

The mechanisms underlying different types of (exhaustivity) inferences

Nicole Gotzner, John Tomlinson (ZAS) & Katharina Spalek (Humboldt-University Berlin)
gotzner@zas.gwz-berlin.de

A sentence like “The JUDGE believed the defendant” is in certain contexts interpreted exhaustively such that nobody else believed the defendant. The present study investigates which mechanisms underpin the derivation of such exhaustive inferences and how intonational cues (rising L+H* pitch accents vs. neutral H* accents) affect its derivation.

Gotzner, Spalek and Wartenburger (2013) found that L+H* accents make contextually-given alternatives more available in comparison with H* accents (see also Fraundorf, et al. 2010). The combination of an L+H* accent with the particle *only* or *also*, in turn, led to a processing cost. We interpreted these findings as indicating that the L+H* activates alternatives and helps identifying the relevant alternatives while overt focus operators lead to additional computations/inferences about relevant alternatives.

Here, we use the materials from Gotzner et al. (2013) to investigate how listeners compute the inferences triggered by these intonational cues and different focus particles. Native German participants heard auditory discourses similar to (1). The second critical sentence of the discourses ((1)-b: *The judge believed the defendant*) was recorded in 6 experimental conditions: We crossed 2 accent type conditions (H* or L+H* on the referent noun *judge*) with 3 particle conditions (*only* (German *nur*), *also* (German *auch*) or bare). Subsequently, participants were presented with statement (2) about the alternative referent mentioned in the first sentence (in all experimental conditions) and had to decide whether the statement was TRUE or FALSE (see Fraundorf et al., 2010 for the same method). If participants interpret the critical sentence exhaustively, they should respond with FALSE.

In the first experiment, the statement was presented after a delay of about 1.5 minutes (4 intervening items). The results are detailed in Figure (1). There were significantly more FALSE responses in the bare condition with L+H* than H* accent whereas accent type did not matter in the case of the particle conditions with *only* and *also*. Interestingly, the bare L+H* accent did not differ from the *only*-H* and *only*-L+H* conditions. As a control, participants gave significantly more TRUE responses in the condition with *also* than the bare particle condition. These results show that L+H* accents reinforce an exhaustive interpretation only if no overt focus particle (*only* or *also*) is present. In a second experiment, we replicated these results with the statements being presented directly after exposure to the discourses. We further compared response times for correct rejections in the exhaustive conditions with H*, L+H* accents, *only*-H* and *only*-L+H*: The statement was rejected quickest with *only*-H* and *only*-L+H*, intermediate with L+H* accent and slowest with H*.

In conjunction, these results indicate that L+H* accents (i) activate alternatives, (ii) license a covert *only* operator and (iii) the application of this operator incurs a processing cost. We will discuss the implications of these results for theories of focus (intonation) and implicatures. We conclude that Chierchia (2013) can account for the findings, assuming that activated alternatives need to be consumed by either an overt or covert focus operator.

Stimuli:

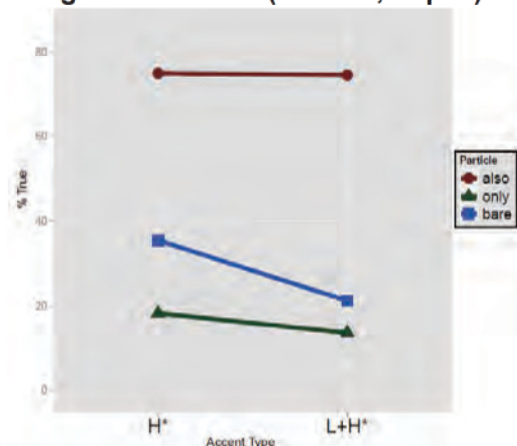
(1) a. Der Richter und der Zeuge verfolgten die Beweisführung. ‘The judge and witness followed the argument.’

b. (Nur)/(Auch) der Richter/RICHTER glaubte dem Angeklagten. ‘(Only)/(Also) the judge/JUDGE believed the defendant.’

c. Er verkündete das Urteil. ‘He announced the verdict.’

(2) Statement: Der Zeuge glaubte dem Angeklagten. ‘The witness believed the defendant.’

Figure 1: Results (%TRUE, Exp. 1)



[Go back to Day 2 Posters](#)