Conditional Questions as Matrix Questions

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SARO workshop, Berlin, 28 June 2024

SPAGAD Speech Acts in Grammar and Discourse

European Research Council
Established by the European Commission

Overview

- 'Conditional Questions' (CQs) as in (1) look like matrix conditionals but are interpreted as questions (Isaacs and Rawlins 2008)

(1) a. If it's raining, will Joanna leave? b. If it's raining, who will show up?

Question: Are these formally conditionals, or questions? how do they compose?

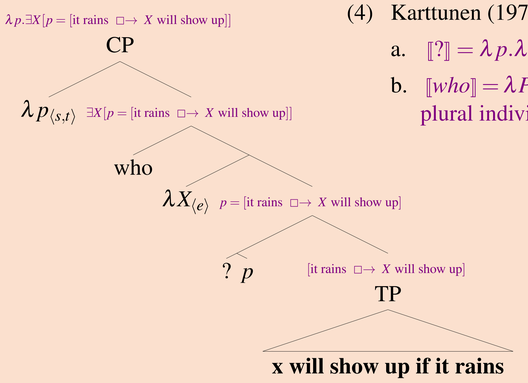
Main Claim: At Logical Form they are **matrix questions** scoping over a conditional

- The *if*-clause undergoes **syntactic reconstruction** into the question nucleus
- We provide **empirical arguments** for our view (also von Fintel's (2010)) and against an existing 'WYSIWYG' approach that treat (1) as matrix conditionals.

Proposal: $Q > if$ Analysis

(2) **Core idea: *if*-clause reconstruction.** The LF of (1), schematically:
a. Will [Joanna leave [if it's raining]]?
b. Who$_1$ will [t_1 will show up [if it's raining]]?

(3)



(4) Karttunen (1977) semantics for Q's:
a. $[\![?]\!] = \lambda p.\lambda q.p = q$
b. $[\![who]\!] = \lambda P_{\langle e,t\rangle}.\exists X[X \text{ is atomic or plural individual} \wedge P(X) = 1]$

(5) The denotation of (3) is a set of **conditional propositions** (von Fintel 2010):
{it rains $\square\!\!\rightarrow$ Ann will show up, it rains $\square\!\!\rightarrow$ Ed will show up, ...,
it rains $\square\!\!\rightarrow$ Ana$\oplus$Ed will show up, ... } $\rightsquigarrow$ *an approporiate semantic object*

(6) Off-the-shelf analysis of conditionals (Stalnaker 1968):
$[\![p \square\!\!\rightarrow q]\!] = \lambda w.\,[\![q]\!](w') = 1$, where w' is the most similar world to w among those that make $[\![p]\!]$ true. (among many compatible with our core proposal)

Selected references: Isaacs & Rawlins 2008: Conditional Questions. *JoS*. - **von Fintel 2010**: Conditional Questions as Questioned Conditionals. *MIT class handout*. - **Iatridou 1991**: Topics in Conditionals. *PhD dissertation, MIT*. - **Bhatt & Pancheva 2006**: Conditionals. In *the Blackwell Companion to Syntax*.

Thanks: We are supported by the ERC '*LeibnizDream*' grant (No. 856421) under the European Union's Horizon 2020 research and innovation programme, by the Hebrew University in Jerusalem, and by the ERC '*SpeechActs in Grammar and Discourse*' advanced grant (No. 787929).

