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Bilingualism VS Trilingualism in Preschoolers Acquiring Russian, Hebrew, & English

Daniella Shimonov
Isabelle Barrière

*Long Island University-Brooklyn and
Yeled V'Yalda*



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Languages Other Than English In NYC

3rd Most Spoken
Language Other Than
English in NYC with
202,225 speakers.

Русский
Russian

14th Most Spoken
Language Other Than
English in NYC with
52,424 speakers.

עברית
Hebrew

Languages Other Than English (LOTE) spoken by New Yorkers over 5 years of age, US Census Bureau (2009) American Community Survey Table B160001 in Garcia, Zakharia & Otcu, 2013, p13.



Key Concepts

- Bilingualism – The ability to speak and understand two languages.
- Trilingualism – The ability to speak and understand three languages.
- Subject-Verb Agreement (SVA) – Sentence structure in which both subject and verb are in accordance in person and number. Examples of Mainstream American English:
 - *the boy \emptyset sleeps*
 - **the boy \emptyset sleep \emptyset*
- Bootstrapping- Children can acquire the morphosyntax of one language by transferring their knowledge from another language.



Similarities and Differences Across English, Hebrew and Russian

Similarity: All 3 languages have overt subject.

Differences:

- English has overt marking subject verb agreement only for 3rd person singular present.
- Russian and Hebrew are overtly marked for person, 1st, 2nd, 3rd singular and plural number and gender for different tenses.

English:

The boys throw \emptyset the toy.

The boy \emptyset throws the toy.

Russian:

Mal'chiki brosayut igrushku.

Mal'chik \emptyset brosayet igrushku.

Hebrew:

Hayeladim zorkim et hadavar.

Hayeled \emptyset zorek et hadavar.



Background

- **Cumulative Enhancement Model** (Flynn, Foley and Vinnitskaya, 2004): trilingual learners' use all of their languages- L1 and L2- when learning an L3; confirmed on *production* data focused on relative clauses on *Kazakh- Russian- English* trilinguals
- **Versus Other 'Deficit' Models:** trilinguals at a disadvantage compared to the usual Hebrew-English or Russian-English bilinguals due to them receiving lower amount of input in each individual language.



Research Question

Does the *Cumulative Enhancement Model* apply to comprehension and production in trilingual preschoolers who are simultaneously exposed to Russian (L1_A) and Hebrew (L1_B) before being exposed to English (L2)?



First step

- What are the similarities and differences between the comprehension patterns of bilinguals Russian-English and Hebrew – English?
- Does Russian and Hebrew bootstrap comprehension in English?



Methodology

- **Parents' Background Information Questionnaires**
-% of input in each language

Participants (3.5 to 5 year old preschoolers):

- 2 Groups of Bilinguals
 - 17 Russian/L1- English/L2
 - 6 Hebrew/L1- English/L2
- Trilinguals: ongoing data collection

