Propositional Attitudes

Talking about people's states of mind is difficult for various reasons. The most interesting from the linguistic point of view is the problem of the identity of meaning between the clause uttered by a reporter about someone's state of mind and the sentence that the holder of this state has, or would, use to express it. Such reports are normally composed of a *that*-clause expressing a proposition towards which the attitude is held, and an assignment of an attitude such as belief, doubt, or fear to a person as in (1):

(1) Tom believes that Peter Carey is a great novelist.

For the reason to do with this standard form, conceived of as expressing a relation between a person and a proposition, Bertrand Russell called such states propositional attitudes and the term has remained in common philosophical and linguistic parlance ever since, in spite of the fact that the problem of the *object* of propositional attitudes (variously regarded as a proposition, sentence, thought, constituents of a proposition, etc) is still widely disputed in the literature.

Reporting on people's beliefs gives rise both to theoretical and practical problems. In other words, it is interesting not only from the semantic and pragmatic point of view, but also from the perspective of an average language user who wishes to make an accurate statement. For example, if the believer utters (2), the reporter may have doubts whether the believer understands the statement or merely repeats a half-understood astronomical statement. Alternatively, the reporter may not be in a position to report on the belief faithfully and with an understanding due to not knowing what the statement is about.

(2) Red giants become white dwarfs.

These discrepancies between the knowledge base of the believer and that of the reporter, as well as the practical difficulty with assessing how much the believer actually knows about the referent, lead to common problems with belief ascription. Another problematic case is when the believer is referentially mistaken and uses a name or description that does not refer to the intended individual. In (3), the believer may have, for example, Pablo Picasso, a Spanish painter, in mind:

(3) The best Italian painter painted this picture.

Moreover, belief can also be ascribed on the basis of non-linguistic evidence. (4) can be uttered of someone carrying an umbrella on a sunny day:

(4) He believes it is going to rain.

In practice, the reporter assumes that the believer has a clear idea what or who he/she is talking about. However, if there are reasons for doubt, the reporter has to assess all the relevant contextual information before making a report in order to make the report valid.

In the philosophy of language, it has been widely assumed that propositional attitudes are ambiguous between the *transparent* and the *opaque* reading. Sentence (5) has two semantic interpretations that correspond to the wide and narrow scope of the existential quantifier respectively:

(5) Tom believes that the king of France is bald.

(5a) $\exists x\ (KoF(x)\ \&\ \forall y\ (KoF(y) \supset y = x)\ \&\ Bel_T\ Bald\ (x))$

(5b) $Bel_T\ \exists x\ (KoF(x)\ \&\ \forall y\ (KoF(y) \supset y = x)\ \&\ Bald\ (x))$

'Bel_T' stands for 'Tom believes that' and 'KoF' for 'the king of France' (see also Russell 1905, 1919; Quine 1956; Neale 1990). When the reporter means (5a) by (5), he/she ascribes to Tom a belief in a particular, known individual (*de re*). By using (5) to mean (5b), the reporter says that Tom believes in the existence of the king of France and ascribes to him a certain property (*de dicto*). The reading in (5a) is transparent, and in (5b) opaque, for the reasons to become clear in what follows. However, these logical forms cannot express the whole problem with belief ascription. When Tom is referentially mistaken and the reporter is aware of it, he/she may substititute a correct description or name as in (5c), where 'KoS' stands for 'the king of Sweden':

(5c) $\exists x\ (KoS(x)\ \&\ \forall y\ (KoS(y) \supset y = x)\ \&\ Bel_T\ Bald\ (x))$

So, there does not seem to be a strict ambiguity here from the perspective of utterance interpretation. Neither do the logical forms above capture the extent of the problem with the varieties of *de re* and *de dicto* beliefs and *de re* and *de dicto* (roughly corresponding to transparent and opaque) reports. The interpretations of (5) have to resort to pragmatics. But before venturing into pragmatic processing, let us focus on the logical form which is the starting point for the application of such processes.

The *de re/de dicto* distinction has to be kept apart from the distinction between *factive* and *non-factive* attitudes and factive and non-factive attitude verbs. Factives are verbs which give rise to a proposition the truth of which entails that the proposition expressed by the *that*-clause is itself true. For example, 'A knows that *p*' entails that *p* is true. Non-factives, such as 'believe' or 'think', do not require that the embedded proposition be true. Moreover, verbs such as 'wish' or 'imagine' are sometimes said to belong to a third category, called *counterfactives* (or *contrafactives*) in that they can be construed as entailing the falsity of the embedded proposition. Non-factives, and in particular the verb 'believe', have been the most widely studied of all. This is caused by the fact that *de dicto* non-factive reports do not, by definition, carry the truth entailment of the embedded proposition and hence express various degrees of detachment from the proposition.

That-clauses in belief reports pose semantic problems because their content has to be evaluated in an *intensional* (non-extensional), propositional attitude context. In such contexts, substituting a coreferential term in the embedded clause may lead to a change of the truth value. This problem has traditionally been discussed in the literature as the non-applicability of *Leibniz's Law*. Leibniz's Law states that two things are identical with each other if they are substitutable preserving the truth of the sentence. In Leibniz's formulation, quoted after Frege, '*Eadem sunt, quae sibi mutuo substitui possunt, salva veritate*'. This law also has a more general claim, dubbed in the literature the *identity of indiscernibles*: if things have all properties in common, then they are identical, they are one thing. Now, when we apply this law to belief reports, we talk about substitutivity of terms or expressions rather than 'things'. To rephrase the law, if all that can be said of one thing can be said of another, then it is said about one thing in two guises. In addition, Leibniz's Law has been applied to attitude contexts in a more recent version which is in fact due to Quine and which states that if things are identical (i.e., they are one), then they have all properties in common. This law is dubbed the *indiscernibility of identicals*. In other words, if we take one object described in two different ways, whatever can be said about it under one guise, can also be said about it under the other guise. In other words again, if A and B are identical, then anything that is true of A is also true of B:

$$\forall x \forall y\, (x = y \supset (F(x) \supset F(y)))$$

In talking about attitudes, we shall follow the common practice and adopt this version of the law, allowing for its extension to the indiscernibility of identicals, remembering that this was not Leibniz's original intent.

Belief reports are thus non-extensional (intensional) contexts in which Leibniz's law does not hold. However, they are also sometimes called *hyperintensional* in that expressions that can be substituted for one another in other intensional (e.g. modal) contexts, cannot always be substituted in attitude contexts. Such expressions have the same intension, and yet are not substitutable. For example, coreferential proper names are substitutable in modal contexts, but not in attitude context. Alternatively, instead of the category of hyperintensionality, we can distinguish degrees to which the guise under which a belief is held contributes to the semantics, as it is developed below.

Now, coming back to (5a) and (5b), we can see that Leibniz's Law of substitutivity *salva veritate* does not work on the *opaque*, (5b) reading. In (5a), on the contrary, the discourse is about a particular, known individual and this reading is *transparent to substitutions* of coreferential terms. In order to preserve compositional semantics, it has been suggested, among others, that one has to establish under what *mode of presentation* (sense, guise) the object referred to is known to the believer. For instance, (6) and (7) may or may not express the same proposition (i.e. may or may not have the same informational content), depending on the modes of presentation that belong to the believer's knowledge base:

(6) Bernard J. Ortcutt is an honest citizen.

(7) The man in the brown hat is an honest citizen.

The speaker of (6) may not consent to believing (7) because he/she may not know that the description in (7) refers to the same individual. So, the core point in discussing attitude reports is to agree on what reference is in such non-extensional contexts and how to use this notion of reference in the semantics. The failure of substitutivity of coreferential expressions suggests that we have to either abandon compositional semantics or incorporate contextual information in semantic theory. Various solutions have been suggested. According to Frege (1892), the role of reference in intensional contexts is taken by sense, i.e. by an objective equivalent of a mode of presentation. Next, the *that*-clause can be taken to refer to a sentence rather than a proposition (see e.g. Bach 1997). Quine (1956) postulated degrees of intensions for quantifying into such contexts. More recently, there have been various suggestions to incorporate the mode of presentation into the logical form, stemming out of the hidden-indexical theory (Schiffer 1992, 1996), developed also in Crimmins and Perry's (1989) and Crimmins's (1992) 'notion', which is an unarticulated constituent of the proposition. These are sometimes understood as a covert 'so' as in 'A so-believes that…' or 'so-labelled' as in 'A believes that B, so-labelled, Φs' (Forbes 1990, 1997). Jaszczolt

(1999, 2000) proposes degrees of semantic significance of the mode of presentation, depending on the default- or non-default status of the interpretation of the attitude report. Constructive criticism of the Fregean direction is also ample in the literature (Clapp 1995, 2000; Salmon 1986; Donnellan 1989; Soames 1987; Recanati 1993). On the other end of the spectrum, the so-called neo-Russellian approaches (e.g. Salmon 1986; Soames 1987, 1995) deny the contribution of the mode of presentation to the semantics of attitude reports. Instead, the semantic content of a sentence is a *singular proposition*. Richard (1990, 1995) suggests that the verb 'believe' is indexical, thereby making the verb contextually sensitive. Larson and Ludlow (1993) propose composites of linguistic forms and extra-linguistic objects called by them *interpreted logical forms*. In this way they capture the relevance of the actual expression that is used to refer in the sentence. Stanley (2000) suggests that all the contextual factors that affect truth conditions can be traced to the elements in the syntactic structure, and therefore there are no unarticulated constituents. Finally, if we extend the category of attitude verbs to include 'say' followed by a *that*-clause, there is Davidson's (1968-9) paratactic account where a demonstrative 'that' refers to an utterance. Davidson advocates a semantic innocence view according to which an expression in an attitude report contributes exactly what it does in non-intensional contexts.

Now, neo-Russellians respect semantic innocence but deny semantic significance of modes of presentation. Intuitively, what they say is that although substitutivity in attitude reports does not *seem* to hold, *in fact* it does: substitution does not affect the truth value. On the other hand, hidden-indexical theorists can only preserve semantic innocence when they give up compositionality. Hidden indices, standing for modes of presentation, have no counterpart in grammar and hence the meaning becomes non-compositional. Be that as it may, some form of mode of presentation is indispensable in talking about propositional attitudes and attitude reports. Even if we attempt to do without it in semantic representation, it appears in pragmatics. Or, what is more common-sensically plausible, it comes from pragmatics but intrudes in the semantic representation of attitude reports. The degree of the contribution of this mode of presentation to the proposition expressed is the core of the ongoing discussions on the matter. In Schiffer's hidden-indexical theory mentioned above, belief is a three-place relation among the believer, the proposition whose structure can be taken into account, and a mode of presentation under which the person believes this proposition. In (9), Φ*m is a type of mode of presentation determined by the context, and <> indicate the intensions:

(8) Ralph believes that Fido is a dog.

(9) (∃m) (Φ*m & Bel (Ralph, <Fido, doghood>, m))

(see Schiffer 1992: 503). This opens up new problems: (i) what information falls under Φ*m; (ii) where does it come from; (iii) why is Φ*m conceived of as a constituent of the logical form of sentences. Here two general answers are available: (a) contextual information included in the mode of presentation can contribute to the propositional form of an utterance (contextualism) or (b) contextual information functions separately from the proposition, as implicatures (anti-contextualism, Recanati 1994). Although it is commonly accepted that this contextual information is needed in reporting on beliefs, the theoretical question remains as to whether it contributes to the truth conditional representation. It seems that one plausible solution is that although modes of presentation as such may be too detailed, too finely-grained for such semantic purposes, *some* contextual information that pertains to the identification of the belief may be semantically relevant (see Jaszczolt 2000). To conclude, two important issues still remain in the focus of discussion: (i) does pragmatic information figure in specifying what the speaker believes, and if so, to what extent; (ii) how to draw the boundary between the semantic representation and the pragmatic information. Both questions are directly related to the issue of the semantics/pragmatics interface and the existence of salient, default interpretations (see *Default Semantics*).

Now, it has to be pointed out that the ambiguity of reading of attitude reports is engendered even by proper names and even where substitutivity is not the case. In the puzzle presented by Kripke (1979), the problem of reporting on beliefs involves the principle of translation (if a sentence in one language is true, its translation into another language is also true) and the principle of disquotation (if a speaker assents to 'p', then he believes that p). Pierre, a speaker of French who lives in France, holds a belief about a certain city unknown to him, called Londres, that it is pretty. His belief, uttered in (10), can be reported on as in (11):

(10) Londres est jolie.

(11) Pierre believes that London is pretty.

Next, Pierre moves to London and acquires a belief expressed by him in (12), while still holding (10):

(12) London is not pretty.

Kripke does not offer a solution. But it seems that in order to avoid contradiction, we have to accept that proper names have some semantically significant mode of presentation which comes with the belief. Or, we have to 'anchor' the proper names to real or imagined objects, as was done in Discourse Representation Theory (Asher 1986; Kamp 1990). All in all, the content and the semantic status of the mode of presentation seem to be the key to the puzzles surrounding attitude ascription.

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Propositional Attitudes

Abstract

The article introduces the semantic problem of reporting on mental attitudes in the form *A believes that B* Φ. It covers the problem of substitutivity of coreferential expressions, the application of Leibniz's Law, the puzzle of disquotation and translation, and discusses briefly the seminal approaches to propositional attitude ascription, both of the Russellian and the Fregean orientation. It also introduces the relevant distinctions such as transparent/opaque, *de re/de dicto*, intensional/extensional, factive/nonfactive.

Biography

K.M. Jaszczolt is senior lecturer in semantics and pragmatics at the University of Cambridge and fellow of Newnham College, Cambridge. She also taught linguistics at the universities of Oxford, Sussex and Brighton. She is managing editor of the book series *Current Research in the Semantics/Pragmatics Interface* (CRiSPI), member of the Editorial Board of *Journal of Pragmatics* and the book series *Studies in Pragmatics*, all published by Elsevier Science. In 1992 she completed her DPhil dissertation *Belief Sentences and the Semantics of Propositional Attitudes* at the University of Oxford. Her recent research concerns developing the theory of utterance interpretation called *Default Semantics* (book in progress, forthcoming from OUP). Her recent publications include books *Discourse, Beliefs and Intentions: Semantic Defaults and Propositional Attitude Ascription*, 1999, Elsevier Science, *Semantics and Pragmatics: Meaning in Language and Discourse*, 2002, Longman, and edited books *The Pragmatics of Propositional Attitude Reports*, 2000, Elsevier Science, and *Meaning Through Language Contrast* (2 vols, co-edited), 2003, J. Benjamins. She also published a number of articles on the semantics and pragmatics of referring expressions, propositional attitudes, and presupposition, among others in *Journal of Pragmatics, Theoretical Linguistics, Journal of Literary Semantics*, and in edited collections.