

Why Semantic Innocence?

by Graham Oppy

Many recent semantic theories have involved explicit acceptance of the following two theses:

1. DIRECT REFERENCE: The utterance of a simple sentence containing names or demonstratives normally expresses a "singular proposition" -- a proposition that contains as constituents the individuals referred to, and not any descriptions or conditions on them.

2. SEMANTIC INNOCENCE: The utterances of the embedded sentences in belief reports express just the propositions they would if not embedded, and these propositions are the contents of the ascribed beliefs.ⁱ

Such theories face a well-known difficulty: they seem to conflict with a third, and apparently obviously true, thesis:

3. OPACITY: Substitution of co-referring names and demonstratives in belief reports does not necessarily preserve the truth of those reports.

In order to meet this difficulty, two different strategies have been proposed.

A. Conventional Implicature: The first suggestion, adopted by Salmon and Soames, is that Opacity is false: despite appearances, the substitution of co-referring names and demonstratives in belief reports does preserve the truth of those reports. Now, of course, this suggestion leaves us with a puzzle, namely: why do we ordinarily suppose, and speak as if it were the case, that Opacity is true? Here, Salmon and Soames suggest that belief reports carry conventional (or generalised) implicatures which can change under substitution of co-referring embedded names and demonstratives.

Neither Soames nor Salmon has given any details about the nature of these implicatures. However, they do say that what gets implicated is information about the mode of presentation under which a singular proposition is grasped by a subject. Consequently, it seems hard to resist the suggestion that what they require is a compositional theory according to which implicated modes of presentation associated with sentences are composed of implicated modes of presentation associated with the words which make up those sentences.ⁱⁱ

But then the question naturally arises why it should not be supposed that these allegedly implicated modes of presentation are actually part of the semantic content of belief reports. Given that we need a theory which associates modes of presentation with words, won't all of this talk about implicated modes of presentation be just a pointless and unmotivated complication in the theory?

B. Unarticulated constituents: The second suggestion, adopted by Crimmins and Perry, is to deny that the theses DR, SI, and O are inconsistent. This response seems most unpromising. Consider the following quasi-logical principle which connects the notions of truth and semantic value:

4. FUNADAMENTAL SEMANTIC PRINCIPLE: If the substitution of expression E1 for expression E2 in sentence S (in context C) leads to a change in (literal) truth-value, then this change is due to the semantic values of E1 and E2 (in context C)

I take it that this is more or less a definition of what it is to be a semantic value: semantic values are whatever it is that words contribute to the determination of the literal truth-values of sentences in which they occur (upon particular occasions of utterance, or more generally, of tokening of those sentences). Moreover, I take it that it is obvious that 4. entails that if the substitution of a name or demonstrative E1 for a co-referring name or demonstrative E2 in a sentence S (in a context C) leads to a change in the literal truth-value of S, then it follows -- contrary to 1., or 2., or both -- that E1 and E2 do not have the same semantic content.

Not surprisingly, Crimmins and Perry are at least tacitly committed to the rejection of 4. In their words, their view is as follows:

It is very common in natural languages for a statement to exploit unarticulated constituents. When we consider the conditions under which such a statement is true, we find it expresses a proposition which has more constituents in it than can be traced to expressions in the sentence that was spoken. Each constituent of the content that is not itself the content of some expression in the sentence, is an unarticulated constituent of the content of the statement. ... The important principle to be learned is that a change in the wording can precipitate a change in propositional constituents, even when the words do not stand for constituents.ⁱⁱⁱ

In other words, the "important principle" to which Crimmins and Perry wish to draw attention is that the substitution of an expression E1 for an expression E2 in a sentence S (in a context C) can lead to a change in the semantic content of the sentence S (in the context C) even though E1 and E2 have exactly the same semantic content -- and this is the denial of my "fundamental semantic principle", 4.

In order to illustrate the notion of "unarticulated constituency", Crimmins and Perry consider the example of utterances of:

(1) It's raining.

As they note, if one utters (1), one will be understood to be claiming that it is raining at the time of one's utterance at some place which is indicated by features of the context of utterance. (Often this place will be the place of one's utterance, but it needn't be.) Moreover, in this case, it seems - at least prima facie

- that there is no expression in (1) which has the place in question as its content.

However, there are two points to note about this example. Firstly, this example does nothing to support the principle that a change in wording can precipitate a change in propositional content even when the words do not stand for the constituents. Rather, this example supports the principle that there can be a change in propositional constituents when there is no change in wording even in the case of sentences which contain no indexical expressions. (In other words: sentences can exhibit an indexicality which is not derived from the indexicality of their component expressions.)

Secondly, and more importantly, the genuine principle which can be derived from cases like (1) does nothing to support the account of belief reports which Crimmins and Perry wish to defend. In their view, the semantic contents of

- (2a) Scott believes that Hesperus rises in the morning.
and
(2b) Scott believes that Phosphorus rises in the morning.

in a given context C, may differ because the context contributes different unarticulated constituents to (2a) and (2b). But it is incredible to suppose that cases like (1) lend any credence to such a view. In the case of (1), there is no word which can plausibly be connected to the place which (allegedly) forms part of the semantic content of (1). However, in the case of (2a) and (2b) there are obvious candidate words -- namely, "Hesperus" and "Phosphorus" -- which could be semantically associated with the (allegedly) unarticulated constituents of the semantic contents of (2a) and (2b). So why suppose that these constituents of the semantic contents of (2a) and (2b) are not (parts of) the semantic contents of the words "Hesperus" and "Phosphorus"?

This mystery is deepened when we note that Crimmins and Perry claim that "the whole utterance, the context and the words uttered, are relevant to identifying the unarticulated constituent". (p.700, my emphasis) The point in the first example seemed to be that, since there is no word in (1) which could have the place in question as its semantic value, it is necessary to suppose that the place in question is an unarticulated semantic constituent; but now we are told that in (2a) and (2b) the words "Hesperus" and "Phosphorus" are "relevant to identifying" certain constituents of the semantic contents of (2a) and (2b), and yet that these words can't have those constituents as (parts of) their semantic values.

This time, I take it that the obvious question to ask is: Why not suppose that the semantic constituents which Crimmins and Perry claim are unarticulated semantic constituents in propositional attitude reports are actually (parts of) the semantic contents of the names and demonstratives which appear in those reports? Isn't all this talk of unarticulated constituents of belief reports a pointless and unmotivated complication in the theory?

So the crucial question for the two types of semantic theory which I have discussed centres on semantic innocence. Crimmins and Perry claim that it is "well-motivated by many considerations in the philosophy of language".^{iv} However, I cannot see that this is so; rather, it seems to me that it is completely unmotivated, and that, in virtue of the above considerations, it is obvious that semantic theory would be better off without it. The point of the rest of this note is to explain why this is so.^v

A useful way to approach this issue is to consider a distinction which has been drawn among various different components of the (allegedly) Fregean notion of sense. Among the senses (or components) of "sense" which can be distinguished, there are at least the following:

(i) Sense1: a purely conceptual or totally descriptive representation which all fully competent speakers associate with a singular term

(ii) Sense2: a set or cluster of properties (represented in a dossier or a mental file) which speakers (more or less) idiosyncratically associate with a singular term

(iii) Sense3: the mechanism by which the reference of a singular term is semantically determined

(iv) Sense4: the information value of a singular term

(v) Sense5: the semantic content of hyperintensional occurrences of a singular term (i.e. of occurrences of singular terms which are embedded within the scope of verbs of propositional attitude, etc.)

Moreover, it is useful to note that Frege's own view -- or, at least, the view which is most commonly attributed to Frege, and which is taken to be the standard target of "Direct Reference" (and "Semantically Innocent") theorists -- relies on a notion of sense which is derived from the identification of sense1, sense3, sense4 and sense5 (or perhaps sense2, sense3, sense4 and sense5).

Now, Frege's own view, as thus characterised, has been heavily criticised -- especially, and most famously, by Saul Kripke^{vi}. However, it is important to note that the two main points established in Naming and Necessity -- viz: (i) that there is no one notion which can plausibly be identified with sense1+ sense3+ sense4 + sense5; and (ii) that names in ordinary language have nothing like sense1 -- have nothing at all to do with the question whether referring terms in ordinary language have something other than their ordinary referent for sense5. Kripke's criticisms of Frege are arguments for DR, but say nothing at all about SI. (It should also be noted that when David Kaplan^{vii} introduced the term "direct

reference", what he had in mind was the thesis which denies that sense3 can plausibly be identified with sense1.)

More recently, there have been theorists -- e.g. Nathan Salmon, Scott Soames, and Crimmins and Perry -- who have contended that the only thing that sense5 can be is the referent of the singular term in question. However, as far as I can see, there is very little positive argument which has been given for this view. (I know of only three such arguments; I shall discuss them in a moment.) Rather, the main defence of this view has been that it is hard to see what else sense5 could be.

However, it is important point to note that both the conventional implicature view and the unarticulated constituent view provide the materials for a semantic theory in which the sense5 of a name or demonstrative is not simply the usual referent of that term.

Very briefly, then, a neo-Fregean reformulation of these views would claim that the semantic content of a sentence which instantiates the schema:

(CS) X #'s that Fa

-- where "#" is a propositional attitude verb, "F" is a simple, unstructured, non-empty predicate, and "a" is a non-empty name, indexical, or demonstrative -- has the form:

(CS*) <SOME M1:C1> <SOME M2:C2> < X #'s < <a, M1> <F, M2> > >

-- where a is the referent of "a", F is the property denoted by "F", X is the referent of "X", #'s is the relation denoted by "#'s", M1 and M2 are variables which range over mental files, and C1 and C2 are contextually supplied properties (conditions on mental files). Moreover, a sentence which instantiates (CS) is true provided (i) that X possesses mental files N1 and N2 which satisfy the conditions C1 and C2, and which are of a and F, respectively; and (ii) that, in virtue of (i), X stands in the #-relation to the state of affairs <a, F>. (I also believe that this theory can be extended to cover a wide range of other sentential constructions.)

I take it that it is clear that this view is very similar to the view that Crimmins and Perry defend -- but it does not require, and nor is it even compatible with, the acceptance of semantic innocence.

I mentioned earlier that I know of three positive arguments which have been advanced in defence of semantic innocence. These are (i) the appeal to intuition; (ii) the argument from free variables; and (iii) the argument for universal substitutivity. Since two of these arguments -- the argument from intuition and the argument for universal substitutivity -- are also arguments against opacity, these are not arguments which Crimmins and Perry could espouse (and, indeed, I suspect that they might well agree with the criticisms which I have to make of these arguments). However, it will be useful to begin with an examination of them.

1. The appeal to intuition: In his book, *Frege's Puzzle*^{viii}, Nathan Salmon goes to great lengths to proclaim the intuitive appeal of a trio of theories ("The Naive Theory", "The Singly Modified Naive Theory", "The Doubly Modified Naive Theory") which make essential use of semantic innocence. According to Salmon, the natural appeal of these theories constitutes good evidence of their (close approximation to the) truth. But in what does this "natural appeal" consist? It may be true that "The Naive Theory" is the first theory which one is likely to think of when one comes to theorise about the semantics of natural languages -- but this is not much of a proof of the value of the theory. Moreover, it is very important to note that it is not plausible to claim that "The Naive Theory" is the theory which we tacitly employ in our ordinary use of language; for -- at least prima facie -- our ordinary use of propositional attitude ascriptions does not conform to "The Naive Theory". But what other reason can there be to suppose that the "natural appeal" of these theories is a recommendation of them?

Even if we waive these worries, there is a further point to consider, viz: that it may be that "The Naive Theory" minus semantic innocence is just as appealing as -- or perhaps even more appealing than -- "The Naive Theory" alone. Of course, this question must be decided on the basis of consideration of alternatives. However, it seems to me that the only adjustment which my view requires to "The Naive Theory" -- as a result of the deletion of semantic innocence -- is a slight complication in the compositional structure of the language. But, on the credit side, my view gets the distribution of truth-values to propositional attitude ascriptions to accord with pre-theoretical intuition. Consequently, it seems that the appeal to intuition does nothing to support semantic innocence.

