From Input to Intake: An Exploratory Study of Caregiver Tuning and Child Processing during Verb Learning

Yumeng Lin[1], Sudha Arunachalam [2*]
[1] School of Foreign Studies, Tongji University, [2] Department of Communicative Sciences and Disorders, New York University

Caregivers often adapt their speech to children's linguistic knowledge, potentially supporting comprehension and learning [1,2]. Prior work has shown that caregivers provide more elaborated input for words they believe children do not know, especially nouns [2,3,4], but less is known about whether this fine-tuning extends to verbs. Experimental studies suggest that some linguistic contexts are especially supportive for verb learning, such as explicitly labeling event participants and using informative referential expressions [5,6]. We therefore asked whether caregivers spontaneously provide such contexts when using verbs they believe their child does not know, and whether such adaptations facilitate children's uptake of the input.

We asked forty parent-child dyads (child ages 30-36 months) to watch 12 trials of videos, with 6 trials showing actors performing familiar actions (e.g., run) and 6 trials showing rarer actions (e.g., snarl). Parents were given a target word and were asked to describe the target video to their child to direct their attention to the target. We coded caregiver speech for global properties (e.g., speech duration, lexical density, lexical diversity, clause density, repetition) and for features specifically motivated by the verb-learning literature, including whether caregivers labeled event participants, whether those labels were unambiguous, and whether they used content nouns versus pronouns. To assess how caregiver input was taken up by the child, we measured eye-gaze latencies to the target event during the task and also administered a post-test on the harder verbs [7].

Caregivers did not systematically increase their use of the specific linguistic features identified in experimental studies as especially supportive for verb learning when they believed a verb was unknown. Instead, they spoke longer for verbs they believed their child did not know. Our eye-tracking data revealed that children's looking latencies did not differ overall between known and unknown verbs, but speech duration interacted with caregiver report of verb knowledge: for unknown verbs, shorter utterances were associated with slower looks to the target, whereas for known verbs, longer utterances were associated with slower looks. No caregiver speech measures predicted post-test performance.

Our findings suggested that caregiver adaptations in naturalistic settings occurred at a global rather than fine-grained level, and that these global adaptations were indeed children's processing efficiency. Children's verb learning in conversations with their caregivers is supported not through uniformly "optimal" structures, but through a communicative system in which caregivers balance informativeness with processing demands.

References

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