An important part of language acquisition is learning the way a particular language marks the agent and patient roles in transitive sentences. In languages that use multiple cues for marking the agent/patient distinction (e.g., German, Croatian), children have problems with sentences where different cues suggest different interpretation (Dittmar, Abbot-Smith, Lieven, & Tomasello, 2008; Slobin & Bever, 1982). The present study used the intermodal preferential looking paradigm and an offline pointing task to examine how Czech 2- and 4-year-olds use case inflection and word order in sentence interpretation. The time course of the preferential looking responses was analyzed to test when children first show signs of using the structural and morphological information from the auditorily presented sentences. Additionally, the preferential looking study tested the abstractness of children’s word order representations by employing structural priming (cf. Savage, Lieven, Theakston, & Tomasello, 2003).

In the preferential looking study, each item consisted of a transitive sentence played to the children and accompanied by two videos. These showed two participants doing the same action but in the opposite roles. The items were organized in pairs, with first sentence (the prime) structurally unambiguous, and the second sentence (the target) temporarily ambiguous:

**Primes:** Medvěd honí pejska. / Pejska honí medvěd.
  - *bearNom chase doggieAcc / doggieAcc chase bearNom*
  - The bear is chasing the doggie.

**Target:** Kačátko češe tygra.
  - *baby duckNomAccAmbig brush tigerNom*
  - The baby duck is brushing the tiger.

The prime sentences were used to evaluate children’s comprehension of different word orders. The target sentences were used to examine the effects of structural priming. In the offline study, children were shown pairs of pictures with the same participants engaging in the same actions but in opposite roles. The sentences varied in word order, and in whether they were temporarily ambiguous or not. Data from 20 2.5-year-olds and 26 4.5-year-olds were evaluated.

Preferential looking results showed that 2-year-olds tended to switch gaze toward the target picture in SVO but not in OVS prime sentences, suggesting that the former are easier to interpret. Similar pattern was observed in 4-year-olds. Younger children demonstrated structural priming in SVO targets by shifting their gaze to the target sentence more often after an SVO prime than after an OVS prime. Older children showed priming effects in OVS sentences. Overall, the findings confirm that children have an abstract representation of word order at the age of 2.5, but their ability to evaluate noncanonical OVS word orders is still limited at 4.5-years. However, the offline study suggested different pattern. The younger group of children showed above-chance performance in all sentences, and the performance was close to ceiling in the older...
group. Differences in comprehension between SVO and OVS sentences were only observed in temporarily ambiguous sentences.

Overall, the findings suggest that children have difficulty with the on-line processing of OVS sentences, but that they have some knowledge of their structure. When provided enough time in the offline task, they perform equally well in OVS and SVO sentences, as long as the sentence-initial words are unambiguously marked for case. Contrary to previous suggestions (Dittmar et al., 2008; Savage et al., 2003), children do not show principal problems with OVS word orders, and they represent word order independently of individual verbs.

Figure 1: Results in primes, reflecting children's comprehension of SVO and OVS sentences. Periods: 0 is the baseline (400 ms before sentence presentation), 1, 2, and 3 are fixations initiated during the first, second and third word, 4 is the period 400 ms after the offset of the last word. It is apparent that younger children show faster comprehension of SVO sentences than the older group.

References: