

# Sorting Out the Implications of Questions

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# The Issue

- What is the status of the proposition associated with (1)?

(1) Who read the book?

*Associated Proposition (AP):* Someone read the book.

- What does the speaker know when he uses (1)? What does the question convey regarding this knowledge?

# The Issue

- **Goal:** To provide a fine-grained classification of questions in terms of the epistemic status of the speaker (and question) as a function of the question's structure and speaker's world knowledge.

## Existing Analyses

- **Presupposition** (Katz and Postal 1964, Karttunen and Peters 1976, Comorovski 1996, a.o.)
  - Something that a speaker must assume to be true in order to use a question.
  - Condition on usability: a presupposition of a question is a necessary condition for a successful interrogative speech act. (Katz 1972)
- **(Generalized Conversational) Implicature** (Groenendijk and Stokhof 1984, Ginzburg 2004)
- **It depends on the wh-word** (Brandtler 2008)

# Presupposition

- Beaver (2001): “Wh-questions presuppose existence of an entity answering the question, or speakers’ expectation of such an entity.” (p. 11)
- The AP is not defeasible and thus not a conversational implicature: it cannot be cancelled by the same speaker who uttered the question.
  - (2) #Although nothing is on the table, what is on the table?  
(Postal 1971:73)
  - (3) #I know that Mary doesn’t read anything. What (exactly) does she read? (Karttunen and Peters 1976:355)
  - (4) John has three cows, in fact ten. (Levinson 1983:115)

# Presupposition

- ▶ Fitzpatrick (2005): The infelicity of examples like (5) is due to violation of the condition on question asking in (6).

(5) #I know that Mary doesn't read anything. What (exactly) does she read? (=3)

(6) A speaker can only ask an information-seeking question if he or she does not know the answer(s).

# Presupposition

- Haida (2003): The reply in (7) duplicates the information already provided by the presupposition (cf. Stalnaker 1999).

(7) Q: Who called John?  
A: #/\*Somebody called John.

- ▶ We note that existential answers as in (7) are not infelicitous given the appropriate intonation (8) and/or context (9).

(8) Q: Who called John?  
A: Somebody did.  
L+H\*

(9) Q: Oh gosh, who locked up the house?  
A: Don't worry, someone did. I heard the keys turn as I  
walked below. (Ginzburg 1995:474)



# Presupposition

- Comorovski (1996): (10) involves presupposition denial / protest (cf. (11)).

(10) Q: Who called John?  
A: Nobody called John.

(11) Q: Did John shoot the king of France?  
A: No, because there never was one.

- ▶ What is the status of infelicitous negative answers to cleft questions?

(12) Q: Who failed the test?  
A: No one.

(13) Q: Who is it that failed the test?  
A: #No one.

# Presupposition

- ▶ We also note that cleft questions cannot be suspended:

- (14)
- a. Who, if anyone, failed the test?
  - b. #Who is it that failed the test, if anyone?

- ▶ Nor can they be used rhetorically:

- (15)
- a. Who could have predicted this disaster?
  - b. #Who is it that could have predicted this disaster?

- **The divergent behavior of clefted vs. non-clefted questions suggests different epistemic statuses.**

# Presupposition

- **Alternative Questions** carry an existential and uniqueness presupposition that one and only one of the alternatives presented is true (Karttunen 1977).

(16) Did John order coffee or tea?

*Presupposition:* John ordered coffee or John ordered tea, but not both.

- ▷ If this is a presupposition, what is the status of the proposition associated with clefted alternative questions?

(17) Was it coffee or tea that John ordered?

# Implicature

- Ginzburg (2004): The AP is a conversational implicature, based on the fact that it:
  - is amenable to suspension.

(18) What, if anything, should I buy at the store?
  - does not always arise.

(19) Who is in favor of amending the Bill of Rights?
  - is calculable: from the use of a wh-question, rather than a more neutral yes/no question, the hearer can infer that the questioner believes that there exists some referent instantiating the wh-phrase.

# Implicature

- Groenendijk and Stokhof (1984): The AP is speaker-oriented and non-grammatical in nature; as such, its status is sensitive to other elements of the question and to the context.

- (20)
- a. Who is that?
  - b. To whom is John married?
  - c. Who is coming with me?

(Groenendijk and Stokhof 1984:33)

## A Fine-Grained Approach

- Brandtler (2008): The status of the AP depends on the type of information the question requests, which is often correlated with the wh-word used.
  - 1 **Argument** questions (*who, what, which*) request existential identification of an argument of the verb.
  - 2 **Framing** questions (*when, where, how*) request referential specification of a spatiotemporal or circumstantial anchor to the event under discussion.
  - 3 **Propositional** questions (*why*) request the specification of the reason for, consequences of, or explication of the expressed proposition.

