to anything. But if properties aren't such functions then, propositions aren't either.
- (iv) World-states are properties of making complete world-stories, the constituents of which are propositions, true. *Since both truth and world-states* are conceptually downstream from propositions, they aren't building blocks from which propositions are constructed.¹

In short, propositions aren't what intensional semanticists have said they are. Nor is the two-place predicate *is true at w* the undefined technical primitive it has often been said to be. If it were, then *nothing* more about the meaning of S would follow from the theorem *For all world-states w*, S *is true at w iff at w, the earth moves* than follows from the pseudo-theorem *For all world-states w*, S *is T at w iff at w, the earth moves*.² Suppose instead we analyzed S *is true at w* as saying that *if w were actual (instantiated), then S would be true*. Although this is a step in the right direction, it is not quite right, because S might fail to exist at some world-states at which the earth moves, or S might exist, but *not* mean (at some earth-moving states), what it actually means. Fortunately, this problem is easily fixed. To say that S *is*

^{1.} See Chapter 5, Soames (2010b).

^{2. &#}x27;S' is here a metalinguistic variable ranging over sentences.

true at w is to say that *S expresses a proposition that would be true if w were actual (instantiated).* To understand *is true at* in this way is to presuppose antecedent notions of *the proposition S expresses* and *the monadic notion of truth* applying to it. Taking them at face value, we invoke a pretheoretic triviality connecting meaning and truth – *if S means, or expresses, the proposition that the earth moves, then necessarily the proposition expressed by S is true iff the earth moves.* This triviality plus the theorem *S is true at w iff at w, the earth moves* entail that S means something *necessarily equivalent to the proposition that the earth moves.* Even this doesn't *fully* specify S's meaning, but it does give us information about S's meaning. Without this appeal to prior notions of truth and propositions, intensional truth theories *don't provide any information whatsoever about meaning.* To transform them into genuine *semantic* theories, we must map sentences to real propositions, the truth conditions of which are derived from their representational properties. We don't need real, representational propositions to *complete* intensional semantics. We need them to have any semantics at all.

2.2 Propositions as cognitive act types

This isn't an argument for traditional Fregean or Russellian propositions. Although their individuation conditions are better suited to accommodating the attitudes, they are still too coarse grained. Worse, the n-tuples of objects, properties, or senses they provide are merely models. Since n-tuples, or other formal structures, don't, without interpretation by us, represent anything as being any way, they aren't meanings or primary truth bearers.³

This, I believe, was the inchoate insight behind Donald Davidson's most telling objection to structured propositions as sentence meanings. Commenting on them in Davidson (1967), he remarked,

Paradoxically, the one thing meanings do not seem to do is oil the wheels of a theory of meaning [...] My objection to meanings in the theory of meaning is not that they are abstract or that their identity conditions are obscure, but that they have no demonstrated use. (Davidson 2001: 21–22)⁴

His point was correct; taking structured entities to be meanings (or *semantic contents*) of sentences doesn't help us give a theory of meaning, *unless one can read off which things a sentence represents to be which ways from the structured entity it*

^{3.} Soames (2010a)

^{4.} See the discussion on in Chapter 4 of Soames (2010a).

expresses. Since this information *can't* be read off traditional structured propositions, we need a new conception.

The needed conception inverts the traditional Frege/Russell idea that the intentionality of propositions is explanatorily prior to that of agents. On that idea, agents who entertain propositions cognitively represent things as bearing certain properties because the propositions entertained do. But that is mystery mongering. It is mysterious what such primitively representational entities are, it is mysterious what cognizing them amounts to, and it is mysterious how and why our cognizing them results in our representing things as bearing properties. The way to reduce the mystery is to start with the obvious fact that agents represent things as being various ways when they think of them as being those ways. Next we solve for two unknowns. What kind of entity P and what relation R can together play the roles of propositions and entertaining in our theories by guaranteeing that agents who bear R to something of kind P thereby 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 as it is represented to be - hot.