(Of course, Salmon and Soames have argued that "The Naive Theory" can accommodate our pre-theoretical intuitions about propositional attitude ascriptions. I would dispute this; however, it would require too much of a digression to take up this issue here.)

2. The argument from free variables: In the introduction to their anthological collection *Propositions and Attitudes*^{ix}, Salmon and Soames claim that semantic innocence is especially compelling in the case of at least one sort of referring expression, viz: free individual variables in open sentences. For example, consider the open sentence:

(3) x is pretty

What more is there for the variable "x" to contribute to the semantic content of (3) than its referent under an assignment -- i.e. how can "x" be anything other than semantically innocent?

This argument is rather puzzling -- for, of course, open sentences belong to formal languages, not to natural languages. So why should we suppose that this argument has any relevance for our present investigation? But, in any case, consider the open sentence:

(4) John believes that x is pretty.

Does it now seem right to ask what more there is for the variable "x" to contribute to the semantic content of (4) than its referent under an assignment? Surely to insist on this would be simply to beg the question.

Perhaps there is a further argument which can be made in support of the view that the occurrence of "x" in (4) must be semantically innocent. As Salmon notes in *Frege's Puzzle*, it may seem that the existence of sentences like:

(4a) $(\exists x)(x = \text{Ted Kennedy} \ \& \ \text{Tom is thinking that } x \text{ is tall})$

force the conclusion that the last occurrence of "x" in (4a) is semantically innocent. As Salmon puts it: "Once it is granted that this sentence is true, it follows by principles of formal semantics that its component open sentence

(4b) Tom is thinking that x is tall

must be true under the assignment of Ted Kennedy as the value of the variable "x". ... [But] the fundamental semantic characteristic of a variable "x" with an assigned value .. is that its only semantic value is its referent. There is nothing else for it to contribute to the semantic content of the sentences in which it figures." (p.4)

This argument can be -- and in my opinion should be -- resisted. A natural first thought is that in a sentence like (4), the variable "x" needs to contribute both a sense and a referent to the semantic content of the sentence. In order to protect this intuition in the face of examples like (4a), what we need to do is to insist that each occurrence of a variable will have a certain degree of embedding within the scope of propositional attitude operators. (So, in (4a), the last occurrence of "x" is of degree one; whereas in the sentence:

(4c) Mary believes that Tom is thinking that x is tall

the last occurrence of "x" has degree two. And so on.) Then we can insist that each occurrence of a variable must have a content which is appropriate to its degree of embedding within the scope of propositional attitude operators. Of course, where "the same variable" appears several times in a sentence -- e.g. in

(4d) $(x = \text{Ted Kennedy} \ \& \ \text{Tom is thinking that } x \text{ is tall})$

-- it will always get assigned the same object on any assignment; however, what else gets assigned to it depends upon its degree of embedding in propositional attitude operators. (Since for any finite sentence, there will be a maximum degree of embedding for any variable, we can also say that the entity which gets assigned to the variable is just the entity which gets assigned to it on its maximum degree of embedding; and, moreover, we can also note that the entities which get assigned to occurrences of the variable where it has less than its maximum degree of embedding are recursively

recoverable parts of the entity which get assigned to the variable simpliciter.)

(A pseudo-technical device which might be introduced in order to facilitate use of this theory is that of subscripting occurrences of variables with numerals which indicate the level of the semantic contents which can replace those occurrences. Adopting this suggestion, (4a) would be more perspicuously represented by:

(4e) ($\$x$) ($x_0 = \text{Ted Kennedy \& Tom}$ is thinking that x_1 is tall)

One sort of example which might seem to make difficulties for this suggestion is sentences like:

(4f) ($\$x$) (Mary believes, and John believes that Mary believes, that x is tall).

Here, we need to regiment. However, I do not see any great cost in the requirement that (4f) must be represented as:

(4g) ($\$x$) (Mary believes that x_1 is tall, and John believes that Mary believes that x_2 is tall).

I do not know of any other difficulties which face this suggestion.)

A likely objection is that this is not good ol' objectual quantification. Well, it is and it isn't. It is objectual quantification, because, in every case, quantifiers take objects as values. But it isn't merely objectual quantification, because, in many cases, the quantifiers also take other entities (apart from objects) as values. I can see no intuitive objection to this modified version of objectual quantification (though I expect that others may see it differently!). Moreover, I hope that it is clear that -- in the absence of any counter-argument -- there is a perfectly adequate response to the argument from free variables here.

Finally, it should be noted that it is not even clear that there is an argument from the nature of free variables in simple sentences like (3) to the conclusion that a theory which identifies sense₁ and sense₃ is in error. (In other words -- and contrary to what is often supposed -- it is not even clear that an argument from the nature of free variables provides good support for 1. above.) For it seems that an Orthodox Fregean could claim that the sense₁ of a free individual variable -- i.e. the description which must be known by any competent user of an open sentence containing that free variable -- is embedded in the assignment function. Without the assignment function, (3) has no semantic content -- so there is a sense in which the assignment function is "part of the meaning of (3)". Of course, this point connects to the initial observation that there are no free individual variables in natural languages.

I conclude that the argument from free variables is unpersuasive.

3. The argument for universal substitutivity: In his paper "Direct Reference, Propositional Attitudes, And Semantic Content"^x, Scott Soames suggests that there are sound arguments involving indexicals and demonstratives which directly support the thesis of semantic innocence. For example, suppose that:

(5) A believes that Ruth Barcan is F

is true with respect to a context c1. Then:

(6) A believes that I am F

will be true in a closely related context c2 in which Ruth Barcan (= Ruth Marcus) is the agent. (We suppose, for the sake of the example, that "F" does not contain first-person pronouns or other related devices.) Suppose that the audience in the context c2 is someone who knows the agent as "Ruth Marcus". Then it seems that there will be a further closely related context c3 in which

(7) A believes that Ruth Marcus is F

is true. "Thus, substitution of one co-referential name or indexical for another preserves truth-value. Since there seems to be nothing special about this example, we have a general argument for [substitutivity as licensed by semantic innocence]." (p.67.)

The problem with this argument is that c1 is not c3: for what needs to be shown, in order to justify semantic innocence, is that -- with no other contextual changes of any sort -- co-referential names, etc. can be substituted in PA-ascriptions without changing the associated semantic content. For all that we have been told, (7) might well have been false in c1, and so the argument is unsuccessful.

Since these are all the positive arguments for semantic innocence with which I am familiar, I conclude that it is just not true that semantic innocence is well-motivated by many -- nor, indeed, by any -- considerations in the philosophy of language. However, since -- as I mentioned earlier -- Crimmins and Perry also reject at least two of the above arguments, there is a further puzzle which now arises, viz: how can it be that Crimmins and Perry claim that semantic innocence is well-motivated by many considerations in the philosophy of language?

The only suggestion that I can offer is that they suppose that the parenthetical remark which they make in the formulation of the principles of semantic innocence and direct reference -- viz: that the semantic contents of (hyperintensional) occurrences of certain singular terms do not involve "any descriptions of or conditions on [the individuals referred to by those singular terms]" -- actually gives the whole content of those principles. That is, it seems that they suppose that there are only two alternatives for the semantic contents of hyperintensional occurrences of certain singular terms: namely (i) the referents of those terms; and (ii) descriptions of and conditions on the referents of those terms. But suppose that the principle of semantic innocence were stated as follows:

SEMANTIC INNOCENCE': The utterances of the embedded sentences in belief reports express just the propositions they would if not embedded, and these propositions are the contents of the ascribed beliefs. That is, the contents of hyperintensional occurrences of singular terms are just the referents of those terms, and not any descriptions of, or conditions on, notions (or mental files) of those referents.

