

The effects of visual context on word learning in 14- to 19-month-old children

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During early language acquisition, children's word usage is highly bound to situational and thus visual contexts (Hoff, 2013). Moreover, studies show that 2- to 3-year-olds are better at word-learning and generalisation when stimuli are presented in the same context—same objects around and same background colour respectively (Axelsson & Horst, 2014; Vlach & Sandhofer, 2011). This suggests that a certain invariance of visual context helps children when learning new words. However, this has never been tested experimentally in younger children. We compare word learning in 14- and 19-month-olds using visually distinct (C1: change in object orientation and background) and identical (C2) object pictures in a fast-mapping eye-tracking paradigm. During the learning phase, two objects are presented with their label. During the test phase, both objects appear side-by-side with one label. We calculate the mean proportion of target looking (PTL) in pre- and post-naming phases in test phases. If children have learned to associate meaning to form, we expect a naming-effect to manifest as an increase in PTL in the post-naming phase. Analyses (mixed model and Wilcoxon tests) of 41 subjects suggest that 14- to 19-month-olds might benefit from context change when learning new words, while they struggle when context doesn't change. This could be due to an increase in attention during learning in C1. Alternatively, changing the background might help children better infer the target concept by separating it from its context (as our stimuli use highly naturalistic backgrounds). Considering these results, we conducted a variation of our first study using the same stimuli for C1 but maximising the learnability of the stimuli of C2 by using grey backgrounds in the pictures (ongoing analysis). We will discuss and compare the results of both experiments in light of other research on language development showing enhanced learning under conditions of variability.