

Familiarity with a situation frees children's cognitive resources.

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Language acquisition has to take nonverbal behavior into consideration, because children's first communicative expressions involve gestures rather than words (Butcher & Goldin-Meadow, 2000). Studying young children's gestures longitudinally, we present first results about what means are favored to refer to events. In our setting, some of the presented events were recurrent over the period of biweekly sessions in which children and their caregivers interacted about objects and events. This way, familiarization was achieved. Familiarity with a situation is assumed to lighten the cognitive load for event processing and to free resources for higher cognitive performance such as language (Farrar et al., 1993). Event processing has been recognized as a part of communicative interaction as children have to coordinate their action goals with the shared goal (Białek et al, 2013).

In our study, we explored how the gestural behavior of the children changes as a function of the familiarization with the objects and events. Following Farrar and colleagues, we predicted that 14 months old children will (1) increase their pointing with speech or their (2) speech overall to familiar items. We operationalized pointing as arm movements with the extensions of an indexfinger, since we found that only indexfinger pointing (and not hand pointing) at 12 months explained a substantial amount of variance in receptive and productive vocabulary as well as in sentence comprehension and production at 24 months (Lüke et al., in prep). As we are in the process of coding the speech in terms of familiar and unfamiliar referents, we can only report preliminary findings: We conducted a 2(data points) x 2(familiarity of items) x 2 (vocabulary group) repeated measures. We found that the percentage of indexfinger points with words increased in nonfamiliar items. This effect was mainly driven by the group of children whose vocabulary was more advanced according to a parental survey provided when the children were 21 months old. This High Vocabulary Group (HVG) used more pointing with words at the second data point overall. For speech, we found that only in the High Vocabulary Group, the amount of words increased significantly.

We can therefore conclude that pointing behavior seems to change as a function of familiarization but only for children whose vocabulary is more advanced than their peers as we found their pointing with speech to increase to unfamiliar items. We can only speculate why children from Low Vocabulary Group are different: One reason might be that they show less interest in the overall situation. However, they showed more pointing at the beginning of the study than HVG; they might have some memory deficits and react in a similar way to novel vs. familiar events; another possibility is that they have some pragmatic deficits and do not take advantage of the overall interaction structure. Finally, the mothers might take up the behavior of children from LVG in a different way: They might mark the novel items less saliently or provide less transparent interaction structure than mothers in the HVG. Marcos (1991) demonstrated that in recurrent interaction routines, a shared view of what is important and relevant is achieved in typically developing children as mothers adjust to child's verbal behavior.

In summary, our data about pointing lightening the cognitive load is not conclusive. It reveals **different cognitive processing as a function of vocabulary knowledge**. Contrary to our predictions, for the familiar items, no changes in the pointing behavior could be observed. However, for the unfamiliar items, children from HVG used pointing increasingly often. This can be interpreted as children's ability to demonstrate either readiness to learn (Begus et al., in press) and/or cognitive load that is expressed by gestural behavior. Children's cognitive abilities seem to be tightly linked to pragmatic abilities, i.e. to **the recognition and use of resources in an interaction**.

References

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