

Syntactic priming in an unscripted dialogue task
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Exposure to a syntactic structure elicits a 5-10% shift towards the same structure in subsequent language production (Bock, 1986). Recent studies involving partially scripted dialogue between a confederate and a participant found much larger effects, inviting the hypothesis that structural priming helps drive alignment of interlocutors' representations in dialogue (Branigan, Pickering, McLean & Cleland, in press; Pickering & Garrod, 2004). Evaluating this interesting proposal will require examining the interaction of priming and other important dialogue variables.

As an initial step, we examined how pragmatic constraints on adjective use interact with syntactic priming. Speakers identifying a target object, e.g. a striped cat, in a display with only one cat, will call that object "the cat," including the adjective "striped" in the description about 20% of time, as opposed to 95% when there is more than one cat, making the adjective necessary to uniquely identify the referent. We expected that when one dialogue partner had previously used adjectival modification to describe an object, the form of that previous modification (postnominal: "the basket with a bow," vs. prenominal: "the dotted line") would affect whether the speaker used postnominal or prenominal modification on the next trial. But how large would these effects be, and would they increase unnecessary modification?

Pairs of participants, situated back-to-back at separate computers, took turns instructing each other about which picture to select. Trials began with an identical display of four pictures on both screens; a circle appeared around the target picture for one participant, who then told her partner what to choose. Trials occurred in prime-response pairs. For priming displays, targets were members of a contrast set, distinguishable by one salient feature (e.g. a tall and a short stool). The feature difference was biased toward either prenominal or postnominal modification. In response trials, the target picture could be described with either a prenominal or postnominal description (e.g. "striped cat" or "cat with stripes"). The target either was or was not a member of a contrast set. An unrelated picture shared the same feature as the target (e.g. a striped shirt) in half the displays.

Contrast largely determined whether the response trials included modification: 95% for contrast displays and 20% for no-contrast displays. These low modification rates indicate that priming had minimal effects on the decision about whether or not to modify. However, when the speaker did modify, there was a significant effect of prime on postnominal modification of the target, as well as an interaction between the effects of prime and contrast, indicating a larger effect of priming in the no-contrast condition. A shared feature picture increased modification rates from 18% to 25% in the no-contrast displays. Postnominal modification of target responses was predicted by a significant interaction between prime type, contrast, and the presence of a shared feature picture.

The combination of the powerful effects of contrast on message selection, the secondary effects of shared features, and the tertiary effects of priming, presumably arising after message selection, suggests that structural priming may not play a special role in dialogue.

References

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