What possible reason could Crimmins and Perry have to accept this principle? (Note also that it may be that Crimmins and Perry have supposed that the many arguments which have been advanced against the identification of sense1 with sense3 -- i.e. those arguments which have been advanced against descriptive theories of reference -- somehow support the principle of semantic innocence. But, as I have already suggested, this supposition is mistaken; there is no (obvious) connection between sense3 and sense5.)

There is one final consideration which might be offered in defence of the view of Crimmins and Perry. In their view, the sort of account which I have suggested won't be able to handle certain sorts of belief reports, viz: "those with content sentences containing devices of underarticulation, and those with no content sentences at all, but which instead are completed with the likes of "what you said", "the same thing", and "Church's Thesis"." (p.710) However, I don't see the problem.

In the first sort of case, if there really are devices of underarticulation, then both objects and what I have called "senses" could be subject to underarticulation. So, for example, the content of:

(8) John believes that it's raining

could be:

<John, Bel, < < it's raining, [it's raining]c > < t, [t]c > < place, [place]c > > >

where [place]c is a contextually supplied condition on the notion of that place which is an unarticulated constituent of the content of (8), and where [place]c is itself an unarticulated constituent of that content. No problem.

What about cases like "what you said", etc? Well, consider a situation in which I utter:

(9) Hesperus is visible in the morning

and then you say:

(10) John believes what you said.

I take it that "what you said" should be taken to be a sort of anaphoric device, and that (10) should be taken to have the content:

< John Bel < <Hesperus, [Hesperus]c > < visible in the morning, [visible in the morning]c > > >

Again, no problem. (Or at least, so it seems. If there is a problem, it remains to be demonstrated.)

I conclude that there is no reason to adopt semantic innocence. Moreover, I note that John Perry has had trouble with semantic innocence before^{xi}. I suggest that perhaps it is time he gave it up.
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ⁱSee, for example: Nathan Salmon, *Frege's Puzzle*, Cambridge, MIT Press, 1986; Scott Soames, 'Direct Reference, Propositional Attitudes, And Semantic Content', *Philosophical Topics*, 1987; and Mark Crimmins and John Perry, 'The Prince And The Phone-Booth: Reporting Puzzling Beliefs', *The Journal Of Philosophy*, 1989.

ⁱⁱSalmon has noted that he has not explicitly committed himself to such a view -- cf. 'Illogical Belief', In James Tomberlin (ed.) *Philosophical Perspectives* 3, 1989, pp.243-285, footnote 26 -- but he has nowhere canvassed possible alternatives to it. Moreover, it seems to me that the standard reasons for supposing that semantic theories ought to be compositional -- e.g. facts about the 'productivity' of speakers -- are also reasons for supposing that Salmon's account of the implicatures associated with propositional attitude ascriptions must be compositional.

ⁱⁱⁱ *ibid.*, pp.699-700

^{iv} *ibid.*, pp.686

^vI should note that some people will prefer to reject DR, while others -- including Orthodox Fregeans -- will wish to reject both DR and SI. Readers who do not share my conviction that DR is correct should read what follows as support for a conditional thesis, viz: Given that one adopts DR, one ought then to reject SI.

^{vi} cf. *Naming and Necessity*, second edition, Basil Blackwell, Oxford, 1980.

^{vii} cf. "Demonstratives" in J. Almog, J. Perry, and H. Wettstein (eds.) *Themes From Kaplan* Oxford University Press, New York, 1988.

^{viii} M.I.T. Press, Cambridge, Mass. 1986.

^{ix} Oxford University Press, Oxford, 1988.

^x *Philosophical Topics*, Vol. 15, Spring 1987, pp.47-87.

^{xi} cf. Scott Soames "Lost Innocence", *Linguistics and Philosophy*, Vol.18, February 1985, pp.59-72.

^{xii} This paper is based on my unpublished doctoral dissertation, 'Attitude Problems', Princeton, 1990. I would like to thank Gil Harman, David Lewis, Scott Soames, Bas van Fraassen, Richard Holton, Steve Rieber, Allen Hazen, Len Goddard, Kai-Yee Wong, Frank Jackson, Phillip Pettit and the editors and reviewers of the AJP.