

Non-Resolving Responses to Polar Questions

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Overview

- The Question Under Discussion (QUD) theory of relevance (Roberts 1996/2012) predicts that responses to polar questions must be resolving answers.
- We find systematic counterexamples:

(1) A: Will we cancel the picnic? B: If it rains.

- Proposal:** Responses should be considered relevant based on not just what alternatives they entail, but also on what they exclude.

The Data

- We find a recipe for constructing felicitous non-resolving responses to polar questions:

(2) A: Is Jane going to Lollapalooza? B: Or Coachella.

(3) A: Will we cancel the picnic? B: If it rains.

(4) A: Did Lucy win the race? B: She might have.

- The preponderance of examples of this kind show that such responses should be considered relevant in an adequate theory.

Background

- We assume that a question Q denotes a set of alternatives that partition the context set c (Groenendijk & Stockhof, 1984).
- A **resolving answer** to Q is a prop. that entails an alternative in Q . – Also called a **complete** or **exhaustive** answer.
- A **partial answer** to Q is a prop. that entails the disjunction of a proper subset of Q .

(5) A: Who ate the cookies? B: Jane or Lucy, but not Steve.

- A **non-answer** to Q is any proposition that is not a partial answer.

(6) A: Who ate the cookies? B: # Jane ate the cake.

- Fact:** All partial answers to polar questions are resolving answers.
 - If Q is a polar question, it contains exactly two alternatives.
 - So every partial answer to a polar question entails exactly one alternative, i.e. is a resolving answer.

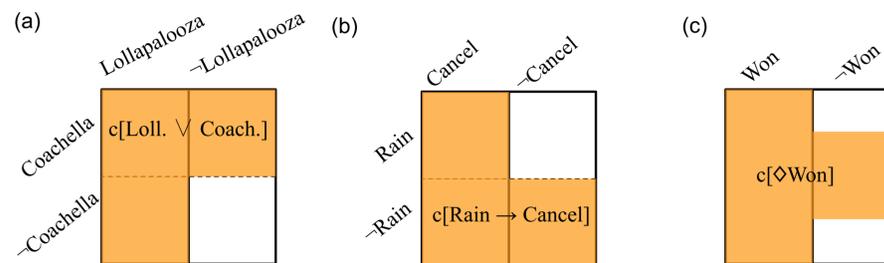
References

- Groenendijk, Jeroen and Martin Stockhof. 1984. *On the semantics of questions and the pragmatics of answers*. Diss. Univ. Amsterdam.
- Roberts, Craige. 1996/2012. Information structure: Towards an integrated formal theory of pragmatics. *Semantics and Pragmatics* 5:6–1.

Analysis

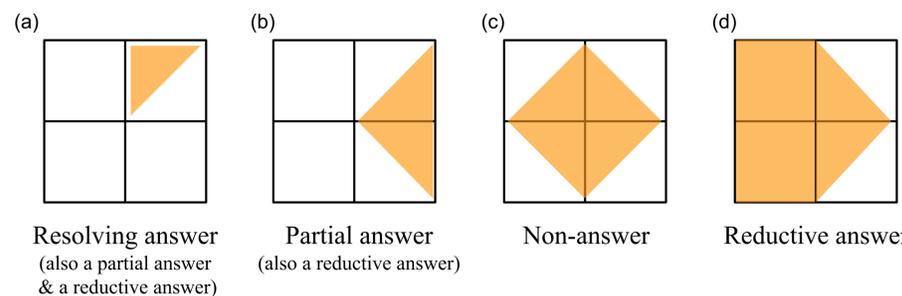
- Question:** Is there a property of B's responses in dialogues (2)-(4) that distinguishes them from ordinary non-answers?
- Answer:** Yes! Each response excludes some proposition that counts as a (partial) answer to the question.

Figure 1: Examples (2), (3), and (4)



- Relevance (ours)** Move m is RELEVANT to the QUD Q iff m is (a) an assertion whose content is a *reductive answer* to Q , or (b) a question whose alternatives are *reductive answers* to Q .
- Reductive answer** Proposition p is a REDUCTIVE ANSWER to Q in context c iff either:
 - (a) $\exists Q'_c [c \cap p \subseteq \cup Q']$
 p 's contextual meaning is a partial answer to Q , or
 - (b) $\exists Q'_c [c \setminus p \subseteq \cup Q']$
 p 's contextual negation is a partial answer to Q

Figure 2: Different answer types



Wh-questions

- (7) A: Who's coming to the picnic?
B: Pat is, if the weather is nice.
- (8) A: Who's coming to the meeting?
B: Either Jane is coming, or she's Skyping in.
- (9) A: Who won the race?
B: Jane might have.
- B's response in (7) is a reductive answer because its negation—the weather is nice and Pat's not coming—entails that Pat's not come.

Followup Questions

- According to the partial answer version of relevance, the follow-up questions in (10) are not relevant.

(10) a. A: Does Sam have any pets? B: Does she have a dog?
b. A: Will we cancel the picnic? B: Will we cancel if the weather is nice?

- According to Roberts's theory, Q_2 can only follow-up Q_1 if every alternative in Q_2 is a partial answer to Q_1 .
- In fact, in that theory, a polar Q_2 can only follow a polar Q_1 if $Q_1 = Q_2$ (assuming a fixed context set c).
- Our proposal instead predicts that the examples (10) are licensed, since each answer to Q_2 is a reductive answer to Q_1 .
- We also predict that the reverse order to (10a) is possible:

(11) A: Does Sam a dog? B: Does Sam have *any* pets?

- This order is natural in a context where B believes that Sam is unlikely to have any pets, especially with stress on *any*.

Additional Constraints

- The constraints we have described so far are still too permissive.

(12) A: Did Jane go to Lollapalooza? B: Or there is life on Mars.

- B's answer is reductive because it eliminates a partial answer.
- Roberts's theory has a similar issue:

(13) A: Did Jane go to Lollapalooza? B: Yes, and there's life on Mars.

- We think the responses in (12) and (13) are irrelevant because they are *built from* units of meaning that do not come from a QUD.
- New Constraint:** A felicitous response must be an exact partial answer (a union of alternatives) to some QUD on the stack, either the current QUD, or a higher QUD.
 - A **higher QUD** is a question on the QUD stack that is a more finely divided partition than the current QUD.

Conclusion

- In information-seeking discourse, relevant utterances are required to address the QUD, at least partially.
- We notice that the distinction between partial and complete answers breaks down when the QUD is a polar questions.
- Our new notion of **reductive answerhood** distinguishes between resolving and non-resolving answers to polar questions.
- This allows us to revise the theory of relevance to be more inclusive, with good empirical results.