

The accent by the adjunct: Pitch accenting interacts with argument structure and previous reference in online reference resolution

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Prosody; Pitch accent; Argument structure; Reference; Comprehension; Visual world paradigm; American English

We investigated how prior reference and argument structure interact with pitch accenting to constrain online reference resolution. In prior experiments [1], accented simple noun phrases were interpreted as new words, while deaccented nouns preferentially interpreted as given.

However, other accounts [2,3] have proposed that the mapping between accenting and discourse status is indirect and mediated by argument structure. Accenting an argument licenses deaccenting its head: *king* in (1b) is new but deaccented because its argument *diamonds* is accented. Adjuncts do not license deaccenting, so *king* is accented in (2b). Moreover, while constraints on the placement of accents have traditionally been taken to refer to new versus given lexical items, production experiments [4] suggest discourse salience influences prosodic prominence even with lexical repetition controlled.

Thus, we investigated (a) whether argument structure mediates the effects of pitch accenting on reference resolution, and (b) whether this applies even without differences in lexical repetition.

We tested online interpretation of accenting using the visual world paradigm. Participants ($N=52$) followed auditory instructions to click playing cards on a computer. Each trial featured two cards of each of two ranks (e.g., two kings, two queens). A mix of two display types was used. In *argument displays*, each card differed in suit and cards were named using an argument phrase, as in (3). In *adjunct displays*, all four cards had the same fictitious suit (stars) and were described using nearby object landmarks, as in (4). An initial instruction established one referent as mentioned, as in (3a). On critical trials, a second instruction referred to an unmentioned target of the same rank, as in (3b). (Filler trials established this card was not always the target.) Using cross-splicing, we manipulated whether the head of the target was accented or deaccented.

If argument structure mediates the interpretation of accents—and does so even with lexical repetition controlled—prominence should interact with display type. In the adjunct condition, a deaccented head noun misleadingly suggests an accessible referent and should increase looks to the already-mentioned competitor. But when an argument is anticipated, deaccenting the head is always licensed and deaccented heads should not cue the mentioned competitor over the unmentioned target.

A multi-level model assessed the log odds of fixating the competitor in the time window before the disambiguating suit (e.g., *diamonds*). As predicted, accent and argument structure interacted, $t=3.23$, $pMCMC<.05$. In the adjunct condition, deaccented heads increased looks to the mentioned competitor, $t=2.51$, $pMCMC<.0001$, but no such effect obtained in the argument condition, $t=0.13$, $pMCMC=.91$.

These results suggest pitch accents are not interpreted as a direct cue to discourse status but one mediated by argument structure. This finding is consistent with offline metalinguistic judgments [2,5] and demonstrates such constraints even influence online reference resolution. Moreover, although constraints on accent placement are typically understood as referring to new versus given *words*, our results suggest similar constraints for new versus old *referents*: both the mentioned and unmentioned referents had a given head noun, but accented nouns were preferentially interpreted as referring to unmentioned referents.

(1a) Which card did you play? (1b) I played the king of DIAMONDS.

(2a) Which card did you play, and where? (2b) I played the KING by the DIAMONDS.

(3a) First click the KING that's by the HEARTS. (3b) Now click the (king/KING) that's by the DIAMONDS.

(4b) First click the king of HEARTS. (4b) Now click the (king/KING) of DIAMONDS.

References

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