

GEFÖRDERT VOM



Bundesministerium
für Bildung
und Forschung

ERNST MORITZ ARNDT
UNIVERSITÄT GREIFSWALD



Wissen
lockt.
Seit 1456

Effects of parental input on heritage language development: A comparison across linguistic categories

Bernhard Brehmer & Tatjana Kurbangulova
University of Greifswald, Germany

Workshop on Heritage Language Acquisition
Tromsø, 19.-20.09.2016

Input effects in bilingual language acquisition

- **crucial importance of input** for monolingual and bilingual language acquisition underlined in different theoretical approaches (cf., among others, Guelzow & Gagarina 2007, Tomasello 2003, 2006)
- Input defined as linguistic material offered to the child by his/her environment (cf. Szagun et al. 2006)
 - cf. different sources of input: mother, father, grandparents, siblings, peers, television (de Houwer 2000)
- Parental input patterns, degree and types of language mixing as well as relative/ absolute amount of exposure to (minority) language significantly affect children's language use and proficiency in minority language (cf. Pearson 2007, Klassert & Gagarina 2010, Paradis 2011 and many others)
 - but: extent of knowledge of the heritage language is related to a complex interaction of many factors

Input effects in bilingual language acquisition

- Most studies deal mainly with **quantitative aspects** of input in the minority language (cf. Paradis & Grüter 2014, De Houwer & Bornstein 2003, de Houwer 2009, 2011, 2014 and Unsworth's research)
 - Reduced quantity of input in minority language impact an individual's processing and representation of that language (cf. Paradis 2011)
- **Qualitative aspects** clearly underresearched
 - potential impact of parental qualitative input on the children's output, especially with regard to cross-linguistic influence apparent in the children's output (Paradis & Navarro 2003, De Houwer 1997)
 - "HS [heritage speakers] may be subject to language input from the first generation which has already undergone changes under the influence of the (L2) majority language." (Kupisch 2013: 207)
 - Cf. **missing-input competence divergence hypothesis** (Pires & Rothman 2009)

Input effects in bilingual language acquisition

- “(...) the relationship between bilingual input and bilingual outcomes is not one-to-one, it is neither linear, nor **does it generalize evenly across linguistic domains and constructions**, or across populations of bilinguals in diverse socio-linguistic contexts. (...) Bilingual development is both sensitive to and resilient against variation in input and experience.” (Paradis & Grüter 2014: 11, emphasis ours)
- choice of outcome measures matters when looking at the effects of input on language development (cf. Thordardottir 2014 on differences among bilinguals in morphosyntactic ability as a function of variation in home language input)

Research question

- **RQ:** Is parental input variability regarding the heritage language (HL) meaningfully related to HL outcomes in children?
 - Are there differences in the extent to which parental input variation affects HL development of children with regard to different linguistic domains?
 - Which innovations in children's HL can be traced back to deviant parental input, which can be characterized as results of internal processes in the child's speech (e.g. individual attrition and/or incomplete acquisition or individual transfer from majority language)?

Data

- Research project **Russian and Polish heritage languages as a resource in the German classroom** (Joint Project: University of Greifswald & University of Leipzig)
- Funded by German Ministry of Education and Research (BMBF), 2013-2016
- Greifswald Project focuses on
 - testing bilingual language development in heritage language and German, 49 informants, 12-14 year old teenagers (6th/7th grade), 26 HS of Russian, 23 HS of Polish
 - different proficiencies (oral proficiency, reading and listening comprehension, writing skills, pronunciation, grammatical and lexical knowledge, style shifting abilities; focus on production)
 - evaluation of the input received by informants in the heritage language and German in each of the selected families by including parents (esp. mothers) in testing

Data

Russian Heritage Speakers	
Number	26
Sex: male : female	14 : 12
Average age at testing	13,6
Average AO German	1,65 (SD 1,32)
Born in Germany	13
communication between parents only in Russian	12
mother > child only Russian	9
father > child only in Russian	10
child > mother only in Russian	4
child > father only in Russian	6
schooling in HL	15

