

Let's Rethink Question Embedding

Ateş İsmail Çalışır

Georg August University Goettingen, RTG 2636: Form-meaning Mismatches

atescalisir@gmail.com

Introduction.

In many unrelated languages, the complementizer embedding a polar question and the complementizer introducing the antecedent of a conditional is the same, below is an example from English with *if*.

- (1) Mary knows if John smokes.
- (2) If John smokes, Mary will not talk to him.

However, the semantic analysis of questions and conditionals doesn't hint at such a convergence. There have been previous theories of unification for these two elements namely from Bhatt & Pancheva (2006), Starr (2014) and Williamson (2019). Every one of these analyses argue for a conditional semantics based on question semantics, in other words, the conditional meaning is built from a polar question meaning either by removing $\neg p$ in polar questions for the conditional meaning or by adding $\neg p$ for the question meaning by some other means rather than the basis of the polar question denotation.

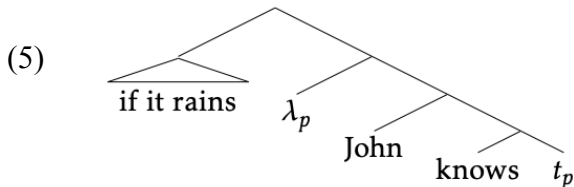
Analysis.

I will propose a brand-new analysis of question embedding challenging the traditional accounts of Hamblin (1973) and Karttunen (1977). This analysis is based on the equivalence between sentences in (1) and (3). Based on this overlap, I propose the following type-flexible semantics for *if* in (4).

- (3) [If I John smokes]₁ Mary knows it₁ and [if John doesn't smoke]₂ Mary knows it₂.
= If p , Mary K p $\wedge$ If $\neg p$, Mary K $\neg p$

$$(4) \quad \llbracket \text{if} \rrbracket = \lambda w_s. \lambda p_{\langle st \rangle}. \lambda f_{\langle \tau, st \rangle}. \begin{cases} p(w) \rightarrow f(w) & \text{if } \tau = \emptyset \\ p(w) \rightarrow f(p)(w) & \text{if } \tau \in D_{st} \end{cases}$$

The entry in (4) can be composed as both the adjunct of a modalized sentence (a conditional) and as a complement of a responsive verb (question embedding). The proposed LF for question embedding cases are given below, where the proposition selected by the verb is coindexed with the conditional restrictor scoping over the whole sentence.



While the analysis proposed here does not directly account for the *know* cases, other complement taking verbs like *tell* show the difference between an *if*-complement and a *whether*-complement. The examples below show that (6') requires Mary to tell $\neg p$ while (6) does not.

- (6) Mary told us that she will tell us if there's a party today. She didn't say anything

(6') Mary told us that she will tell us whether there's a party today. She didn't say anything

The data above shows that *if*-complements do not inherently have the negative complement unlike *whether*-complements. Due to this, I regard the strong exhaustivity that comes with *know* as a secondary problem not directly related to complements themselves. The lexical entry for *whether* is given below in (7), which is specified with regards to the second disjunct.

$$(7) \quad \llbracket \textit{whether} \rrbracket = \lambda w_s. \lambda p_{\langle st \rangle}. \lambda f_{\langle \tau, st \rangle}. \begin{cases} p(w) \rightarrow f(w) \wedge \neg p(w) \rightarrow f(w) & \text{if } \tau = \emptyset \\ p(w) \rightarrow f(p)(w) \wedge \neg p(w) \rightarrow f(\neg p)(w) & \text{if } \tau \in D_{st} \end{cases}$$

Outlook.

Such an analysis of embedded questions challenge the widely-assumed semantics of question embedding. Furthermore, the proposed analysis also distinguishes between *whether* and *if* as single lexical items not specified for question embedding or (un)conditional cases, allowing a unified treatment of such items in both question and conditional constructions. The only difference being the number of propositional arguments each operator would require, $n \geq 1$ for *if* and $n > 1$ for *whether*. This correctly predicts the their distribution in conditionals, which take a single proposition and unconditionals (8) which obligatorily take $n > 1$ propositions.

(8) John will go to the party whether or not Mary joins him.

For responsive verbs like *ask*, I assume a lexical semantics along the lines of '*request to be told*'. Nothing hinges on the exact lexical semantics of such verbs apart from split indexicality involving the illocutionary part of such verbs.

References

- Bhatt, R. & Pancheva, R. (2006). Conditionals. In M. Everaert & H. van Riemsdijk, The Blackwell companion to syntax. London, Blackwell, 638-687.
- Biezma, M. & Rawlins K. (2012) "Responding to alternative and polar questions." *Linguistics and Philosophy* 35(5). 361–406.
- Eckardt, R. (2007). The syntax and pragmatics of embedded yes/no questions. In *Linguistik Aktuell Linguistics Today* (pp. 447–466)
- Groenendijk, J. A. G., & Stokhof, M. J. B. (1984). Studies on the semantics of questions and the pragmatics of answers. Amsterdam.
- Hamblin, C. L. (1973). Questions in Montague English. *Foundations of Language* 10:41–53.
- Karttunen, L. (1977). Syntax and semantics of questions. *Linguistics and philosophy* 1(1). 3–44.
- Kratzer, A. (1986) "Conditionals," in *Papers from the Twenty Second Regional Meeting of the Chicago Linguistics Society*, Chicago Linguistics Society, Chicago, 1–15.
- Mayr, C. (2018) "Predicting polar question embedding", *Proceedings of Sinn und Bedeutung* 21(2), 863-880. 21. R. Truswell (ed.). University of Edinburgh
- Rawlins, K. (2013). (Un)conditionals. *Natural language semantics*, 21, 111-178.
- Schlenker, P. (2004) "Conditionals as definite descriptions." *Research on language and computation* 2(3). 417–462.
- Starr, W. (2014). What 'If? *Philosophers' Imprint*, 14, e10.
- Williamson, G. (2019). "Conditional antecedents as polar free relatives." *Proceedings of Semantics and Linguistic Theory* 29. Los Angeles, CA, Linguistic Society of America, 496-508.