Seen in this way, the answer to the question 'What are propositions and what is it to entertain one?' is obvious. *Propositions are 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* the property *being red* 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* allows us 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 act-type of perceiving or thinking, plus a property it has when the cognition is accurate. The entity is a proposition, which is the cognitive act of representing o as P. The property is truth, which the act-type has iff to perform it is to represent o as o really is.

2.3 Predication

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 to be red, or visualize it as red, or merely overhear it being described 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 (determinable) act-type *traveling to work*, which, though not inherently effortful, has (determinate) instances, like biking to work, that are. Thus, to *judge* that o is red, is to predicate redness of o in a 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 (roughly) to be disposed to judge it to be. The story is similar for attitudes like doubting that *don't* aim at truth. The things doubted may be true or false, just as the things believed may be. Since what is believed by x may be doubted by y, truth- and non-truth-normed attitudes have the same propositional objects. Since propositions are act-types, and since for any act-type A, A is identical with the act-type *performing A*, entertaining a proposition is *the act-type* – because it is the proposition – in terms of which other attitudes with the same object are defined.

This is the basis of a naturalistic epistemology of propositions. Since believing p doesn't require cognizing p, any creature that can perceive or think of p's subject matter can believe p, whether or not it can 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 own cognitions, self-conscious agents identify distinct propositions as distinct representational states or operations, and come to conceive of truth as a form of accuracy.

2.4 Complex propositions

So far I have spoken of simple propositions, which predicate properties of objects. Complex propositions involve additional operations. But the idea is always the same. How a proposition represents things is read off the act-type with which it is identified, from which we derive its truth conditions. In the simple case, the proposition *that o is red* predicates redness of o and so *represents o as being red*, which is what any conceivable agent who entertains it represents. Note, the way a proposition represents things to be is, by definition, the way any conceivable agent at any conceivable world-state represents things to be by entertaining (i.e. performing) it. Since what a proposition represents doesn't change from world-state to world-state, its truth conditions don't either. Thus, the proposition *that o is red* is true at any 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.⁵

3. Foundational and empirical advantages of cognitive propositions

This conception explains both how an organism without the ability to cognize a proposition can know or believe one and how sophisticated agents acquire the concept, and come to know things about propositions by monitoring their own cognitions. We also get a plausible story about what it is for a proposition to be *the meaning (semantic content) 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. 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. To do this is to perform the act-type that is the proposition (semantically) expressed by the sentence in a special way. It follows that one's use of the sentence *is* one's entertaining the proposition it expresses. Since no other cognition is needed, understanding what S means in L (in the sense of knowing its semantic content) doesn't require having any thoughts about p or L, let alone *knowing that* S stands in some relation R to p and L.

These are *foundational* advantages of cognitive propositions. Their *empirical* advantages for theories of language and information are equally important. Unlike arithmetic, the theorems of which didn't depend on the attempted logicist reductions of Frege and Russell, current empirical theories involving propositions yield different results when combined with different conceptions of propositions. As I argue in Soames (2015), many familiar, and seemingly recalcitrant, problems posed by hyperintensional constructions have arisen from conceptions of propositions that don't individuate them correctly. This problem is directly addressed by taking propositions to be a species of purely representational cognitive act-types of operations.⁶ Consider the generic act-type of traveling to work and the more specific act-type of driving to work that relates an agent to the same start and end

^{5.} Being repeatable act-types or operations that are capable of being performed with or without the use of language, propositions are neither sentences nor spatio-temporally locatable events in which agents perform them. In this sense they are abstract, rather than concrete, objects. Although I do not take it for granted that *all* abstract objects exist necessarily, i.e. at every world-state, the issue of whether or not propositions do is irrelevant to their utility for us. Whether or not propositions must exist at a world-state is irrelevant to whether or not they are true at that state.