Diagnostics for *if*-clause reconstruction

- Independent **evidence from scope** that some sentence-initial *if*-clauses originate lower than their surface position (Iatridou 1991, Bhatt & Pancheva 2006):

(7) a. If it rains, Mary **believes** that Bill will come. (Iatridou 1991:26)
≈ 'Mary believes that Bill will come if it rains' (*believe* > *if*)
b. If Alfonso came to the party, Mary is **convinced** that Joanna left early.
≈ Mary's convinced that Joanna left early if Alfonso came to the party'

– (7) convey mental states with conditional content; not conditional mental states.
– Can be probed using a generalizations about **presupposition filtering** under attitude predicates (Heim 1992, a.o.): the existence presupposition of the (indicative) conditional is filtered in (8a) and, crucially, also in (8b):

(8) *Context: Joanna is out of town; no way she will come to the party tonight.*
a. Bill mistakenly thinks that Joanna might come to the party tonight. Furthermore, **he thinks that Alfonso will leave if she comes**.
b. Bill mistakenly thinks that Joanna might come to the party tonight. Furthermore, **if she comes he thinks that Alfonso will leave**.

- Hallmarks of a **movement derivation** for the positioning of low-based *if*-clauses:

(9) ***Island effects*** (see Iatridou 1991, Bhatt & Pancheva 2006):
a. #If Alfonso comes to the party, Mary expressed the concern that Joanna will cause trouble. (Complex NP island)
b. #If it rains, Mary wonders whether Bill will come. (WH-island)

(10) ***Principle C effects*** (see Iatridou 1991, Bhatt & Pancheva 2006):
a. *If **John**$_i$ gets sick, **he**$_i$ thinks that Ann will come visit. (with *think* > *if*)
b. ***He**$_i$ thinks that Ann will come visit if **John**$_i$ is sick.
c. (?)If **he**$_i$ gets sick, **John**$_i$ thinks that Ann will come visit. (with *think* > *if*)

Correct predictions for Conditional Questions

- **Prediction of Q> *if*:** (i) *if*-clauses in CQs can be interpreted in the scope of attitude verbs in the Q; (ii) their distribution will be constrained by the above diagnostics.

(11) a. A- Bill wrongly thinks that Joanna might come to the party tonight.
B- Yeah I know. And does he think that Alfonso will leave if she comes?
b. A- Bill wrongly thinks that Joanna might come to the party tonight.
B- Yeah I know. And **if she comes does he think that Alfonso will leave?**
(✓ *think* > *if*)

(12) *If John comes to the party, did Mary express the concern that Alfonso will come too? (with ***concern>if — Island effect***)

(13) *If **John**$_i$ comes to the party, does **he**$_i$ think that Alfonso will come too? (with ***think>if — Principle C effect***)

Comparison with a *if* > *Q* dynamic analysis

(14) Isaacs & Rawlins' (**2008**) ***if* > *Q* Context-Update Approach**
(i) CQs like in (1) are structures in which a question is embedded under a conditional (***if* > *Q***). What-you-see-is-what-you-get.
(ii) 'if' can formally compose a proposition with a question meaning.
(iii) A dynamic, two-step process of semantic interpretation where the global context is first updated with the proposition in the conditional antecedent, and then the question in the consequent takes the newly created context as input and outputs a question meaning (e.g. partition)

Problem I: doesn't predict the effects of reconstruction above.

Problem II: over-generates questions in **conjuctions and disjunction**:

(15) a. *It's both raining and who will show up?
b. *It's either not raining or who will show up?
– In dynamic frameworks, *and* and *or* have update semantics just like *if* (Heim 1983, a.o.).
– All else being equal, the context update approach to CQ predicts that (15) should convey exactly the same meaning as (1b)

Consequences for Speech-Act (un)embeddability

- It seems to us that (outside perhaps very restricted circumstances) CQs don't have a *true Conditional Question* reading, where the question is posed only if the condition specified by the antecedent is met
– E.g., (1a) $\not\approx$ *'In the case it's raining, then give me an answer to the question of whether Joanna will leave.'*
- This suggests that CQ structures cannot have a parse in which a question is truly embedded in the consequent of a conditional
- Which in turn suggests, for a theory in which speech acts can be embedded, that a constraint is called for that bans embedding a Question speech-act operator in the consequent of a conditional:

(16) * If it's raining [$_{Q-SA}$ I REQUEST ANSWER: [will Joanna leave]]