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 kindergartens 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 grow up in communities where Russian has no official 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.

/ 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 = 0.64), 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)

Effect of input frequency
Controlling for the effect of transparency, the bilingual children are significantly more accurate on adjectival gender agreement with more frequent nouns (β = 0.27 (SE = 0.1), z = 2.62, p = 0.009). However, no effect of item frequency was found for the monolinguals.

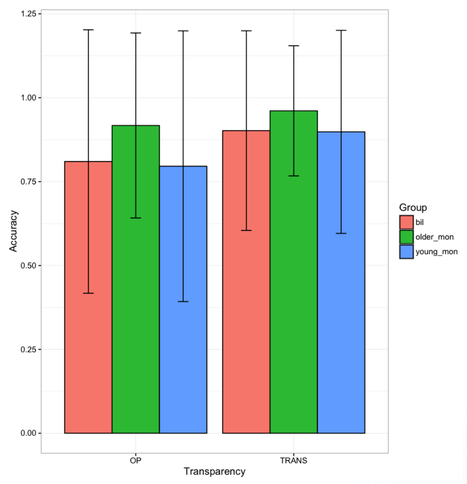
/ GENDER SYSTEM OF RUSSIAN

- 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 -ʌ can be either feminine or neuter.

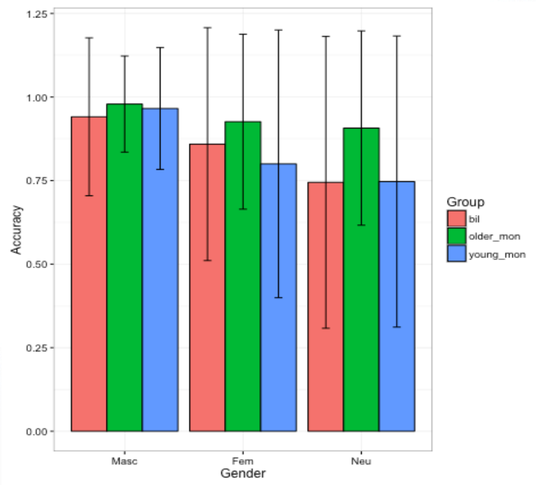
/ PREVIOUS STUDIES

- Monolingual children acquire target-like adjectival gender agreement with transparent masculine and feminine nouns very early (even before two-word utterances emerge; Ceitlin 2009);
- Opaque masculines sometimes trigger non-target-like feminine agreement, and opaque feminines might trigger masculine agreement, due to the ambiguity of nominative singular forms.
- Target-like agreement with neuters is acquired late: due to low input frequency, ambiguity of opaque neuters and overlap in inflectional paradigms of neuters and masculines.

