

## **Investigating German-speaking 30-month-olds' sensitivity to vowel- and consonant mispronunciations of early words: A pupillometry study.**

**Clara Menze, Tom Fritzsche, Barbara Höhle & Silvana Schmandt**

University of Potsdam

According to the Division of Labor Theory consonants are more important for lexical processing than vowels, the so-called C-bias (Nespor et al., 2003). The developmental patterns of the C-bias vary cross-linguistically (Nazzi & Cutler, 2019). In Romance languages (French, Italian, Spanish), it emerges before 12 months of age. In Germanic languages, the picture is rather mixed: In English, the C-bias is not to be found until the age of 30 months; in Danish there is even a V-bias, and in German there is no bias at 20 months. This study asks whether German-learning 30-month-olds show a C-bias when processing mispronunciations of early acquired words. We measured children's pupil size while they viewed 30 test trials, each consisting of a picture and a corresponding auditory label which was either (1) correctly pronounced (COR; e.g., baby, [be:bl]), (2) mispronounced in the initial consonant (CMP; e.g., [ze:bl]), or (3) the stressed vowel (VMP; e.g., [by:bl]). Eighteen filler trials ensured that children heard more than 50 percent correctly pronounced words. Assuming a C-bias, we expected larger pupil dilations for CMP compared to VMP and to COR. So far, data from 16 children (5 girls, mean age: 29.4 months, range: 27.3–31.1) have been analyzed. The final sample of 30 children will be complete by the time of the conference. Preliminary results show significantly smaller pupil dilations for CMPs than COR (Fig. 1). The direction of this effect is surprising. Moreover, the pupil dilations in CMPs tend to be smaller than in VMPs, which hints at processing differences between vowels and consonants. Overall, we find indications for a C-bias in German 30-month-olds, similar to findings in English. Potential explanations for the unexpected direction of the effect are currently explored.