Comprehension Task



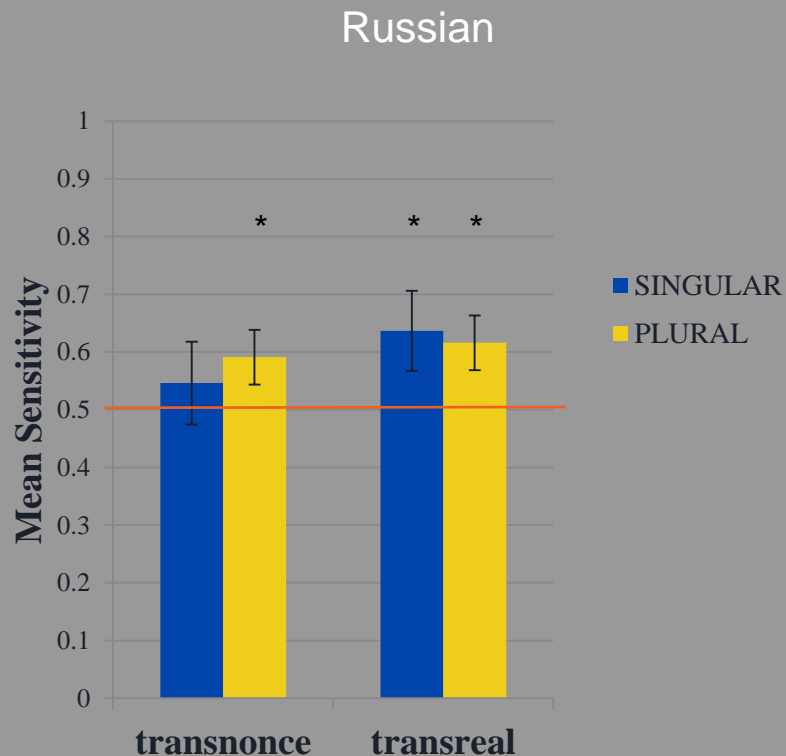
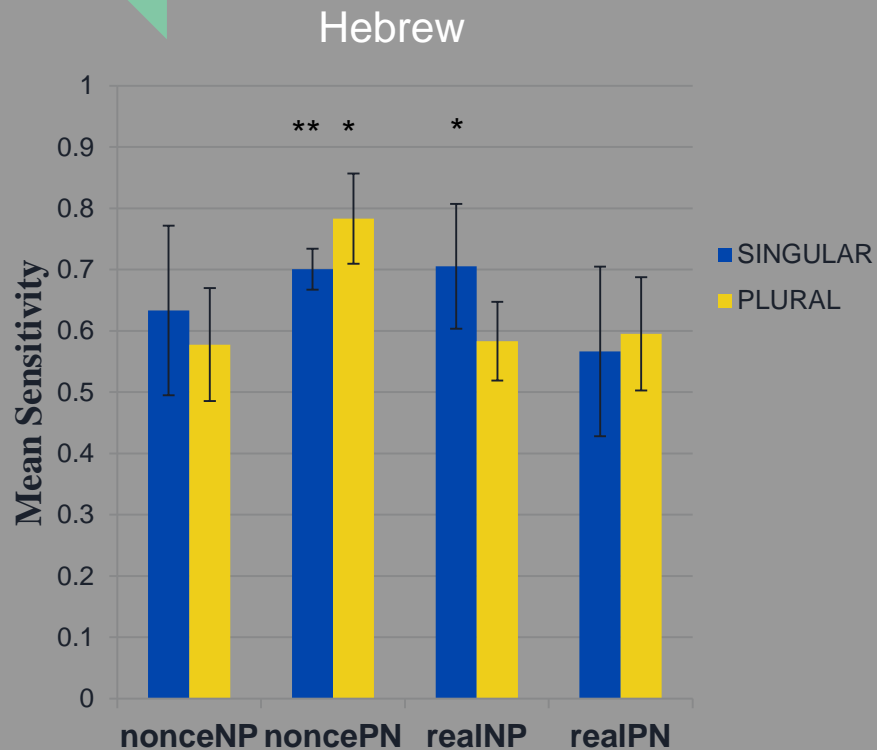
Mal'chik \emptyset chitaet knigu



Mal'chiki chitayut knigu

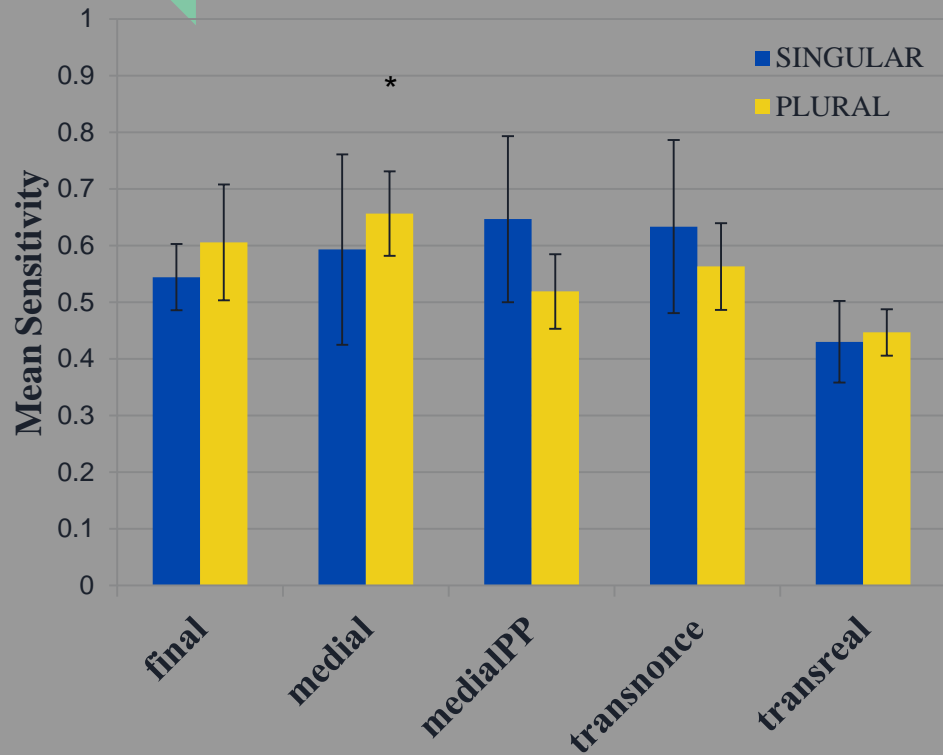
<u>Conditions:</u>	<u>English:</u>	<u>Russian:</u>	<u>Hebrew:</u>
Transitive Real NP	The boys throw \emptyset the toy. The boy \emptyset throws the toy.	Mal'chiki brosayut igrushku. Mal'chik \emptyset brosayet igrushku.	Hayeladim zorkim et hadavar. Hayeled \emptyset zorek et hadavar.
Transitive Real NP Pronouns	-	-	Hem zorkim et hadavar. Hu zorek et hadavar.
Transitive Nonce NP	The boys throw \emptyset the muk. The boy \emptyset throws the muk.	Mal'chiki brosayut keryag. Mal'chik \emptyset brosayet keryag.	Hayeladim zorkim et hatechirah. Hayeled \emptyset zorek et hatechirah.
Transitive Nonce NP Pronouns	-	-	Hem zorkim et hatechirah. Hu zorek et hatechirah.
Intransitive Medial PP	The boys sleep \emptyset on the bed. The boy \emptyset sleeps on the bed.	-	-
Intransitive Medial Adverb	The boys sleep \emptyset deeply. The boy \emptyset sleeps deeply.	-	-
Intransitive Final	The boys sleep \emptyset . The boy \emptyset sleeps.	-	-

