

## On pragmatic intrusion into semantic content

The main empirical aim of this paper is to establish a distinction among types of ‘implicatures’ - between those that can enter into semantic content and those which would normally not enter into content. The distinction is motivated by a somewhat novel account of communication which uses elements of situation theory and relevance theory.

At the heart of Grice’s pragmatic theory is a technical notion of ‘saying’. Non-conventionally determined components of the content of an utterance are determined as following from the speaker saying what she says in a context where the CP and maxims are presupposed. For Grice’s theory to coherently function as he proposed it, ‘what is said’ ought to be equivalently definable as what is conventionally meant (minus conventional implicatures) or as the logical, semantic content of the utterance. However, as many have observed, the logical, semantic content of an utterance often seems to involve non-conventional components. (1)a non-conventionally implies that the ostracisation took place after, and as a result of, the inebriation. But the implications of temporal order and causality seem to have become part of the semantic interpretation of the nuclear scope of the adverbial quantifiers in (1)b (hence the lack of contradictoriness):

- (1)    a.     At the party, I got drunk and no one talked to me.  
      b.     It’s not true that, at parties, I always get drunk and no one talks to me; it’s that no one talks to me and I get drunk.

As has long been noted (by Wilson, Kamp, Kempson i.a.) this ‘pragmatic intrusion’ has serious consequences not just for pragmatic theories but also for semantic theories - for what are we to say about the semantic rules which determine the interpretation of sentences containing operators and connectives which seemingly allow non-conventional content within their scope? Among the many responses to this issue are the extremes of denial that there is intrusion (Stanley 2000, King & Stanley 2003) and denial that intrusion is a problem (Kamp, Sperber & Wilson). The latter school tend to view conventional, linguistic meaning as yielding only underspecified representations which are ‘developed’ in certain ways to yield something which would give us the semantic content. More conservatively, SDRT (see Asher 1999) posits a circumscribed ‘primary’ pragmatic phase which defeasibly determines a semantic content which may be subject to revision in the secondary phase, where the global context involving the speaker’s intentions is considered. Carston (2002) proposes just one global phase of pragmatic processing involving a ‘satisficing’ of what is explicit and implicit. According to Carston, any kind of implicature could, in principle, intrude into content. I have elsewhere argued that both of these positions are problematic for various reasons.

Briefly, it seems clear that much semantic content incorporates elements derived by considering speaker’s intentions - in particular, specific indefinites (see Stalnaker 1998, Kamp & Bende-Farkas 2001). Also, it is unclear that a coherence-based SDRT could account for all pragmatic intrusions - such as in referential uses of definites, metonyms and more creative cases.

While I agree with Carston that all aspects of interpretation are computed as a matter of determining speakers’ intentions, I have argued that there is nothing in her proposal to say what should or should not go into the semantic content of an utterance.

Both Asher & Carston have basically pragmatic inferential accounts of implicit/explicit. By contrast Chierchia’s (2001) grammatical account of intrusion builds on the neo-Gricean notion of ‘defaultness’ for GCIs positing the local inclusion of GCIs into the linguistic semantic computation. This is problematic if one attempts to extend it beyond the scalar cases Chierchia considers since the so-called ‘I-implicatures’ (as in (1) above) do not have exclusive triggers (conjunction and juxtaposition do not always have these implications). More seriously, so it will be argued below, genuine scalar implicatures never really intrude into content.

It will be proposed that intuitions about what is, or can be, part of semantic content derive from how

the acts are perceived. In particular, it will be proposed that our intuitions distinguish between what a speaker directly indicates and what she indicates indirectly. The former notion is the source of intuitions about the semantic content of an utterance. Here we will give a brief sketch of the main ideas before making some suggestions about what may not intrude into content.

The proposal draws on the two basic ideas of S&W's relevance theory. One is that, at it's most basic, a communicative act is perceived as a matter of one agent drawing another agent's attention to something. The other idea is that communicator and addressee co-ordinate on what the attention is being drawn to by assuming that the natural response to an act of ostension is to seek out a source of relevance in the direction indicated. We assume that the objects of attention are situations. In situation theory, communicative language use is a matter of providing a characterisation of the type of the situation being indicated. The proposal is that, conventionally, the use of language in a communicative act is part of the ostensive gesture. The gesture provides more or less help in narrowing down what is being indicated. Thus what is indicated by an utterance is constrained, but not fully determined, by the type of situation determined compositionally from the sentence meaning. So, in a sense, the meaning of a sentential node will always underdetermine the content of the sentence's interpretation - rather like the semantic rule for 'we' only says that the collection referred to includes the speaker.

It is interesting to consider the fact that, when people perform ostensive acts, they often simultaneously display how they relate to what they indicate. Saying, "My pet bird has died", the speaker may also draw the audience's attention to how she feels about this. She may also say, "My pet bird, sadly, has died". Parentheticals do not contribute to semantic content, but guide the audience toward what is being indirectly indicated. Indirectly indicated situations involve the speaker and the situation directly indicated and they carry information about how the speaker relates to an indicated situation. Of the many ways in which speakers relate to what they indicate directly, speaker's reasons and grounds are often of interest. Grice's (1975) discusses "He is an Englishman. He is, therefore, brave." as a matter of two ground-floor speech acts (saying that he is English and that he is brave) and an indirect indication that the grounds for the second speech act involve some constraint linking being English and brave. We argue that all genuine 'implicatures' be modelled on these lines. The example of my uttering 'I have a cold' to a suggestion of a swimming expedition is a case in point. A situation directly indicated will carry much information for the audience, depending on what constraints they are attuned to. Which of this information they exploit depends on their own interests. However, on some occasions, it will become necessary that the audience be aware of certain constraints linking the type of the situation indicated with other situation types since these constraints may figure prominently in what is indirectly indicated. In the case at hand, I am directly indicating a situation in which I have a cold and indirectly indicating that this fact serves as a reason for my turning down the offer. In this case, the act of indicating this latter situation (involving the directly indicated situation and the speaker) constitutes something like an indirect speech act of excusing oneself. To recognise this act, one has to make the inference about how the directly indicated situation would serve as a reason for refusal. Our intuitions that the information that I cannot go swimming because I have a cold is not contained in the semantic content of the utterance stem from the fact that this information is contained in what is indirectly communicated only and is not carried by what is directly indicated.

Following Stalnaker (1998), we can say that the semantic content of the utterance of the first sentence in "A man walked. He whistled." is merely existential; but the speaker indirectly indicates something of her grounds for the utterance, involving the individual she has in mind. Thus, while the speaker's referent is not in the situation directly indicated, he is in what is indicated overall and hence available for future anaphoric reference. We argue that where information would stem from speakers' grounds, then it never intrudes into direct content for reasons of redundancy - this is why the speaker's referent does not figure in proposition expressed by the utterance of the first sentence.

At least some scalar implicatures arise as a matter of the speaker indirectly indicating that their

epistemic relation to what is directly indicated involves a situation of a type which is contained in the type of the directly indicated situation. For example, if a speaker directly indicates a situation of a type where some students pass, then her grounds may involve a situation of a type where some passed and some failed. We advocate an analysis of 'some/not all' implicatures as a case where the speaker, in uttering "Some (of the) Fs G-ed", chooses not to use a more economical and potentially more informative form, "the Fs G-ed". This calls for a reason, the usual one being that she is drawing one's attention to more specific grounds. We will focus in our presentation on the 'some/not all' case as a genuine case of implicature/indirectness. There is good reason to agree with Verkuyl & van der Does (1995) and Carston (1998) that numerals may underspecify in their meaning as to whether they mean 'at least n' or 'exactly n' (see Papafragou & Musolino 2003 for developmental evidence which points in this direction) - hence numerals may not give rise to genuine scalar implicatures. Other prototypical scalars may go the same way.

Levinson (2000) suggests that, with stress, some/not all SIs intrude into the scope of conditionals:

(2) If you eat **SOME** of that cake you won't get fat.

It is suggested that this is understood to mean, 'if you eat some but not all of the cake you won't get fat'. One can account for this intuition without assuming that the antecedent of the conditional has itself been strengthened by a scalar implicature.

Following Rooth, we can assign a structure to (6) as in (3)a giving rise to a contextual set of alternatives of the form in (3)b:

- (3) a. [[If you eat [SOME]<sub>F</sub> of that cake you won't get fat]~C]  
 b. [if you eat D of that cake you won't get fat]

One possible context is that which contains one alternative, 'any'. The difference between 'any' and 'some' in DE contexts is that, since 'some' is a kind of indeterminate quantity expression, this makes the 'any' alternative actually logically stronger than the 'some' alternative. One obvious reason why the speaker did not use the stronger alternative would be that she thinks that if you eat the whole cake you will get fat. And this of course would be presupposed to be part of the context. Given this presupposition, the meaning of the sentence uttered would yield a conflicting conclusion where all of the cake is eaten. Given our intuitions about the utterance, it seems we assume that the conditional with the more specific antecedent would be taken to hold in these circumstances. This is to be expected given that there is a general principle of reasoning which says that if two conditional generalisations yield conflicting conclusions in certain circumstances, then the conditional with the more specific antecedent should be favoured. So, given that the speaker's intonation would draw our attention to this presupposition, it is clear he meant the stated conditional holds only in circumstances where not all of the cake is eaten.

This seems a more satisfactory account to that which just supposes that the conditional sentence in (2) is taken to mean 'if you eat some but not all of the cake you won't get fat'. On this understanding, the speaker is communicating nothing informative about cases where we eat all of cake. But this doesn't seem quite right. It seems it is part of the overall interpretation of such an utterance that if some Fs G then P but if all Fs G then not P. That is, we only get the 'implicature intrusion' effect where we are made aware of both conditionals. Note also that it is much more difficult to understand (4) as implying you will get fat if you eat both. This is so since there is no ready stronger alternative to 'or' in the DE context.

(4) If you eat the cake **OR** the cookies, you won't get fat

Levinson also suggests that SIs of the 'some/not all' variety can intrude into the scope of negation:

(5) It's not true that some men are chauvinists. All men are.

We argue that this is possible because there is a so-called echo negation in addition to sentential

negation (see Cormack & Smith 1998). Consider the contrast in intrusive possibilities where negation is genuinely sentential (in the scope of modals). Temporal & causal inferences get in, SIs don't:

- (6) a. John shouldn't wash his hair and go out in the cold.
- b. ? John shouldn't make some of the beds before his break. He should make them all.
- c. John shouldn't mark exams and get paid extra; marking is part of his job description.
- (7) a. Mary mustn't have slept with Brad Pitt and fallen pregnant, otherwise it would be all over the tabloids.
- b. ? Mary mustn't have passed some of the students, otherwise she would have drafted a re-sit exam.

We also note that true echo negation can include parentheticals in its scope:

- (8) a. It's not true that John's dog, sadly, died. It was a vicious cur and the neighbourhood couldn't be happier about its death.
- b. It's not true that John's dog, it's sad to say, has died. It was a vicious cur and the neighbourhood couldn't be happier about its death.

Examples like (9) (from Sauerland 2001) have been much discussed as cases where scalar, some/not all implicatures are available within the scope of disjunction.

- (9) John had some of the peas or the broccoli last night.

Chierchia (2001) and others point to this as evidence of SI intrusion into content and hence support for a grammar which computes SIs locally. Sauerland proposes a more conservative account whereby the understanding, 'some but not all Fs G or P' is derived because it is implied globally that not all Fs G. While Sauerland seems right that the appearance of intrusion results from a global implication, his account, involving a more elaborate default mechanism for computing scalar implicatures has some problems. It will be argued, rather, the implication is derived from what the speaker indirectly indicates about her grounds in making the disjunctive utterance.

One good reason to think that our understanding of (9) is due to a global implication that not all Fs G rather than a locally computed SI comes from considering that (10)b below is incoherent in the context given. If the SI is computed locally, there seems to be no reason why (10)b should not be as coherent as (10)a. On the global account, the incoherence is predictable since the assumption that not all students passed is inconsistent with the other disjunct:

- (10) *Context: If a student fails the exam, he/she gets a chance at a re-sit early in the summer vacation. The re-sit is set and administered by the teacher of the course.*
- a. Mary is either on vacation or some of her students failed.
- b. # Mary is either on vacation or some of her students passed.

Sauerland proposes a global account of (9) which involves some dubious default implicature mechanisms. One involves having A and B as scalar alternatives to  $A \vee B$  in addition to  $A \wedge B$  - implying that B and  $\neg B$  are implicatures of any assertion A. Another more general component of Sauerland's account assumes that SIs for a sentence containing two scalar triggers are selected from a set of alternatives which is a kind of cross product of the individual scalar alternatives. More precisely, if  $\phi(X, Y)$  is a sentence containing scalar terms X and Y where X is a term on scale  $Q_x$  and Y on  $Q_y$ , the set of scalar alternatives is  $\{\phi(X', Y') : X' \text{ is an element of } Q_x \text{ and } Y' \text{ is an element of } Q_y\}$ . The predicted implicatures are then the denial of all  $\phi(X', Y')$  that entail  $\phi(X, Y)$  (modulo default inferences about the epistemic state of the speaker). But this seems to wildly over-generate unattested implicatures. For instance, according to this (11)a implicates (11)b, (12)a implicates (12)b. But these never seem to be implicated.

- (11) a. Some people who attended some of the talks were bored
- b. No one who attended all of the talks was bored

- (12) a. Some people whose coffee was warm complained  
 b. No one whose coffee was hot complained

It can be argued that the implicature is suggested as a matter of the speaker indicating something of their grounds for the disjunctive utterance, that not all Fs G. It is interesting that hearing (9) out of the blue, without any knowledge of the contents of the relevant fridge, although we sense the suggestion of this inference, we are in the dark as to whether John didn't eat all the peas because he couldn't have (there were too many) or the speaker has more direct evidence to the contrary (she has seen that some of the peas are left). In cases where it is clear in the context that the speaker could not know whether or not all Fs G, the implicature evaporates (assuming it is consistent that he could have eaten all, if he was hungry):

- (13) John: We've left our guest at home alone all evening. Was there anything there for him to eat?  
 Mary: There were only last night's left-overs in the fridge. So he has either eaten some of those or ordered take-out.

Again we can have an account of this by reasoning from the use of the less economical description which cannot be as informative as the bare definite alternative to something about the speaker's grounds. Where a speaker uses disjunction to characterise two or more exclusive epistemic alternatives, we would conclude that she is indirectly indicating that her grounds for making the whole disjunctive utterance include the information that not all Fs G-ed. There is a good reason why this kind of implication is 'global' rather than 'local' in situations where the disjunction gives rise to the clausal and scalar implicature. On the one hand, since grounds are 'certain', one would never indirectly indicate anything about one's grounds within the characterisation of one of the epistemic alternatives. On the other, in raising the issue of whether all Fs G-ed by use of the marked form and therefore making the question relevant, the speaker would have to specify the 'just some or all' alternatives as separate disjuncts, if she did not have information which would resolve the issue. Therefore, one can conclude the marked form was used because the speaker as a means of indirectly indicating she has information that not all Fs G-ed.

Other examples offered by Chierchia involve intrusion into epistemic contexts:

- (14) Bill thinks that some of the students passed.

As Chierchia admits, the intuition that this implies 'Bill thinks some but not all passed' is not so strong. In order to elicit the judgement, he suggests imagining a context where the speaker of (14) has just spoken to Bill who has said, "Some students passed". Just so. In that case the speaker's grounds will make reference to Bill indirectly indicating his own grounds. In as far as one can assume the use of the marked form suggests the speaker of (14) is indirectly indicating this, then the implicature will be available. Although matters have to be considered on a case by case basis, we believe that all apparent intrusions of genuine SIs can be handled in this way.

**References:** Asher (1999) 'Discourse structure and the logic of conversation', in Turner (ed) *The Sem./Prag. Interface from Different Points of View* CRiSPI. Carston (1998) 'Informativeness, relevance and scalar implicature', in Carston etc (eds.) *RT: Applications and Implications*. John Benjamins. Carston (2002) *Thoughts and utterances*, Blackwells. Chierchia (2001) 'Scalar implicatures, polarity and the syn./prag. interface', ms UniMiB. Cormack & Smith (1998) 'Negation, polarity & V positions in English' *UCLWPiL 10*. Kamp & B-F (2001) 'Indefinites & binding'. ESSLI notes. King & S. (2003) 'Semantics, pragmatics & the role of semantic content. ms UMich. Levinson (2000) *Presumptive Meanings*, MIT Press. Papafragou & M. (2003) 'Scalar Implicatures: experiments at the sem.-prag. interface'. *Cognition*. Sauerland (2001) 'Defense of a global account of implicatures', ms Tubingen. Stalnaker (1998) 'On the representation of context', *JoLLI*. Stanley (2000) 'Context and logical form', *LI*. Verkuyl & vdD (1995) 'The semantics of plural noun phrases' In J. van der D. ed *Quantifiers Logic and Language*.