

7.

Uli Sauerland - Seminar für Sprachwissenschaft, Universität Tübingen "How many"-Questions and Pair-List Situations

The contrast this squib discusses was observed by Calixto Aguero-Bautista (p.c.). It concerns the felicity of the questions in (1) in the following context, which I will call a Pair-List Situation: Last night, three students (John, Bill and Mary) read *War and Peace*, five other students (Tom, Ian, Sue, Ann, and Lea) read *Buddenbrooks*, and two other students (Tina and Lina) read *Ulysses*. No other reading took place last night. Since there's no student that read every book, the question (1a) is infelicitous in this situation. Surprisingly, though, (1b) is a felicitous question in the same situation. Furthermore, the answer in (1b), which looks like a pair-list answer, is possible.

- (1) a. #Which students read every book last night?
b. How many students read every book last night?
Three *War and Peace*, five *Buddenbrooks*, and two *Ulysses*.

I believe the primary difference to be understood about (1) is that of the felicity of the questions. The felicity can be explained by looking at the presuppositions of each of the questions.

For "which"-questions with quantifiers like (1a), I adopt Chierchia's (1993) analysis but use Engdahl's (1980) syntactic theory of reconstruction (see also Aguero-Bautista 1999). Chierchia derives the following felicity condition for "which"-questions with universals in pair-list situations: the universal must bind an implicit variable in the trace position of the "which"-phrase. As the semantic representation (2a) illustrates, this binding relation is ruled out in (1a) by weak crossover. Therefore, only the analysis (2b) without an implicit variable is possible for (1a). But this presupposes that there is a single student who read every book.

- (2) a. *Which_f every book_j f(student of j) read t_j
b. Which_f every book_j f(student) read t_j

I show now that the "how many"-question (1b), however, is felicitous when the universal quantifier takes scope over the trace of the "how many"-phrase, without binding a variable in this position. This LF-representation, as shown in (3), doesn't violate the weak crossover condition.

- (3) How_n every book_j [n-many students] read t_j

According to Cresti's (1995) and Rullmann's (1995) semantics of "how many", (3) asks for the maximal number n such that every book was read by at least n students. Because "every book" takes scope above "n-many students", it's not important for (3) whether there are students that read every book. Therefore (3) is a felicitous question in a pair-list situation where every book was read by a different number of different students, like the one described above.

The felicity contrast in (1) is explained. Now consider the pair-list answer in (1b). The complete answer (3) requires is "Two students read every book". I believe, however, that an overly informative answer to a question is always possible, as long as it provides the relevant information. The answer given after (1b), I claim, is such an overly informative answer.

The weak crossover condition states an empirical mismatch between inverse scope and inverse binding. Here, we saw this familiar scope/binding difference in a new environment with pair-list answers. The result therefore supports Chierchia's claim that weak crossover is at work in (1a).

References

- Aguero-Bautista, C. (1999) "On Pair-List Readings," unpublished ms., MIT.
Chierchia, G. (1993) "Questions with Quantifiers," *Natural Language Semantics* 1: 181-234.
Cresti, D. (1995) "Extraction and Reconstruction," *Natural Language Semantics* 3: 79-122.
Engdahl, E. (1980) *The Syntax and Semantics of Questions in Swedish*, PhD dissertation, University of Massachusetts, Amherst.
Rullmann, H. (1995) *Maximality in the Semantics of Wh-Constructions*, PhD dissertation, University of Massachusetts, Amherst.