^{6.} The distinction between purely representational act-types that are propositions and those that are not is made in Chapter 2 of Soames (2015).

points, even though the latter constrains how the traveling occurs in a way that the former does not. It is the same with the generic act-type of predicating *being so-and-so* of an object o and the more specific act-type of doing so by identifying o as predication target in a certain way. Both represent the same thing as bearing the same property, even though the latter constrains how the object is cognized in a manner that the former doesn't. In this way, the cognitive conception of propositions provides individuation conditions that result in *cognitively distinct* but *representationally identical* propositions. These propositions represent the same things as being the same ways, and so impose identical truth conditions on the world, while imposing different conditions on minds that entertain them. This opens up new explanatory opportunities.⁷

3.1 Cognitively distinct but representationally identical propositions

Consider (1) and (2).

- (1) a. Russell tried to prove (the proposition) that arithmetic is reducible to logic.
 - b. Russell tried to prove logicism.
- (2) a. 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 (1) and (2), (1a) and (1b) express different propositions, and (2a) and (2b) 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, (2b) may be true, even if she has no clue what he thought about arithmetic, in which case (2a) is false. How can this be? Although propositions (1a) and (1b) each require one who entertains it to predicate *trying to prove* of Russell and L, (1a) also requires one to identify L by entertaining it. Thus *to perform, i.e. to entertain (accept or believe), proposition (1a) is to perform, i.e. entertain (accept or believe), (1b), but not conversely* (just as to perform the act of driving to work is to perform the act of traveling to work, but not conversely).⁸ From this, the different truth conditions of (2a) and (2b) follow.

^{7.} See Chapters 2–8 of Soames (2015).

^{8.} This observation holds necessarily when applied to the propositions that are the different semantic contents of (1a) and (1b). See Soames (2015: 39–43). In addition, sentence (1b) can

Because propositions are cognitive acts, they can place different constraints on how an agent cognizes an item, even when they predicate the same property of the same things.

Next consider (3) and (4).

- (3) a. I am in danger. Said by SSb. SS is in danger.
- (4) a. I believe that I am in danger. *Said by SS*
 - b. SS believes that SS is in danger.

Since (3a) and (3b) express representationally identical but cognitively distinct propositions, (4a) can be false even if (4b) is true. This happens when I see SS in a mirror and believe him to be in danger, without believing I am in danger. Here, we distinguish predicating property P of an agent A cognized *in the 1st-person way* from predicating P of A however cognized. To do the first is to do the second, but not conversely, so the acts 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 – *I am the one in danger* – involves believing 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.

If one wonders how I can report the 1st-person beliefs of others without being able to entertain the propositions I report them as believing, one should keep familiar examples like (5) in mind.

(5) (Every x: Fx) x believes that x is G

We can think of an utterance of (5) as asserting that the propositional function expressed by the matrix clause *is true of every x who is F*. Thus (5) is true iff each such x believes the singular proposition that predicates *being G* of x. *If we add that the believer identifies the predication target of G in the 1st-person way, we ascribe de se attitudes; if we don't, we ascribe de re attitudes.* This strategy generalizes to reports of attitudes born to all the other propositions of limited accessibility I will be talking about, including those in (6).

be used to assert a pragmatically enriched proposition p that requires the second argument of the *prove* relation to be cognized via the name 'logicism'. This proposition p is representationally identical to the semantic content of (1b), but neither belief in the semantic content of (1a) nor belief in the semantic content of (1b) guarantees belief in p. Believing p does necessitate belief in the semantic content of (1b), but not in the semantic content of (1a). See Soames (2015: 80–81).

- (6) a. The meeting starts now! Said at t
 - b. 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. Suppose I plan to attend a meeting that will start at t – noon on July 1st. Not wanting to be late, I remind myself of this that morning. Nevertheless, as the morning wears on, I lose track of time. So, when I hear the clock strike noon, I utter (6a), and change my behavior. Coming to believe of t *in the present-tense way* that the meeting starts then motivates me to hurry off. Had I not believed this, I wouldn't have done so, even though I would have continued to believe, of t, that the meeting starts then. As before, I believe something new by coming to believe something old in a new way. What makes (6b) true is that the proposition to which I have only just come to bear the *realizing* relation requires *cognizing t in the present-tense way*.

