

## Sorting Out the Implications of Questions

Aviad Eilam and Catherine Lai, *University of Pennsylvania*

**1. The Issue** Despite extensive discussion in the linguistic literature, there seems to be no consensus regarding the status of the existential implication that a *wh*-question like (1) carries. Part of the difficulty in determining whether this is a presupposition, implicature, or some other meaning component, derives from the disparate interpretations of certain presupposition diagnostics and the inapplicability of other criteria to interrogative clauses. In this paper we propose the phenomenon of intervention effects as a novel diagnostic, and show that it correctly classifies argument *wh*-phrases and alternative questions as having an existential implicature, while presuppositions arise with *wh*-adjuncts and clefted questions.

**2. Existing Analyses** One popular view, argued for in Katz and Postal (1964), Karttunen and Peters (1976), and Comorovski (1996), *inter alia*, holds that the implication of *wh*-questions is a presupposition. Evidence for this comes, for example, from the impossibility of cancelling the presupposition by the same speaker who uttered the question (2) (Karttunen & Peters 1976). Alternative questions (3) are also commonly thought to involve an existential presupposition that one and only one of the alternatives presented is true (Karttunen 1977). However, others maintain that no such presupposition exists; Ginzburg (1991) specifically claims that an implicature is involved in *wh*-questions, based on (i) its amenability to suspension (4), (ii) the observation that the implicature does not always arise, thus in (5) the speaker of the House does not necessarily believe that anyone supports amending the Bill of Rights, and (iii) its calculability: the hearer can infer that the questioner believes that some referent instantiates the *wh*-phrase since the more neutral yes/no question form was not employed.

**3. A Novel Approach** While these analyses have illuminated important properties of *wh*-questions, the proposed distinctions appear overly coarse: *wh*-phrases differ in whether they allow negative answers (6)-(7) (Brandtler 2008), which is inexplicable under a uniform approach. Moreover, a unified presuppositional approach cannot distinguish between standard *wh*-questions and cleft questions, since the latter have an existential presupposition by virtue of the cleft. Again, negative answers are licit for standard *wh*-questions (8), but infelicitous with a clefted question (9) (Brandtler 2008).

We propose a finer-grained categorization, based on the presence or absence of intervention effects in the sense of Beck (1996), which groups *wh*-arguments and alternative questions vs. *wh*-adjuncts and cleft questions. Argument *wh*-phrases (10) become degraded when a focused or quantificational expression precedes the *wh*-phrase (Tomioka 2007), while alternative questions (11) lose their alternative question reading under similar circumstances (Beck & Kim 2006). This contrasts with *wh*-adjuncts (12)-(13) and cleft questions (14) (Beck & Kim 2006, Yoon 2008), where such effects are weak or nonexistent. We follow recent work showing that intervention effects are not syntactic or semantic, but rather derive from the information structure and prosody of questions (Tomioka 2007, Eilam 2009). Interveners are inherently anti-topical and therefore potentially incompatible with the information structure of questions, which are partitioned into a focus—the *wh*-phrase/disjunct—and a ground, consisting of a link and tail (cf. Vallduví 1990). In examples like (10) and (11) interveners can be neither links nor tails since the implication, whether it involves the intervener or not, is a generalized conversational implicature whose truth is thus not taken for granted, by speaker or hearer. The improved status of intervention configurations involving *wh*-adjuncts and clefts (12)-(14), however, results from the presupposition these questions carry. Since the presupposition includes the potential intervener, the latter can be (part of) the tail of the question, hence backgrounded, and no clash with the informational articulation of the question occurs.

**4. Ramifications** This approach falls in line with recent work demonstrating that the semantic/pragmatic implications of questions depend on the specific *wh*-phrase or structure involved (Fitzpatrick 2005). Moreover, it establishes that negative answers as in (6) are a *cancellation* of an implicature, rather than a *denial* of an existential presupposition (cf. Comorovski 1996), while infelicity in (7) occurs because the question truly carries a presupposition. This proposal also further supports an information structural-prosodic analysis of intervention effects: a syntactic theory associating differences in degradedness with the structural height of the *wh*-phrase (Yoon 2008) cannot explain the data from alternative questions, nor does it predict the distinctions in the acceptability of negative answers. Lastly, the proposal has important implications for the hypothesis that it is their existential presupposition which allows questions to introduce discourse referents, on a par with indefinite NPs (Comorovski 1996).

- (1) Who read the book? *Implication*: Someone read the book.
- (2) #I know that Mary doesn't read anything. What (exactly) does she read?
- (3) Did John order coffee or tea? *Presupposition*: John ordered coffee or John ordered tea, but not both.
- (4) What, if anything, should I buy at the store?
- (5) Who is in favor of amending the Bill of Rights?
- (6) Q: Who bought the book?  
A: No one.
- (7) Q: When did John buy that book?  
A: #Never.
- (8) Q: Vem träffade du igår?  
whom met you yesterday  
'Whom did you meet yesterday?'  
A: Ingen.  
nobody (Swedish; Brandtler 2008:87)
- (9) Q: Vem var det som du åt lunch med igår?  
whom was it that you had lunch with yesterday  
'Whom was it that you had lunch with yesterday?'  
A: ??Ingen / Sven.  
nobody Sven (Swedish; Brandtler 2008:87)
- (10) \*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)
- (11) Q: Did only John order coffee or tea?  
A1: #Coffee. [\*AltQ]  
A2: Yes. [✓Yes/NoQ]
- (12) (?) amuto encey sukce-lul cechulha-chi anh-ass-ni?  
anyone when homework-ACC submit-CHI not.do-PAST-Q  
'When did nobody submit their homework?' (Korean; Yoon 2008:381)
- (13) daremo naze ko-na-katta-no?  
anyone why come-NEG-PAST-Q  
'Why did no one come?' (Japanese; Tomioka 2006:7)
- (14) Was it coffee or tea that only John ordered?

**Selected References:** Beck, S., and S.-S. Kim. 2006. Intervention effects in alternative questions. *Journal of Comparative Germanic Linguistics* 9, 165–208. Brandtler, J. 2008. Why we should ever bother about *wh*-questions: On the NPI-licensing properties of *wh*-questions in Swedish. *Working Papers in Scandinavian Syntax* 81, 83–102. Karttunen, L., and S. Peters. 1976. What indirect questions conventionally implicate. In S. Mufwene, C. A. Walker, and S. B. Steever (eds.), *Papers from the 12th Regional Meeting Chicago Linguistics Society*, 351–368. Tomioka, S. 2007. Pragmatics of LF intervention effects: Japanese and Korean *wh*-interrogatives. *Journal of Pragmatics* 39, 1570–1590. Yoon, S. 2008. An argument/adjunct asymmetry in *wh*-questions. *University of Pennsylvania Working Papers in Linguistics* 14.1, 381–393.