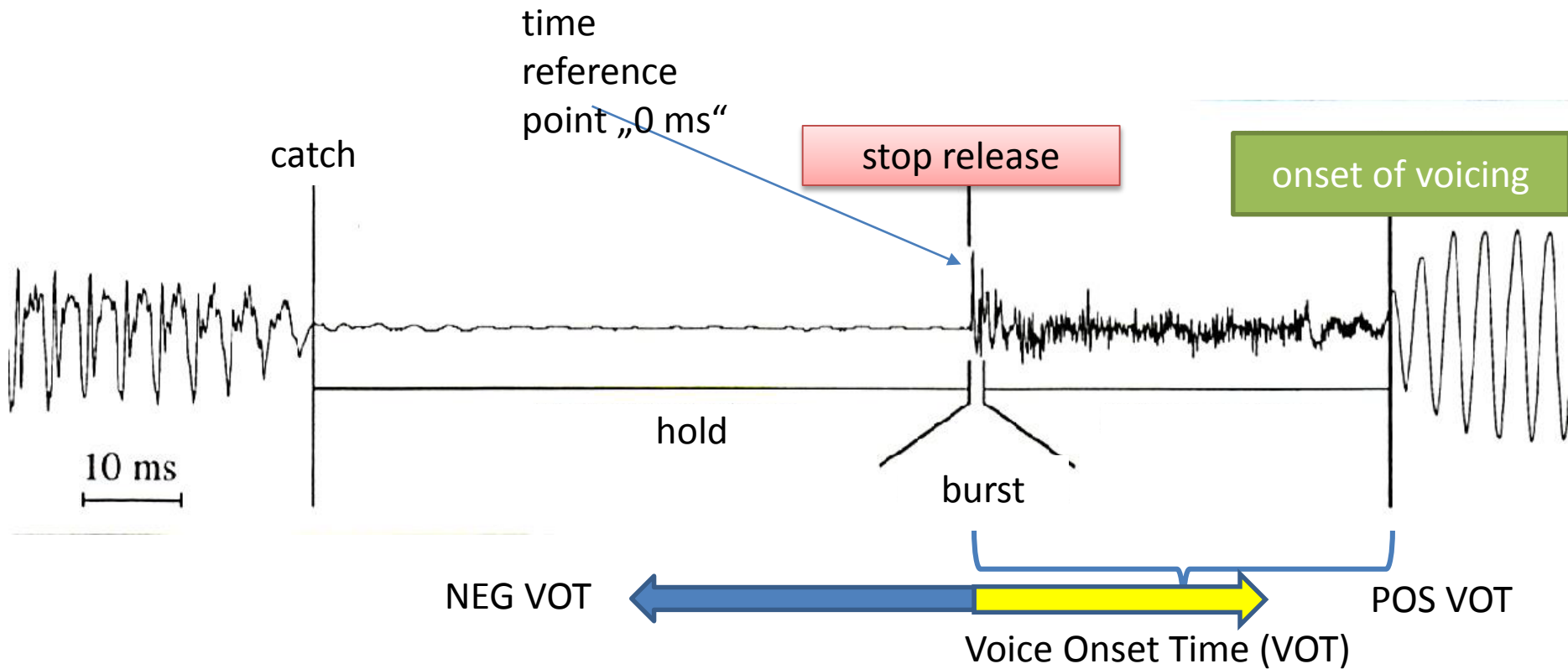
Results I

Input and acquisition of phonetic features :

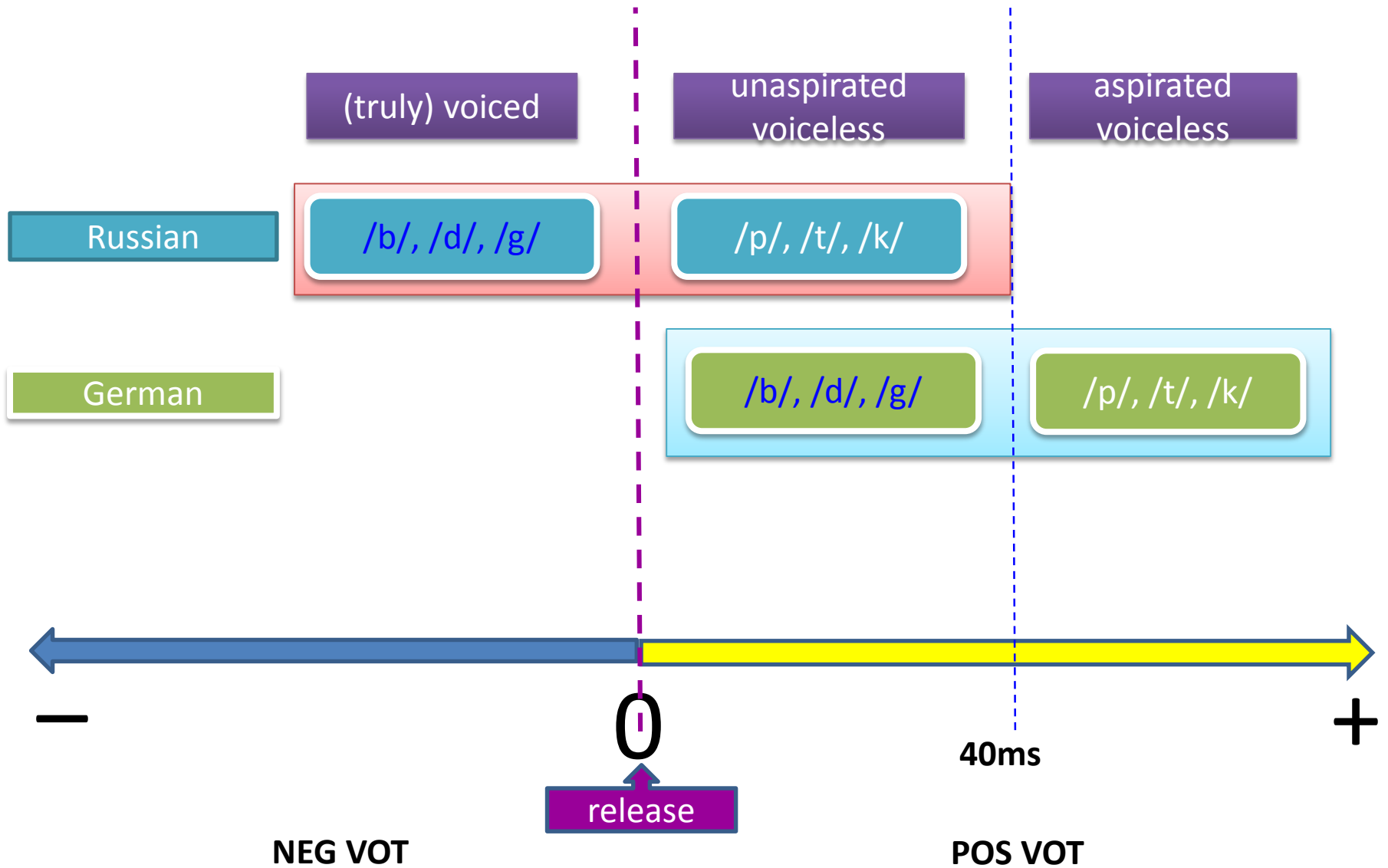
Voice Onset Time (VOT)

Tatjana Kurbangulova

Rus+Ger: **phonological** voiceless stop consonants /p/, /t/, /k/
vs. voiced stop consonants /b/, /d/, /g/
different phonetic basis for the voicing distinction