3.2 Linguistic cognition

Linguistic cognition is another source of representational identity without cognitive identity. 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 the sentence expresses. Since *using the sentence to predicate humanity of Plato* is itself a purely representational cognitive act, it too counts as a proposition p*. Since to entertain p* is to entertain p, but not conversely, they are cognitively distinct but 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 use them are expected to know that those who do 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 (7).

- (7) a. Hesperus is a planet.
 - b. Phosphorus is a planet.
 - c. x is a planet (with Venus as value of 'x')

Let p be expressed by (7c). P_H is a proposition representationally identical to p that requires one to cognitively identify the predication target, Venus, of *being a planet* via the name 'Hesperus'. P_p requires cognition via the name 'Phosphorus'. Utterances of (7a) assert both P_H and p; utterances of (7b) assert P_p and p. With

this, we reconcile a pair of hard-to-combine insights: one who accepts (7a) may, as Frege noted, believe something different from what one believes in accepting (7b) – thereby explaining the potentially different truth conditions of utterances of (8a) and (8b) – even though the propositions believed are representationally identical, as intimated by Kripke.⁹

- (8) a. Mary believes that Hesperus is a planet.
 - b. Mary believes that Phosphorus is a planet.

Now consider A's use of (9) in addressing B, each presupposing that both *under-stand* the names.

(9) 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 unique object that is both Hesperus and visible in the evening is the unique 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.

The extra representational content carried by A's remark arises from the linguistically enhanced proposition asserted, the presupposition that A and B understand the names, and the information that comes with this understanding. The conversation then continues as in (10).

- (10) a. If Hesperus's orbit had been different it wouldn't have appeared in the evening. *Said by A*
 - b. In that case would Hesperus still have been Phosphorus? Asked by B
 - c. Of course. Hesperus would have been Phosphorus not matter what. *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 enrichment of A's use of (9) and the lack of such enrichment of A's use of (10c) hinges on what

^{9.} Chapter 4 of Soames (2015) discusses attitude ascriptions like (8), including those in which the agent of the reported attitudes uses words not used by the reporter because different languages are involved.

understanding the names requires. It requires knowing that most agents who use them take, and expect others to take, 'Hesperus' to stand for something seen in the evening and 'Phosphorus' to stand for something seen in the morning. Presupposing that both understand the names in this sense, A and B add descriptive content to A's utterance of (9). 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 when evaluating assertive utterances of (10c).

This explanation depends on three points: (i) to cognize o via a name n does *not* involve *predicating being named n of o* (any more than cognizing oneself in the 1st-person way involves predicating 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 bare semantic contents of the sentences uttered;¹⁰ (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 many instances of Frege's puzzle involving them.¹¹

3.3 The Millian modes of perceiving and recognizing

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 oneself by *cognizing oneself in the 1stperson 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*.¹²

^{10.} See Chapter 4 of Soames (2015).

^{11.} The key idea is essentially an updated and generalized version of the neglected suggestion in Putnam (1970, 1975b) that natural kind terms are associated with stereotypes that are regarded by speakers as crucial to understanding them, even though the stereotypes don't contribute to semantic contents. See Chapter 4 of Soames (2015) for this plus a solution to Kripke's puzzle about belief presented in Kripke (1979).