# Proposal

- Brandtler is correct in distinguishing different types of wh-questions.
- However, the presupposition-implicature distinction seems inappropriate:
  - The AP is not part of the communicative intent of the speaker (cf. Simons 2007).
  - The AP does not involve Gricean-type inferential reasoning.
- We propose that the distinction is between **epistemic bias** and **presupposition**.

# Proposal

- **Bias** is a state in which the speaker believes that the probability that a proposition is true is greater than the probability that it is false, but this belief is not necessarily shared by the hearer (cf. Romero and Han 2004, Tomioka 2009).
- **Presuppositions** need to be satisfied by the common ground, i.e., shared by the discussants, before the common ground can be updated with the proposition expressed by the sentence (von Stechow 2007).



# Diagnostics

- We recast the diagnostic of negative answers (Brandtler 2008) as distinguishing between bias and presupposition, and add tests whose results line up similarly.

<b>Associated Proposition</b>	Bias	Presupposition
<b>Type of Question</b>	Wh-argument question Non-clefted alternative question	Wh-adjunct question Clefted wh-question Clefted alternative question
<b>Diagnostics</b>	<ul style="list-style-type: none"> <li>✓ Negative answers</li> <li>✓ Answers w/ positive indefinite</li> <li>✓ Restating of AP</li> <li>✓ Suspension (“if any X”)</li> <li>✓ Rhetorical questions</li> <li>*Antecedent for <i>too</i></li> <li>⊖ Intervention effects</li> </ul>	<ul style="list-style-type: none"> <li>*Negative answers</li> <li>*Answers w/ positive indefinite</li> <li>*Restating of AP</li> <li>*Suspension</li> <li>*Rhetorical questions</li> <li>✓ Antecedent for <i>too</i></li> <li>⊖ Intervention effects</li> </ul>

## Diagnostics: Clefted Wh-Questions

- Looking (again) at the results of some diagnostics with respect to clefted wh-questions:
  - Negative answers
    - (21) Q: Who failed the test?  
A: No one. (=12)
    - (22) Q: Who is it that failed the test?  
A: #No one. (=13)
  - Suspension
    - (23) a. Who, if anyone, failed the test?  
b. #Who is it that failed the test, if anyone? (=14)

## Diagnostics: Clefted Wh-Questions

- Antecedent for *too*: Any material can serve as the antecedent for the presupposition of *too* (Winterstein 2009).

- (24) *Conversational Implicature*  
Lemmy asked Ronnie whether Linda is on vacation, and Ritchie doesn't know whether she's back either (=too).
- (25) *Conventional Implicature*  
Lemmy, that idiot, came to the party, and Ritchie is an idiot too: he arrived completely drunk.
- (26) *Presupposition*  
It's Lemmy who stole the truck and somebody stole the money too.

## Diagnostics: Clefted Wh-Questions

- We note that this is not true of non-clefted questions:
  - (27) Q: Who had a meeting with the dean yesterday?  
A: #I don't know, but I did too.
  - (28) Q: Who is it that had a meeting with the dean yesterday?  
A: I don't know, but I did too.

## Diagnostics: Adjunct Questions

- Wh-adjunct questions group with clefted questions: the existence of a place and time for an expressed event or state is necessarily presupposed.
    - Negative answers
- (29) Q: When did John buy that book?  
A: #Never.
- (30) Q: Where did John buy that book?  
A: #Nowhere. (Brandtler 2008:92)
- (31) Q: Where did you go yesterday?  
A: Nowhere.

## Diagnostics: Adjunct Questions

- Answers involving a positive indefinite
  - (32) Q: When did John buy that book?  
A: #I don't know, but he did it at some point.
  - (33) Q: Where did John give the lecture?  
A: #I don't know, but he did it somewhere.
- Antecedent for *too*
  - (34) Q: Where on campus did John give the lecture yesterday?  
A: I don't know, but he gave it at Drexel too.

## Diagnostics

- *Why*-questions presuppose the truth of the AP. However, they can be answered in the negative without denying the AP (Fitzpatrick 2005, Brandtler 2008).

(35) Q: Why did John buy that book?  
A1: No reason.  
A2: Because it seemed interesting.  
→ John bought that book

- In *why*-questions, the propositional presupposition holds regardless of the status of the existential presupposition: an event can take place without any obvious reason.

## What are intervention effects?

- **Intervention effects** arise when a quantificational or focusing element (=intervener) precedes a wh-phrase in a wh-question, leading to degradedness (Beck 1996 et seq.).

- (36) \*amuto nuku-lul manna-chi anh-ass-ni?  
anyone who-ACC meet-CHI not.do-PAST-Q  
'Who did no one meet?' (Korean; Yoon 2008:381)
- (37) a. \*Minsu-man nuku-lul po-ass-ni?  
Minsu-only who-ACC see-PAST-Q  
b. nuku-lul Minsu-man po-ass-ni?  
who-ACC Minsu-only see-PAST-Q  
'Who did only Minsu see?' (Korean; Beck 2006:3)



## What are intervention effects?

- In the case of alternative questions, an intervener preceding the disjunct supposedly results in loss of the alternative question reading (Beck and Kim 2006).

