Predictive use of grammatical case in bilingual children is modulated by task

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The ability to rapidly generate predictions based on linguistic cues, including case markers, is critical for learning about complex contingencies in language (Phillips & Ehrenhofer, 2015). There is an ongoing debate on whether German children can anticipate OS word order from the Accusative case (ACC) on the object and assign such sentences a correct parse (No: Schipke et al., 2012; Sauermann & Höhle, 2016 vs. Yes: Özge et al., 2016). Russian children can do it faster because of special salience of the Russian case system (Sekerina & Mitrofanova, 2017).

In the present study, we extend the debate to bilinguals and test the predictive strength of ACC case in 3-to-6-year-old Russian-German (N=37) and age-matched Russian (N=66) monolingual children. They participated in a Visual of World eye-tracking study that employed a 2x2 design, with Word Order (OVS (1) vs. SVO (2)) crossed with Task (3 single referents as in Özge et al., 2016 vs. 2 pictures side-by-side, Fig. A). In the response-based 3-Ref task, children verbally accepted/rejected a picture; in the simpler 2-Pic task, they selected the correct picture by pointing. The accuracy in both groups in the OVS condition (2) was excellent, with monolinguals (92%) slightly outperforming bilinguals (88%).

\textbf{2-Pic Task} (Fig. B): The proportions of looks in both groups revealed a main effect of Word Order and early interaction between Word Order and Group. Monolinguals fixated the correct picture already at N1-ACC and showed a stronger Word Order effect. In contrast, bilinguals needed the Verb. \textbf{3-Ref Task} (Fig. C): The monolinguals started to anticipate the agent (fox) in the OVS condition at N1-ACC, just like in the 2-Pic task. The bilinguals’ fixations occurred only at N2-NOM. Thus, although bilingual children can use case predictively, the timing is modulated by task, in addition to other factors (cognitive capacity, Zhang & Knoeferle, 2012).

1. Seryj zajčik sejčas s’est kapustu.
Grey-NOM bunny-NOM now will eat cabbage-ACC

2. Seryj zajčik sejčas s’est lisa.
Grey-NOM bunny-ACC now will eat fox-NOM

Lines mean different things in SVO and OVS conditions:

Blue line -- Looks to the picture with the agent (bunny) in SVO => correct picture

Red line – Looks to the picture with the agent (bunny) in OVS => wrong picture


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