

Précis
of
Beyond Rigidity

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Beyond Rigidity is divided into two parts. Part 1 is devoted to the semantics and pragmatics of names, and the sentences, including attitude ascriptions, that contain them. In part 2, the model developed in part 1 is extended to natural kind terms, and simple predicates in which they occur. The model is then used to explain the necessity of certain aposteriori statements containing such predicates.

Part 1 begins with a review of Kripke's arguments against traditional descriptive semantic analyses of proper names. Special attention is paid to the modal argument, which is strengthened to rule out analyses that treat names as synonymous with rigidified descriptions, or descriptions that are required to take wide scope when embedded under modal operators or predicates. I then try to fill an important gap in Kripke's original story by providing a positive account of the meaning and semantic content of names. The central question is *What do proper names contribute to the semantic contents of (i.e. the propositions semantically expressed by) sentences that contain them?*

The answer developed divides names into two classes, linguistically simple -- like *Pedro Martinez, Microsoft, and Seattle* -- and partially descriptive -- like *Mrs. Thatcher, Queen Elizabeth, Princeton University, Yankee Stadium, and Mt. Washington*. Linguistically simple names are purely Millian; their meanings (semantic contents) are their referents, and the semantic contents of sentences containing them are singular, Russellian propositions. By contrast, the semantic contents of partially descriptive names are complexes consisting of their referents, plus properties predicated of the referents. For example, the semantic content of *Princeton University* is, roughly, that of the description *the x: University x and x =y*, relative to an assignment of Princeton itself to 'y'. Like the propositions semantically expressed by sentences containing linguistically simple names, the propositions semantically expressed by

sentences containing partially descriptive names are Russellian. However, in these propositions, properties contributed by the name itself are predicated of its referent.

These claims are developed within a broader theory which, details aside, identifies the meaning of a nonindexical sentence S with a proposition asserted by utterances of S in all normal contexts. The key idea is that although such a sentence may be used to convey, and even assert, different propositions in different contexts, the semantic content of S is the common core of what is asserted and conveyed by utterances of it across contexts.¹ For example, in different conversational settings, (1a) may be used to assert and convey a variety of different propositions, including those semantically expressed by (1b-d).

- 1a. Peter Hempel once taught at Princeton University.
- b. The philosopher, Peter Hempel, once taught at Princeton University.
- c. My neighbor, Peter Hempel, once taught at Princeton University.
- d. Peter Hempel, the man standing over there, once taught a Princeton University.

In these cases, a speaker who assertively utters (1a) relies on the conversational background – including remarks previously made, plus the shared presuppositions of conversational participants -- to assert and convey propositions which are modest descriptive enrichments of the bare singular proposition that predicates of Mr. Hempel the property of having taught at Princeton. Since, in each case, this bare singular proposition is a trivial consequence of the descriptively enriched proposition that is asserted, it too counts as asserted, even though the enriched proposition may be the primary focus of speakers and hearers. Since the bare singular proposition is the common core of what is asserted by utterances of (1a) across all normal contexts, it is the semantic content of (or proposition semantically expressed by) (1a).

¹ This idea is revised and updated in Soames “Naming and Asserting,” in Z. Szabo, ed., Semantics vs. Pragmatics, (Oxford: Oxford University Press), 2004.

Similar points hold for attitude ascriptions in which (1a) is embedded under verbs like *say*, *assert*, and *believe*. Depending on the conversational context, an assertive utterance of (2a) may result in the assertion of the propositions semantically expressed by (2b), (2c), or (2d).

- 2a. Mary said / believed that Peter Hempel once taught at Princeton University.
- b. Mary said / believed that the philosopher, Peter Hempel, once taught at Princeton University.
- c. Mary said / believed that her neighbor, Peter Hempel, once taught at Princeton University.
- d. Mary said / believed that Peter Hempel, the man standing over there, once taught at Princeton University.

Nevertheless, the semantic content of (2a) describes Mary as saying / believing the bare singular proposition semantically expressed by (1a).

This distinction between unenriched semantic contents of sentences and the descriptively enriched propositions they may be used to assert or convey leads to a strategy for reconciling semantic Millianism with certain anti-Millian intuitions involving sentences which differ only in the substitution of one coreferential name for another.

- 3a. Peter Hempel was Carl Hempel
- b. Carl Hempel was Carl Hempel

Although (3a) and (3b) semantically express the same Russellian proposition, the descriptive enrichments of this proposition that these sentences would be used to assert or convey in different contexts are markedly different – hence, the intuition that they have different “cognitive values.” This point carries over to attitude ascriptions like (4a) and (4b), where different descriptive enrichments may lead to differences in the truth values of the propositions asserted by utterances of the sentences.

- 4a. Mary said / believed that Peter Hempel was Carl Hempel.
- b. Mary said / believed that Carl Hempel was Carl Hempel.

In this way, the pragmatic mechanism of descriptive enrichment provides both a sense in which synonymous sentences may sometimes correctly be seen as having different “cognitive values,” and a sense in which substitution of coreferential names in synonymous attitude ascriptions may sometimes fail to preserve truth value. In so doing, descriptive enrichment plays an important part in accommodating and explaining away certain intuitions that have often been taken to be problematic for the Millian.

Although this is the conclusion of part 1, I did not argue in the book, and I do not believe, that descriptive enrichment is a universal solvent for dissolving **all** anti-Millian intuitions. In particular, I intended it to augment, not replace, the Millian idea -- championed by Nathan Salmon -- of different ways of entertaining and believing the same proposition.² Since I did not make this clear enough in the book, I will say a word about it now.³

Fregeans like to point out that whenever we think about an object we think about it in, or as being, a certain way. Properly understood, this is something even Millians can accept. Consider the trivial Russellian proposition

- 5. < Identity, <Mr. Hempel, Mr. Hempel> >

that predicates the identity relation of Mr. Hempel and himself. Different ways of thinking of Mr. Hempel give rise to different ways of entertaining this proposition. Thinking about him simply as a

² Nathan Salmon, Frege's Puzzle, (Cambridge MA: MIT Press), 1986.

³ The point is obliquely touched on in footnote 10 to chapter 1, and in the surrounding text on pp. 10-12.

famous philosopher, or simply as my neighbor, I may entertain (5) by understanding (6a) or (6b), and reflecting on the propositions they semantically express.⁴

6a. My neighbor, Peter Hempel was my neighbor, Peter Hempel

6b. The famous philosopher, Carl Hempel was the famous philosopher, Carl Hempel.

Thinking about Mr. Hempel first one way and then the other, I may also entertain (5) by understanding (6c), and reflecting on the proposition it semantically expresses.

6c. My neighbor, Peter Hempel, was the famous philosopher, Carl Hempel.

Since each of these propositions is a descriptive enrichment of (5), in entertaining them I am also entertaining (5). It may even be that there is no way of entertaining (5) without entertaining (explicitly or implicitly) some descriptive enrichment of it. Since, in our example, the three different ways of entertaining the same unenriched, singular proposition carry with them distinct descriptive contents, their cognitive significance is different.

However, this does not mean that descriptive (plus Russellian) content is **all** there is to cognitive significance. For example, if I entertain (5) by understanding

6d. My neighbor, Carl Hempel was the famous philosopher, Peter Hempel

and reflecting on it, I may well entertain (5) in a way that differs from the way I entertain it when I understand (6c) -- even though there is no difference in descriptive or Russellian content in the two cases.⁵ If this is right, then although different ways of entertaining, or

⁴ In order to keep things simple, in discussing this example I ignore tense.

⁵ In my particular case, these ways of entertaining (5) are equivalent, since I recognize that my former neighbor, whom I knew as 'Peter Hempel', was the famous philosopher, known as 'Carl Hempel'. However, if I were ignorant of this, entertaining (5) via (6c) might differ significantly from entertaining it via (6d), even though the contents of, (propositions semantically expressed by) the two are the same.

believing, a singular proposition often are associated with different descriptive contents, there may be more to such ways than simply such contents, and it is plausible to think that some ways of entertaining and believing the same singular proposition do not differ in descriptive or Russellian content at all. For this reason, descriptive enrichment should be seen as part, but only part, of the explanation of anti-Millian intuitions about the cognitive significance of sentences containing names, and the truth values of related attitude ascriptions.⁶ (This point is taken up in more detail in my replies.)

Part 2 of Beyond Rigidity focuses on a gap in Kripke's discussion of natural kind terms, and statements of theoretical identification – like *Water is H₂O* -- involving them. According to Kripke, natural kind terms are rigid designators, and so true identities involving them must be necessary, if true – even though they are typically knowable only aposteriori. Although this claim is correct for certain cases in which the identity sentences have the form $\gamma = \delta$, a significant number of the “statements of theoretical identification” that Kripke is concerned with do not have this form -- including certain readings of the examples in (7) on which they express necessary aposteriori truths.

- 7a. Ice is H₂O
- b. Water vapor is H₂O
- c. Water is H₂O
- d. Lightning is electricity
- e. Light is a stream of photons.

⁶ Of course, what has been said here about (6a-d) could equally be said about pragmatic descriptive enrichments of utterances of the simpler sentences (3a,b), and attitude ascriptions containing them. Such enrichment occurs both when one uses sentences in one's private thought to entertain or come to believe propositions, and when uses sentences in conversation to assert and convey information.

- f. A material object is (pure) gold if and only if the only element contained therein is that with atomic number 79.
- g. For all bodies x and y , x is hotter than y if and only if x has a higher mean molecular kinetic energy than y .

In each of these cases, the identification statement is naturally represented as a universally quantified conditional or biconditional, along the lines of (8a), (8b), or (8c).