Results: Evidence of Comprehension (Mean Sensitivity) by Number and Condition

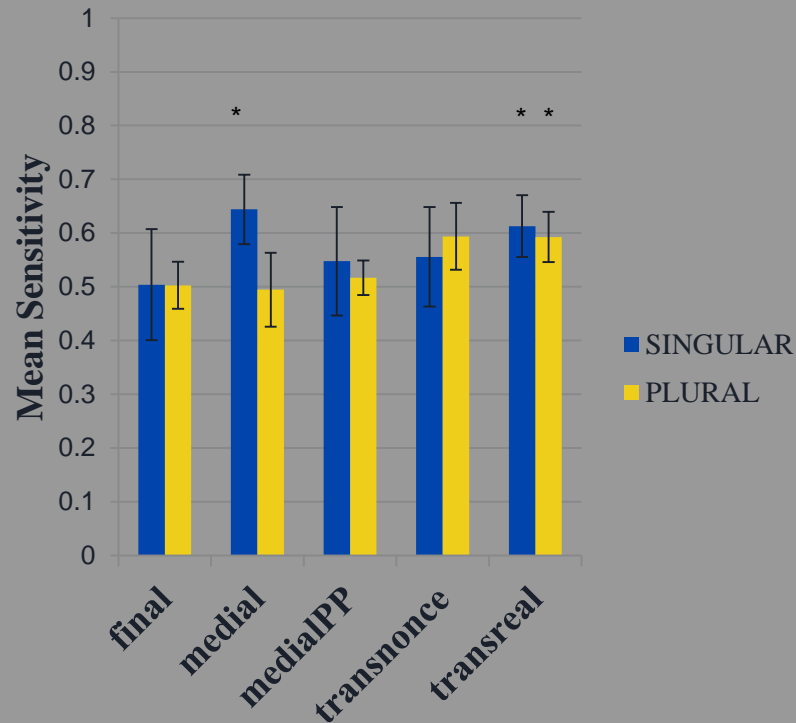


Results: Mean Sensitivity by Number and Condition

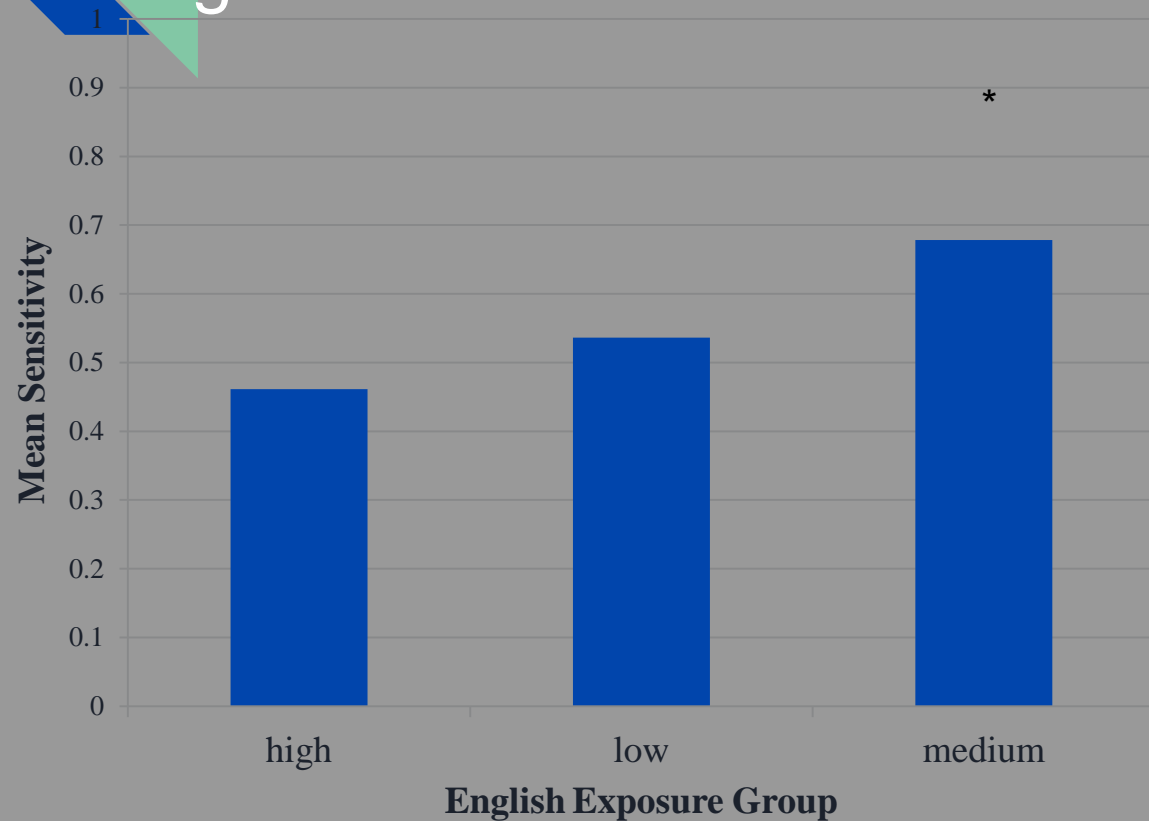
English for Hebrew



English for Russian



Results: English Comprehension by Exposure to English



Group	English Exposure	Russian/ Hebrew Exposure
Low	10 25	90 75
Medium	50	50
High	75 10	25 90

→ Significant L1 exposure bootstraps bilinguals' performance in their L2



Conclusions and Significance

1. Examination of bootstrapping from L1 to L2 in preschoolers' *comprehension*
2. 50%/50% Exposure advantage: evidence of bootstrapping from L1 to L2
3. Russian-English Bilinguals understand a broader range of structures in L2/English than Hebrew-English Bilinguals
4. Cumulative Enhancement Model predicts: Hebrew/L1-Russian/L1-English/L2 trilinguals will comprehend broader range of structures compared to bilingual Hebrew-English → ongoing data collection
5. Significance: assessment of bilinguals and trilinguals

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