Acquisition of grammatical gender in Latvian-Russian bilinguals

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/ABSTRACT/
We present the results of an experimental study of the acquisition of Russian adjectival gender agreement by monolingual and bilingual preschool children. Unlike previous studies investigating the acquisition of grammatical gender in Russian, our study focuses on bilingual children and monolingual Russian controls living in Latvia, growing up in a community characterized by a high degree of both societal and individual bilingualism. Although the monolinguals come from one-language households and attend kindergarten with Russian curricula, they are passively exposed to a certain amount of the Latvian language outside of their immediate circle. Furthermore, the bilinguals in Latvia can be expected to be generally more balanced than bilinguals in previous studies, who grew up in communities where Russian has negligible status (e.g., The United States or Norway, Schwartz et al. 2015, Rodina & Westergaard 2015). We also address the influence of noun frequency and cumulative amount of language exposure on the acquisition of grammatical gender and analyze the non-target-consistent agreement patterns produced by both monolingual and bilingual children.

/GENDER SYSTEM OF RUSSIAN/
• Three grammatical genders — masculine, feminine and neuter.
• Masculine is a grammatical default (Corbett 1991).
• Gender agreement is expressed as a suffix on singular adjectives, etc.
• Gender of transparent nouns is predictable from their ending in the nominative singular (–C = –M, –a = –F, –o = –N).
• Gender of opaque nouns is ambiguous: nouns ending in –C can be either masculine or feminine; nouns ending in –a can be either feminine or neuter.

/BILINGUALISM IN LATVIA/
• Location: Baltic Region of Northern Europe; Population: ~2.07 million people; Part of the former USSR 1944-1991; Joined EU in 2004; Most numerous minority group: ethnic Russians; Population Census of 2011: 56% mainly use Latvian at home, 34% mainly use Russian; Population Census of 2000: 75% Latvian native speakers have some knowledge of Russian; 56% Russian native speakers have some knowledge of Latvian.

/RESEARCH QUESTIONS/
1. Will differences between mono- and bilingual children be mainly quantitative?
2. Will we find changes in correctness in the gender system of bilinguals?
3. Does the amount of cumulative exposure affect the acquisition of grammatical gender in bilinguals?
4. Does the frequency of lexical items affect the acquisition of grammatical gender?
5. Does morphophonological transparency affect the acquisition of grammatical gender?
6. Are monolingual children growing up in Latvia different from their peers growing up in Russia?

/STIMULI AND PROCEDURE/
Goal of the experiment: to elicit attributive adjectives agreeing in gender with the target nouns; Elicitation materials: a set of differently colored picture pairs depicting the target nouns, presented on a laptop screen: Six conditions: transparent and opaque nouns of masculine, feminine and neuter gender (Rodina & Westergaard 2015); Elicitation procedure:
Exsp: Ets nazyvazēja grība. Kāko oni po tovētu? "This, we call 'mushroom'. What color are they?"
Child: Krāsainā grīb un dzeltenā grība. ‘A red mushroom and a green mushroom’
Exsp: Oto plāpsis? “What has disappeared now?”
Child: Krāsainā grīb. ‘The red mushroom’

/RESULTS/
Differences between monolinguals and bilinguals
Older monolingual children are significantly more accurate than the bilinguals and younger monolingual children together (β = 1.42 (SE = 0.53), z = 2.7, p = 0.008); at the same time, there is no difference in performance between bilinguals and younger monolinguals (p = 0.16).

Effect of age and cumulative exposure in bilinguals
Controlling for age, cumulative length of exposure has a significant positive effect on accuracy (β = 1.36 (SE = 0.54), z = 2.13, p = 0.03). In addition, age – independently – also has a significant positive effect, such that older participants are more target-consistent (β = 0.16 (SE = 0.04), z = 3.5, p = 0.0005).

Effect of transparency
The positive effect of transparency turns out to be statistically significant overall (β = 1.37 (SE = 0.40), z = 3.4, p = 0.0007). No effect of item frequency

/EFFECT OF TRANSPARENCY/

/CONCLUSIONS/
1. Bilingual children show overall lower gender agreement accuracy than monolinguals close to them in age, and are comparable to younger monolinguals;
2. No qualitative differences between mono- and bilingual children. Younger monolinguals and bilinguals alike overuse masculine agreement with neuters, which might indicate the emergence of the gender default;
3. Amount of exposure positively correlates with gender agreement accuracy;
4. Bilingual children – but not monolinguals - are sensitive to the relative frequency of nouns in their input. While this might be attributable to the fact that the monolinguals in our study are too advanced for the effects of frequency to be apparent, this might also suggest that bilinguals rely more on contextual cues (e.g. agreement) than monolinguals do when assigning grammatical gender;
5. Transparent nouns elicit fewer errors than opaques across all genders and participant groups;
6. The performance of monolingual Russian children living in Latvia is comparable – both quantitatively and qualitatively – to what has been previously reported for age-matched Russian children growing up in Russia (Schwartz et al. 2015).