The Undefinedness of Conventional Implicatures

Once upon a time, linguists and philosophers (Bach and Harnish 1979) took evaluative adverbs like *unfortunately* alongside some other types of adverbs as non-truth-conditional. The embedding test (Wilson 1975) also confirms such a view, as when these adverbs are embedded in the antecedent of a conditional, they fall out of the scope of *if*. Among others, Asher (2000) proposes a truth-conditional semantics for them by treating them similarly to SDRT's treatment of presuppositions. More recently, also in the framework of truth-conditional semantics, Potts (2005) deliberately flouts the 'One Sentence, One Proposition' dogma and launches a formal treatment of them as conventional implicatures (CIs) in his two-dimensional type-logical system, which correctly captures the semantic duality and asymmetry of sentences like (1) both conceptually and formally. In his approach, (1) express an at-issue content and a CI content, both being entailments of the sentence. By comparison, with the canonical analysis for sentences like (2), (1) and (2) differ not in their linguistic contents, but only in their semantic composition.

(1) Sadly, Michael Jackson died.
   a. At-issue content: Michael Jackson died.
   b. CI: It is sad that Michael Jackson died.

(2) It is sad that Michael Jackson died.
   a. At-issue content: It is sad that Michael Jackson died.
   b. Presupposition: Michael Jackson died.

Applying a three-valued system for presupposition, we have for the assertion of (2) the values $< 1 >, < 0 >, < undefined >$ with the third value arising due to presupposition failure. *Sadly*, just as *sad*, is a factive predicate too and seemingly presupposes the truth of the state of affairs described by the rest of the sentence. However, we cannot apply the presupposition/assertion distinction for (1). Although the CI content does presuppose the content by the rest of the sentence, this 'presupposition' is not the presupposition but the assertion of (1).

(3) If Michael Jackson, sadly, died, it would not surprise me. $\not\rightarrow$ Michael Jackson died.

In other words, in (2), the assertion and the presupposition are interdependent in the sense that the definedness of the assertion requires the truth of the presupposition, whereas the two contents in (1) do not have such a relation but one that the assertion (= the presupposition in (1)), is independent of the CI content, while the definedness of the CI depends on the truth of the assertion.

I therefore suggest that (1) should have a three-valued logic with the values $< 1, 1 >, < 1, 0 >, < 0, undefined >$ in the order of <truth value of assertion, truth value of CI>, different from Potts' four-valued ($< 1, 1 >, < 1, 0 >, < 0, 1 >, < 0, 0 >$) logic of CIs. The reason is that the conjunctive relation between the two assertions in (1) $p \wedge sad(p)$ is a special one where $sad(p)$ is defined only if p is true. This argues against one property of CIs as defined in Potts' (2005), namely "CIs are logically and compositionally independent of what is 'said (in the favored sense)', i.e. independent of the at-issue entailments". This

property does not hold in general, at least not in the case of evaluative adverbs. This is why a conjunctive analysis that works like for appositives does not work properly for evaluative adverbs. This gives us the following picture by comparison.

(4) conjunction (two at-issue assertions)

a. The earth is round (p). Michael Jackson died (q).

b. (i) unidimensional, bivalence

p	q	$p \wedge q$
1	1	1
1	0	0
0	1	0
0	0	0

(ii) unidimensional, four-valued

p	q	$p \wedge q$
1	1	$< 1, 1 >$
1	0	$< 1, 0 >$
0	1	$< 0, 1 >$
0	0	$< 0, 0 >$

(5) presupposition (p^v, with v from Voraussetzung) and at-issue assertation (q^a)

a. multidimensional, bivalence

p^v	q^a
1	1
1	0

b. multidimensional, three-valued

p^v	q^a
1	1
1	0
0	undefined

(6) at-issue assertion (p^a) and CI (q^c) in the case of evaluative adverbs

a. Potts' L_{CI}, mutildimensional, four-valued

p^a	q^c	$p^a \bullet q^c$
1	1	$< 1, 1 >$
1	0	$< 1, 0 >$
0	1	$< 0, 1 >$
0	0	$< 0, 0 >$

b. my L_{CI}^{eADV}, multidimenstional, three-valued

p^a	q^c	$p^a \bullet q^c$
1	1	$< 1, 1 >$
1	0	$< 1, 0 >$
0	undefined	$< 0, undefined >$

To sum up, Potts' L_{CI} is a four-valued multidimensional system, whereas I propose to revise it into a three-valued multidimensional system for evaluative adverbs. In other words, Potts' analysis is conjunctive in nature while my L_{CI}^{eADV} is conjunctive plus (subsententially-) presuppositional. In the talk, I will address the nature of this undefinedness, e.g. how it differs from the undefinedness due to presuppositon failure like for (2).

References

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