When lexical access for ambiguous words can be reordered: Reducing the subordinate bias effect via a repetition paradigm

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Readers experience processing difficulties when reading biased homographs preceded by subordinate biasing contexts. According to the Reordered Access Model (Duffy et al., 1988), this is the result of competition between the dominant meaning and the context-instantiated subordinate meaning upon reaching activation simultaneously. Attempts to overcome this processing deficit by further instantiating the subordinate meaning have often failed to eliminate the subordinate bias effect, upholding the conclusion that lexical access is exhaustive.

The present study used eye tracking to examine the processing of biased homographs preceded by single-sentence contexts that instantiated the subordinate meaning. We varied whether this preceding context contained a prior instance of the homograph or a control word or phrase. Having previously encountered the homograph in its subordinate meaning earlier in the sentence reduced the subordinate bias effect for the subsequent encounter in both early and late eye movement measures. This reduction in processing time was not observed after the weaker instantiation of the subordinate meaning in the non-repeated condition. To ensure that this reduction in processing time actually reflected a reduction in the subordinate bias effect and not simply a benefit of recent lexical access through repetition, we compared these reductions in reading times to conditions in which the dominant meaning was instantiated by preceding context that included either the homograph or a control word or phrase. We found no significant differences in processing times for the dominant conditions as a function of repetition, supporting the idea that the observed reductions in processing times for the subordinate conditions actually reflect a mediation of the subordinate bias effect. Additionally this supports our conclusion that it is possible to create a strong enough biasing context to reduce the subordinate bias effect within a single sentence frame. Furthermore, we see that mediation of the subordinate bias effect is due to more than simple semantic or repetition priming. By using dominant conditions with equal degrees of repetition priming (repeated condition) and semantic priming (non-repeated condition) as our basis for comparison, we have attempted to control for this basic effect of priming and examine the effect of biasing context strength alone.

Example.

Subordinate. Kayla was hoping for a condo on the fourth story/floor, but the best they had was the third story so she didn’t buy it.

Dominant. At night Sue’s mom reads here a story/book before bed, but last night they didn’t read a story since she was in trouble.
References: