

## 1 An important argument for the ambiguity of *even*

### 1.1 Background: semantics for *even*

- (1)  $even_{C,w}(P)$
- defined if and only if
    - $\exists Q \in C: [Q \neq P \wedge Q(w) = 1]$
    - $\forall Q \in C [Q \neq P \rightarrow \text{likelihood}(Q) > \text{likelihood}(P)]$
  - truth conditions:  $P(w) = 1$

This semantics gives the right results for *even* in positive environments but makes incorrect predictions in DE environments.

- (2) a. John even greeted [Mary]<sub>F</sub>.  
(John's greeting Mary is unlikely/unexpected.)  
b. John didn't even greet [Mary]<sub>F</sub>.  
(John's greeting Mary is likely/expected.)

Everyone agrees that the ordinary *even*, whose semantics are described in (1) cannot appear in the immediate scope of negation. One way of stating this is that the *even* in (1) is a PPI.

As for how to derive the reading in (2b), two ways have been proposed:

- (3) a. The Scope Theory (Karttunen and Peters (1979), Wilkinson (1996), Lahiri (1998), Guerzoni (2003))  
*even* takes scope over negation:  
LF:  $even(\neg(P))$   
b. The Ambiguity Theory (Rooth (1985))  
there are two homophonous *even*'s:  $even_{PPI}$  and  $even_{NPI}$ . The semantics of  $even_{NPI}$  are such that we get the expected implicatures.

### 1.2 Non-homophony for $even_{PPI}$ and $even_{NPI}$

The ambiguity approach receives support from the fact that in certain languages the putative counterparts of  $even_{PPI}$  and  $even_{NPI}$  are, in fact, not homophonous.

- (4)  $even_{PPI}$
- John even greeted [Mary]<sub>F</sub>.
  - Der Hans hat **sogar** [die Maria]<sub>F</sub> begriesst.  
the John has even the Mary greeted  
'John even greeted [Mary]<sub>F</sub>.'  
(see also: Italian *addirittura*, and Dutch *zelfs*)
- (5)  $even_{NPI}$
- Nobody even greeted [Mary]<sub>F</sub>.
  - Niemand hat auch nur [die Maria]<sub>F</sub> begriesst.  
No-one has also only the Mary greeted  
'Nobody even greeted Mary.'  
(see also: Italian *anche solo*, Dutch *ook maar*)

## 2 Guerzoni's Response

*auch nur* 'also only', the putative  $even_{NPI}$ , does not actually parallel *sogar*, the putative  $even_{PPI}$  in the biases it introduces in questions.

- (6) a. base sentences, no bias:  
Hat der Georg die Maria begriesst?  
Has the George the Mary greeted  
'Did George greet Mary?'
- b. with *sogar* ( $even_{PPI}$ ), no bias:  
Hat der Georg sogar die Maria begriesst?  
Has the George even the Mary greeted  
'Did George even greet Mary?'
- c. with *auch nur* (putative  $even_{NPI}$ ), negative bias:  
Hat der Georg auch nur die Maria begriesst?  
Has the George also only the Mary greeted  
'Did George even greet Mary?'

## 2.1 A quick review of Guerzoni's proposal

The facts:

- (7) a. Did John even answer the easiest problem?  
Negative Bias
- b. Did John even answer the hardest problem?  
No Bias
- c. Did John even answer Problem 4.33?  
Background assumption: Problem 4.33 is trivial → **Negative Bias**  
Background assumption: Problem 4.33 is the toughest → **No Bias**  
Background assumption: Problem 4.33 is in between → question is incoherent

The analysis: *even* can move to a position above the trace of *whether* (as in LF2).

- (8) a. LF1: [whether<sub>1</sub> [t<sub>1</sub> [even [John knows Italian]]]]  
({[hardP](John knows Italian), [hardP](John doesn't know Italian)})
- b. LF2: [whether<sub>1</sub> [even [t<sub>1</sub> [John knows Italian]]]]  
({[hardP](John knows Italian), [easyP](John doesn't know Italian)})

If we already have an [easyP] presupposition, the only answer compatible with it is the negative answer in LF2. This is the source of the bias.

Rooth's ambiguity account can handle the presuppositional behaviour of questions with *even*, but as it stands it cannot explain why we find negative biases and why the negative biases correlate with [easyP].

Note that Guerzoni's explanation does not depend upon the question negation licensing some NPI. In the above example, there just was no NPI. But even when we have an NPI, we can see that the mere presence of an NPI does not force a negative bias.

- (9) a. Did George greet anybody?
- b. Have you ever been to the LSA?

## 2.2 Back to *auch nur* and *sogar*

Guerzoni attempts to provide a compositional analysis of *auch nur*.

- (10) The positive aspects of her proposal
  - a. the meaning of *auch nur* follows from the meaning of *auch* and the meaning of *nur*. It is not an idiom.
  - b. the NPI-nature of *auch nur* does not need to be stipulated (hence Guerzoni's approach is 'Lahirian'.)
  - c. the bias facts in questions follow.
- (11) Some new assumptions
  - a. Postulation of a novel kind of ambiguity for *only*
  - b. The movement properties of *sogar*

### 2.2.1 *Only and just*

- (12) *only*<sub>C,w</sub>(P)
  - a. (Presupposition): is defined if and only if  $P(w) = 1$ .
  - b. (Exclusivity Assertion):  $\forall Q \in C[Q \neq P \rightarrow Q(w) = 0]$

Guerzoni proposes that under certain circumstances *nur* in German loses its exclusivity assertion. In particular, in these cases the presupposition and the assertion of *nur* 'only' are switched.

- (13) *nur*<sub>2,C,w</sub>(P)
  - a. (Exclusivity Presupposition):  $\forall Q \in C[Q \neq P \rightarrow Q(w) = 1]$
  - b. (Assertion):  $P(w) = 1$ .

She then notes that English *just*, which otherwise has essentially the same semantics as *only*, can in certain circumstances lose its exclusivity.

- (14) equivalent to *only*:
  - a. I met *only/just* Mary.
  - b. I didn't meet *only/just* Mary.
- (15) not equivalent to *only*:
  - a. Can you spare just 5 minutes for me tomorrow?  
(Presupposition: You cannot spare more than 5 minutes for me tomorrow.)
  - b. Can you spare *only* 5 minutes for me tomorrow?

## References

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