^{12.} The first of the Millian modes mentioned here *is* included in the semantic content of, e.g., (1a). The 1st-person and present-tense Millian modes are *not* included in the semantic contents of sentences containing the 1st-person singular pronoun and the temporal 'now'. As

Perception is another such mode, or rather a vast family of modes. Agent A watches bird B, predicating *being red* of B *cognized visually*. Since A's perceptual predication is a sub case of the general act predicating *being red* of B, the two are distinct but representationally identical propositions. So are *predicating being Tom's pet* of B and *doing so cognitively identifying the predicate target B visually*. Even if A already knows the former – namely, that B is Tom's pet – from Tom's previous testimony, A may faultlessly respond to an utterance of (11a) by uttering (11b):

(11) a. That is Tom's pet. Said to A demonstrating Bb. 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.¹³

My final Millian mode is *recognizing* something previously cognized.¹⁴ When one has predicated *being F* of x before and one now *recognizes x recurring* as predication target of *being G*, one doesn't need further premises to predicate *being both F and G* of x. To recognize recurrence is immediately and noninferentially to connect the information in one cognition with information in others. Ubiquitous in cognition, *recognition of recurrence* connects elements both *within* individual propositions and *across* multiple propositions we entertain.¹⁵ Incorporating it within propositions generates trios of cognitively distinct but representationally identical propositions of the sort indicated by P1-P3.

- P1. The act of predicating R of a pair of arguments, o and o, *recognizing o's recurrence*.
- P2. The act of predicating R of the pair of arguments, *without recognizing o's recurrence*.
- P3. The act of predicating R of the pair of arguments *whether or not one recognizes o's recurrence.*

with *linguistic* Millian modes, encoding the modes associated with these indexicals in the semantic contents of sentences containing them would misrepresent many attitude ascriptions in which they occur embedded under attitude verbs. See Chapters 2, 4 and 5 of Soames (2015) for discussion.

^{13.} Chapter 5 of Soames (2015) extends this discussion and uses it to address puzzles in the philosophy of mind. As before, these perceptual Millian modes are generally not included in the semantic contents of the sentences that are used to assert propositions containing them.

^{14.} The seminal discussions of recognition of recurrence are Fine (2007) and Salmon (2012).

^{15.} Recognition of recurrence is discussed in Chapters 6–8 of Soames (2015).

Since I can fail to believe P1 while believing P2 and P3, I can use (12a) to say something true without saying anything false, even if (12b) is false and a = b.

- (12) a. I don't believe that a R a.
 - b. I don't believe that a R b.

4. Cognitive propositions in a realist conception of linguistics

In all cases from (1) to (12), taking propositions to be purely representational cognitive acts allows us to derive correct but otherwise elusive results about what is believed, asserted, etc. Having indicated why linguistic theories should embrace cognitive propositions, I will close by sketching how they fit into a realist conception of linguistics. I begin by asserting two general claims illustrated by some of my examples. *First, many assertive utterances assert multiple cognitively distinct but representationally identical propositions that may be reported by non-equivalent attitude reports. Second, Millian modes of presentation in propositions asserted or communicated by utterances are often not parts of the semantic contents of the sentences uttered.¹⁶ Because these modes of presentation are antecedently occurring features of our cognition, they are routinely available to speaker-hearers, who add them when doing so results in illocutionary contents that make maximal sense of linguistic performances.*

4.1 Semantic contents excluding Millian modes

Sometimes it is crucial that such modes *not* be included in semantic contents. For example, a speaker uttering one of the sentences of (13) will rely on *hearers* to recognize the recurrence of John, even though recognition of the recurrence *isn't* part of the semantic content of the sentence, since, if it were, the thought attributed to Mary would be transparently absurd.¹⁷

- (13) a. *John* fooled Mary into thinking that *he* wasn't John.
 - b. *John* fooled Mary into thinking that *he*, John, wasn't John.
 - c. John fooled Mary into thinking that John wasn't John.

Although there are exceptions – including sentences (1a) and (2a) – the semantic contents assigned to sentences by a correct semantic theory generally won't include

^{16.} Chapters 2, 4, 5, 6, and 7 of Soames (2015).

^{17.} The italicized occurrences in (13a) and (13b) are anaphoric; cf. Soames (2012) and Chapter 6 of Soames (2015).