- 8a. $\forall x (Px \rightarrow Qx)$
- b. $\forall x (Px \leftrightarrow Qx)$
- c. $\forall x,y (Pxy \leftrightarrow Qxy)$

This presents a problem. Although the Kripkean examples do appear to be necessary, it is not clear how their necessity follows from their truth, plus the nature of the natural kind predicates they contain. If, as in the case of singular terms, rigidity is a matter of sameness of extension across world-states, then even natural kind predicates are not rigid – since the extension of such a predicate at w is the set of instances of the relevant kind at w , and this changes from world-state to world-state. Another possibility is that natural kind predicates are rigid in the sense that whenever they apply to an object o at a world-state w , they apply to o at every world-state in which o exists. However, there are two problems with this thought: (i) what follows from the fact that P and Q are rigid in this sense, plus the truth of (8b), is not the necessity of (8b), but only the truth of (9).

- 9. $\forall x \Box (Px \leftrightarrow Qx)$

(ii) a number of natural kind predicates – e.g. *is blue* and *is hotter than* – that figure in Kripkean necessary, a posteriori statements of theoretical identification are not rigid in the suggested sense. The conclusion drawn in Beyond Rigidity is that there is no natural extension of Kripke's notion of rigid designation applying to predicates that vindicates the

doctrine that statements of theoretical identification of the form (8) in which the predicates are rigid are necessary, if true.

There is, however, another aspect of Kripke's linguistic model which, in a number of cases, can be used to get the desired result. According to Kripke, natural kind terms and predicates are often introduced by reference-fixing stipulations involving a sample of individuals with which speakers are acquainted. With this in mind, suppose that the natural kind predicate P is introduced by stipulating that it is to apply (with respect to any time and world-state) to all and only those members of the unique natural kind k of the appropriate type (species, substance, etc.) to which all, or nearly all, members of a certain group of individuals (actually) belong. Suppose further that Q is a predicate associated with a kind k' of the same type (species, substance, etc.) as k , and that the extension of Q (at any time and world-state) is the set of instances of k' (at that time and state). Finally, suppose both that P has successfully been introduced in accord with its reference-fixing stipulation, and that (8b) is true. From the former, we conclude that nearly all members of the sample used to introduce P are members of one and only one kind k of the relevant type (species, substance, etc.). Using the latter – i.e. the truth of (8b) -- we deduce that all of these instances of k are also instances of k' . But since k was stipulated to be the only kind of the appropriate type (species, substance, etc.) that most members of the reference-fixing sample for P are instances of, it follows that $k = k'$, and hence that (8b) is necessary. In this way, the necessity of a number of Kripkean examples of the necessary a posteriori can be explained.

One such case is (10a), which contrasts with the necessary a priori (10b).

10. $\forall x (x \text{ is water iff } x \text{ is an instance of a substance molecules of which contain two hydrogen atoms and one oxygen atom})$
 - b. $\forall x (x \text{ is water iff } x \text{ is water})$

These sentences semantically express different propositions by virtue of the different semantic contents of the simple predicate *is water*, on the one hand, and the compound predicate in (10a), on the other. The semantic content of the latter is a complex property the constituents of which are the semantic contents of the words and phrases that make it up. The semantic content of *is water* is the property of being an instance of *k*, where *k* is the substance water. Since the substance differs from the complex property, the propositions semantically expressed by the two sentences differ, and knowing or believing the proposition expressed by (10b) is not sufficient for knowing or believing the proposition expressed by (10a).

For me, properties are the semantic contents of predicates. Hence they are constituents of propositions, which in turn are objects of the attitudes, as well as the semantic contents of sentences. Natural kinds – of which substances, species, and colors, are different types -- are more elusive. In Beyond Rigidity, I identified them with intensions, thought of as functions from world-states to extensions. However, this is more specific than needed. For my purposes, the metaphysical nature of kinds may be left open. Their important features are that they may have different instances at different world-states, that they are distinct from their instances, that a kind may exist in different world-states even if its extensions in those states don't overlap, and that if two kinds are different, then they differ in at least some possible instances.

This last feature reflects the fact that natural kinds are individuated less finely than the properties with which they may be necessarily coextensive -- which is important for the account of how the propositions expressed by (10a) and (10b) differ (even though both are necessary). How is it that the former is knowable only *a posteriori*? Complications aside, the answer goes something like this. To know the proposition expressed by (10a) is to know, of the manifest natural kind water, that it is so and so. In general, to have knowledge of an object, or a manifest kind, one must be acquainted with the object or the kind, or one must

stand in some chain of communication to those who are so acquainted. In the case of manifest kinds, the most basic way of being acquainted with, and believing things of, them is by being acquainted with, and believing things of, some of their instances. Since these beliefs are arrived at and justified empirically, knowledge of the kind to which these beliefs give rise is also empirical. In particular, my knowledge of the proposition expressed by (10a) rests on someone's knowing of certain instances of the kind that they are instances of it, and that their chemical composition is H₂O. Since this knowledge is aposteriori, (10a) is an example of the necessary aposteriori.

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