(38) Q: Did only John order coffee or tea?  
A1: #Coffee. [\*AltQ]  
A2: Yes. [✓Yes/NoQ]

## What are intervention effects?

- While many analyses have sought a syntactic (Pesetsky 2000) or semantic (Beck 2006) explanation, recent evidence converges on the claim that intervention of this type reflects **faulty realization of the information structure (IS) of questions** (Tomioka 2007, Eilam 2009).

(39)     [...A ... [Wh] ...B ...]  
          LINK   FOCUS   TAIL

(40)     [[Wh]<sub>i</sub> ...Int ... t<sub>i</sub> ...B ...]  
          FOCUS   TAIL →

## What are intervention effects?

- Support for this approach includes (i) the existence of interspeaker variability in judgments, (ii) weakening of the effect when the intervener is embedded or not a subject, and (iii) amelioration of the effect when the focused expression is backgrounded (Eilam 2009):
  - (41) Context: The graduate students in linguistics took two preliminary exams, in syntax and phonology, last week. The results were surprising: there was one exam that all the students passed, including John, but no one except John passed the other.
    - ✓ Did only John pass syntax or phonology?

## How are intervention effects related to our issue?

- Wh-adjunct questions and clefted alternative questions exhibit weak intervention effects or no effects at all:
  - (42) (?) amuto encey sukce-lul cechulha-chi  
anyone when homework-ACC submit-CHI  
anh-ass-ni?  
not.do-PAST-Q  
'When did nobody submit their homework?'  
(Korean; Yoon 2008:381)
  - (43) daremo naze ko-na-katta-no?  
anyone why come-NEG-PAST-Q  
'Why did no one come?' (Japanese; Tomioka 2006:7)
  - (44) Was it coffee or tea that only John ordered?

## How are intervention effects related to our issue?

- Yoon (2007, 2008) proposes a syntactic account: *wh*-adjuncts are generated as adjuncts to *vP* (*when*, *how*) or directly in SpecCP (*why*). Their LF movement to SpecCP does not cross NegP, which blocks this kind of movement.
- Problems with this account:
  - The necessary assumptions regarding movement are no longer thought to hold: overt and LF movement do not differ in the relevant way (Chomsky 1993), and it is not clear that in situ *wh*-phrases move at all (Reinhart 1998).
  - The definition of NegP as the intervener is inadequate.
  - Cannot explain why Intervener  $\gg$  Wh is always dispreferred, as Yoon (2007) herself establishes.

## How are intervention effects related to our issue?

- We propose that the improved status of intervention configurations in wh-adjunct and cleft questions results from the inclusion of the potential intervener within the presupposition these questions carry (cf. Tomioka 2009).
- Bias has a different IS status: it does not background. The intervener must be computed as new information and clashes with the informational articulation of the question.
- Unlike the syntactic account, this analysis manages to connect the data from intervention effects to the other diagnostics.

## Remaining Issues and Ramifications

- This analysis falls in line with recent work demonstrating that a uniform analysis of questions as presupposition triggers is inadequate (Fitzpatrick 2005). We suggest a fine-grained classification, determined by structural factors and world knowledge, and supported by a variety of diagnostics.
- This proposal also provides further support for an IS analysis of intervention effects over syntactic or semantic approaches.

## Remaining Issues and Ramifications

- Negative responses can be logical answers to a question, pace, e.g., Keenan and Hull (1973) and Comorovski (1996).
  - Wh-adjunct questions allow us to differentiate negative responses qua logical answers (45), which are infelicitous given the presuppositional status of the question, and negative responses which are used to deny the presupposition (46).

(45) Q: When did John buy that book?  
A: #Never. (=29)

(46) Q: When did John buy that book?  
A: He didn't.



## Remaining Issues and Ramifications

- Comorovski (1996) suggests that the existential presupposition of questions allows them to introduce discourse referents, on a par with indefinite NPs.

(47)      Who<sub>i</sub> left the party and where did he<sub>i</sub> go?

- However, implicatures can do the same (48).

(48)      Q: Does John have a mistress?

            A: Are you kidding? She was at his house last night.

- Speaker's belief that there exists a referent instantiating the wh-phrase should be sufficient to license a discourse referent.

## Remaining Issues and Ramifications

- *Which*-questions also tend to exhibit weaker intervention effects than plain *wh*-questions (Tomioka 2006, Endo 2007).

(49) daremo dono hito (dake)-wa syootai sitaku-nai-no?  
anyone which person (only)-TOP invite want.to-NEG-Q  
'Which person does no one want to invite?'

(Endo 2007:50)

- Issue for future research...

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