Millian modes of presentation used by speakers to extract information from utterances. This pervasive fact increases the already significant distance between semantic and assertive, or other illocutionary, content. Competent speakers can usually identify what is asserted by an utterance, but they aren't, and don't need to be, good at identifying the semantic content of the sentence uttered.¹⁸ The correct theory of semantic content is the one which, when combined with independent pragmatic principles, does the best job of predicting assertive and other illocutionary content (cf. Soames 2008a). Such a theory isn't tested by *semantic intuitions*. Speakers do have a pretty good idea of what *they* would mean by a use of a sentence S in this or that context, and what information they would glean from others' use of it. But they don't have reliable opinions about what the linguistic meaning of S contributes to what S is used to assert or convey by competent speakers across all contexts, or about how much of what is communicated in particular cases is due to linguistic meaning.¹⁹

4.2 Semantic content vs. individual psychologies

The ability to use language requires that one's identification of the illocutionary contents of utterances match, to a sufficient degree, those of other speakers. How that match arises from the individual psychologies of speakers doesn't matter for determining whether they speak a common language. Even if, as I suspect, the required illocutionary match is compatible with individual differences in the information that is directly encoded psychologically vs. the information added inferentially, this needn't show that the *semantic contents* of sentences used by encoders are different from the *semantic contents* of those used by the inferers. Semantic contents can't be extracted from individual psychologies.²⁰

With this in mind, suppose some speaker directly psychologically encodes the bare semantic content of the 'Hesperus'-'Phosphorus' sentence (9) and works out the assertive contents of utterances of it in the manner suggested earlier. The fact that this *can be done* shows that the asserted content *isn't* a second meaning. We

^{18.} An independent argument for this is given in Soames (2009a).

^{19.} See Chapter 3 of Soames (2002). To put the point most simply, the assertive content of a use of S on a given occasion is roughly what the speaker means by S on that occasion; the semantic content is the abstract, least common denominator associated with S across contexts. It must be mastered independently by the language user in order to recognize correct assertive contents across contexts. See Soames (2002, 2008a, 2009a) for details.

^{20.} Semantic contents are always abstract in the sense of ft. 5. Semantic contents determined by users of the language are always part of the individuating conditions for the language, despite not being extractable from the psychology of an individual language user.

learned from Grice (1967) not to posit gratuitous new semantic contents to capture implicatures that can be explained by independently needed pragmatic principles governing linguistic exchanges. *The lesson is similar when it is assertive or other illocutionary contents that need to be captured*. Roughly, and with some qualifications, the semantic content of a sentence S is the minimal antecedently encoded information from which a well-informed, optimal reasoner *could* use rational pragmatic strategies to generate the illocutionary contents of uses of S across contexts.²¹ It is not required that speakers *do*, in fact, systematically derive these illocutionary contents from the minimal semantic contents needed for the job.

For example, some speakers *might* directly encode not only the bare singular proposition that predicates Venus of Venus, which is the genuine semantic content of (9), but also the assertive content carried by utterances of (9) in contexts in which speaker-hearers *understand* it (in the sense discussed earlier). These speakers might access the two encodings in different linguistic environments, making *ad hoc* adjustments when needed. With enough fiddling, the illocutionary contents of their utterances might match those of other speakers, allowing them to communicate with all and sundry, despite the fact that they treat the unambiguous sentence (9) as if it were ambiguous. If semantic contents were extractable from individual psychologies, these speakers might count as speaking dialects in which (9) was ambiguous. But they don't; semantic contents aren't extractable from individual psychologies. There is no such thing as *semantic*, as opposed to *communicative*, competence.

The degree of illocutionary match required for communicative competence is less than one might think. Some overlap in representational content is certainly required. But, as illustrated by Example (9), much illocutionary content is due to what one's community presupposes communicatively competent agents will know. Since such presuppositions depend on widely-shared interests and beliefs, big differences in illocutionary contents are compatible with identical semantic contents of sentences uttered. Take the term 'water', the semantic content of which is the kind H₂O. Because the stuff is ubiquitous, as well as necessary and useful to us, the widely presupposed information associated with the term is pretty rich. An agent A lacking this information will miss much of the illocutionary content of linguistic performances involving the word, even if A uses it to stand for the kind, H₂O.

^{21.} In certain cases, like 'I'm ready' and 'I'm finished, in which grammatically complete sentences are semantically incomplete, and so don't express propositions, their semantic contents may be understood as recipes for representational cognitive acts to be performed on contextually given constituents. See Bach (1994) and Soames Chapter 7 of (2010b).

Despite the problems A would have communicating with us, his words wouldn't thereby differ from ours in semantic content.

Examples of this sort illustrate a general point. Although semantic content plays a role in individuating languages spoken by populations, it doesn't come close to determining the illocutionary contents of utterances. Differences in perceptual modes of presentation extend the point still further. The blind and color-blind can use color words with the same semantic contents we do, despite their inability to extract information in normally expected ways from utterances like, 'My car is the red one parked across the street'. Merely possible agents who perceive the same colors we do using an entirely different sense, with different observation conditions, might speak a language semantically identical to ours, despite finding it very difficult to communicate with us.

Defects in the ability to recognize *recurrence* have even greater effects on communication without affecting semantic content. Imagine an agent who suffered from a generalized version of the malady exemplified by the character Peter in Kripke (1979) who suspects different uses the name 'Paderewski' designate different men – one a statesman and one a musician. Since the men are identical, the name is semantically unambiguous. Unfortunately, Peter can't reliably detect recurrences of the same name as presenting recurrences of the same content. If his problem were extended to all names, natural kind terms, and other directly referential expressions, his ability to reason and communicate would essentially collapse, with no effect on the semantic contents of his words.

One key reason semantic contents are not extractable from individual psychologies is that participation in a social practice of the right sort allows agents to speak a language that is partially individuated by the semantic contents of its expressions. The social practice allows individuals access to contents of names, natural kind terms, and other expressions that would otherwise be inaccessible to them. This pattern of communal use, not any aggregate of independent individual cognitions, determines semantic contents of the expressions in the language spoken by members of a community. It also plays a large role in determining the representational contents of predications individuals perform by linguistic means. Because of this, the representational contents of many propositions these individuals use language to entertain, assert, or believe are not extractable from their individual psychologies. Although cognitive propositions are psychological in the broad sense of being objects of attitudes to which the bearer makes his or her own cognitive contribution, the representational contents of those attitudes are often determined in part by contributions made by other, sometimes distant, language users. There is only one aspiring science that studies this, and it isn't psychology.

5. Conclusion

I will close with a word about predication, which is ubiquitous in semantic contents of sentences. Like traveling from A to B – which is an abstract act-type that is performed by performing a more specific act-type in the same family (driving, bicycling, jogging, or walking, from A to B) – predicating the property *being red*, say, of an object o is an abstract act-type that is performed by seeing o as red, visualizing it as red, remembering it as red, imagining it as red, or by *any other possible way of perceiving or cognizing it as red*. Since there is no end to these more specific modes of representational perception and cognition, the primitive notion of predication employed in linguistic semantics is not reducible to concepts in any more specialized science.

Even if *predication by humans* proved to be reducible, as it conceivably might, this wouldn't touch the linguistic description of English. When I consider the possibility of alien beings believing or asserting certain propositions that are expressible in English, I *am* ascribing certain predications to them, but I am *not* ascribing the fine-grained neural realizations of those predications characteristic of normal human beings. The purely representational cognitive acts that are semantic contents of some English sentences are no more limited to human agents than they are to any other possible agents. Though English is an abstract object brought into being by humans, it is available to all comers. The primary object of the study of realist semantics is the language, not its causal origin or its realization in particular populations of speakers.

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