/ EFFECT OF TRANSPARENCY



/ EFFECT OF GENDER

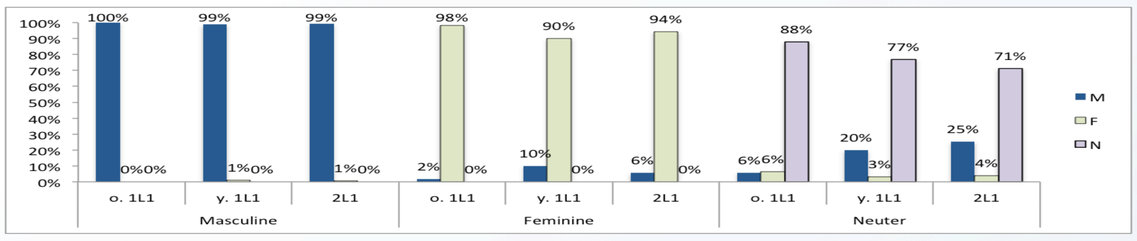


/ BILINGUALISM IN LATVIA

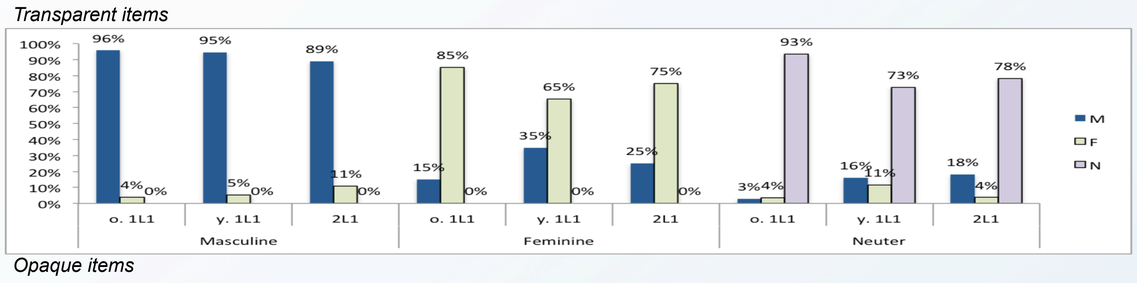
- **Location:** Baltic Region of Northern Europe;
- **Population:** ≈ 2.07 million people;
- Part of the former **USSR** 1944-1991;
- Joined **EU** in 2004;
- **Most numerous minority group**: ethnic Russians;
- **Population Census of 2011**: 56% mainly use Latvian at home, 34% mainly use Russian;
-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

- High degree of **societal** and **individual bilingualism**;
- Schools: **Latvian and Russian curricula** existed in parallel until 1999; bilingual education models introduced in minority schools by 2007;
- Kindergartens: **Latvian and Russian curricula** exist in parallel;
- Latvian-Russian **bilingual children** in Latvia:
  - ➢ generally more balanced;
  - ➢ exposed to extensive and varied input in both languages;
  - ➢ exposed to language input (including child-directed speech) generated by non-native speakers.

/ AGREEMENT PATTERNS BY CONDITION AND PARTICIPANT GROUP



Transparent items



Opaque items

/ RESEARCH QUESTIONS

1. Will differences between mono- and bilingual children be mainly quantitative?
2. Do we find changes/reductions 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?

/ PARTICIPANTS

Monolinguals:
Born and resident in Latvia; both parents speak Russian natively; attend kindergartens with Russian as primary language of instruction.

- **Younger group** (N = 24): mean age = 43.6 months (SD = 2.9);
- **Older group** (N = 18): mean age = 54.4 months (3.5).

Bilinguals (N = 19):
Born and resident in Latvia; one parent speaks Russian and the other speaks Latvian natively; attend kindergarten with Latvian language of instruction. Mean age = 62.2 months (SD = 10.4). Mean cumulative length of exposure (UBiLEC) = 2.39 (SD = 0.92).

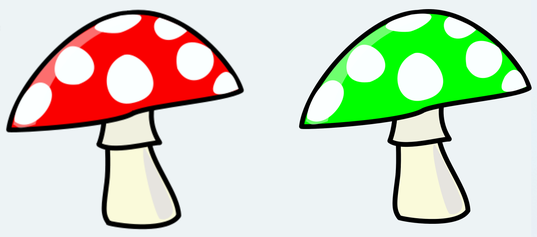
/ CONCLUSIONS

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).

/ 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:

Exp: Eto nazyvaetsja ‘grib’. Kakie oni po tsvetu?
‘This, we call ‘mushroom’. What color are they?
Child: Krasnyj$_M$ grib i zeljonyj$_M$ grib.
‘A red mushroom and a green mushroom’
Exp: Chto propalo?
‘What has disappeared now?’
Child: Krasnyj$_M$ grib!
‘The red mushroom!’



References: Ceitlin, S. N. 2009 *Ocherki po slovoobrazovaniju i formoobrazovaniju v detskoj rechi*. [On inflection and derivation in child language] Moscow, Russia: Znak; Corbett, G. G. 1991. *Gender*. Cambridge University Press; Rodina, Y., & Westergaard, M. 2015. Grammatical gender in bilingual Norwegian–Russian acquisition: The role of input and transparency. Bilingualism: Language and Cognition; Schwartz, M., Minkov, M., Dieser, E., Protassova, E., Moin, V., & Polinsky, M. 2015. Acquisition of Russian gender agreement by monolingual and bilingual children. International Journal of Bilingualism. **Acknowledgements**: The research leading to these results has received funding from the Norwegian Financial Mechanism 2009-2014 under Project Contract No NFI/R/2014/053.