VOT



Test VOT

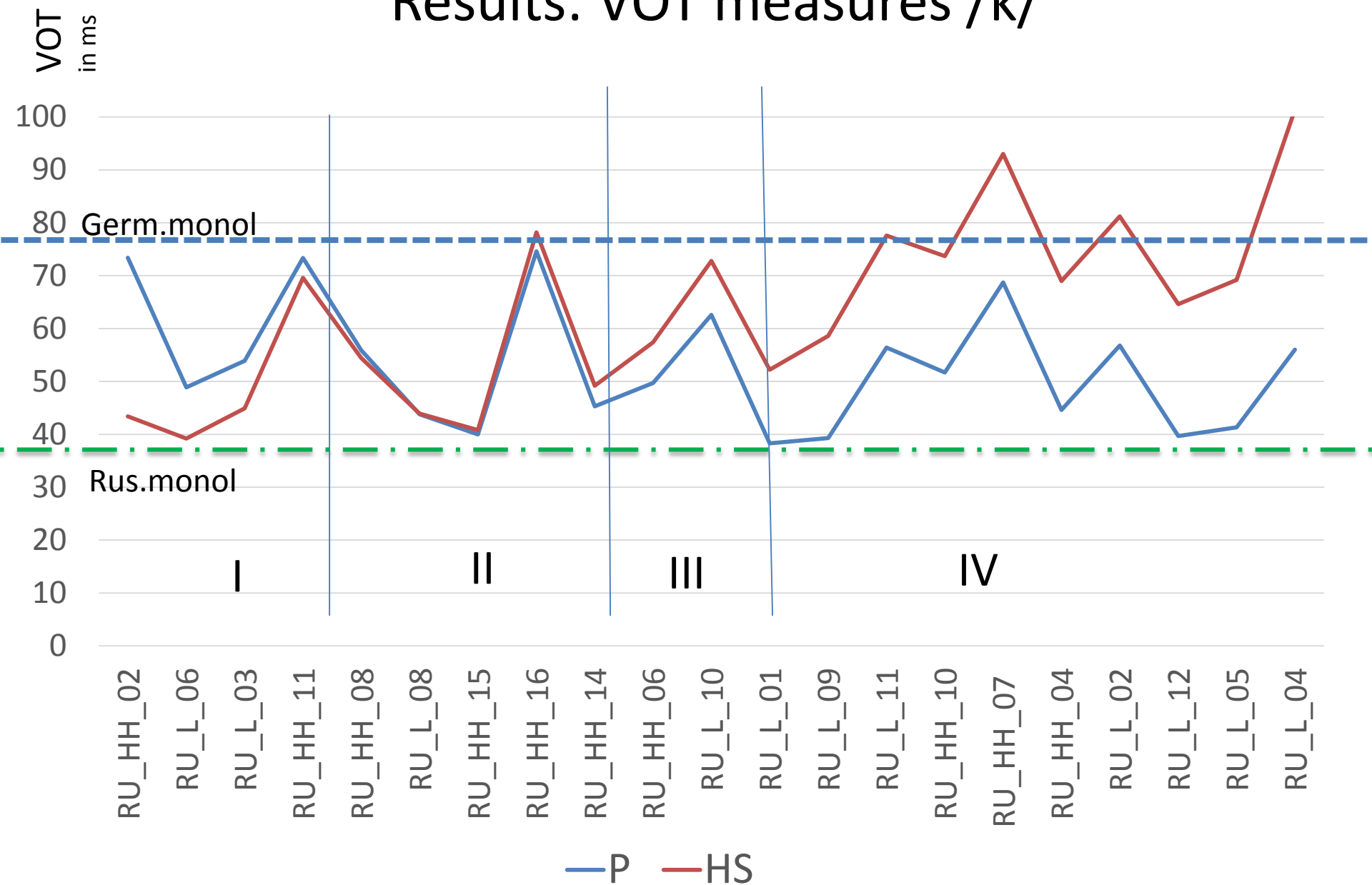
Informants Σ	42
Families	21
- heritage speakers	13f, 8m
- parents	21f

Minimal pairs
par - bar
tam - dam
kum - gum

Stimuli	62
Tokens	2593

sound recordings were analyzed using Praat (Boersma/Weenink 2015)

Results: VOT measures /k/



Results II

Input and acquisition of inflectional morphology

Bernhard Brehmer

Test

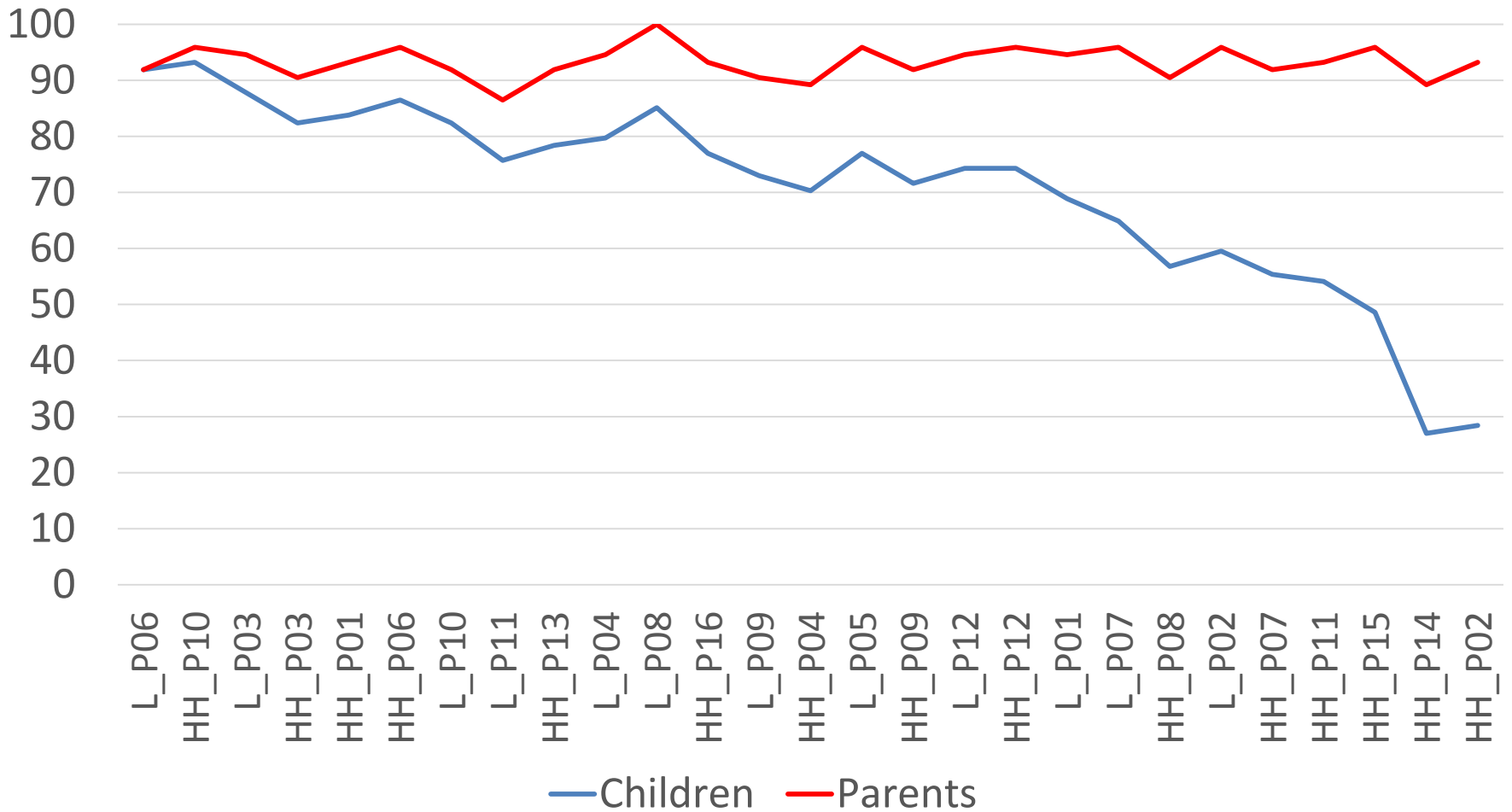
- **Cloze-Test:** 74 gaps, focus on inflectional morphology of nouns (30 gaps) and verbs (32 gaps)

Жили-были Маша и медведь. Маша – _____ (маленький) девочка. Она _____ (жить) с родителями в _____ (деревня).

- performed orally by the children (n=26), parents mostly preferred written form of testing
- Score: correctly filled gaps (orthographical errors neglected)

Results II

Correctness score (%)

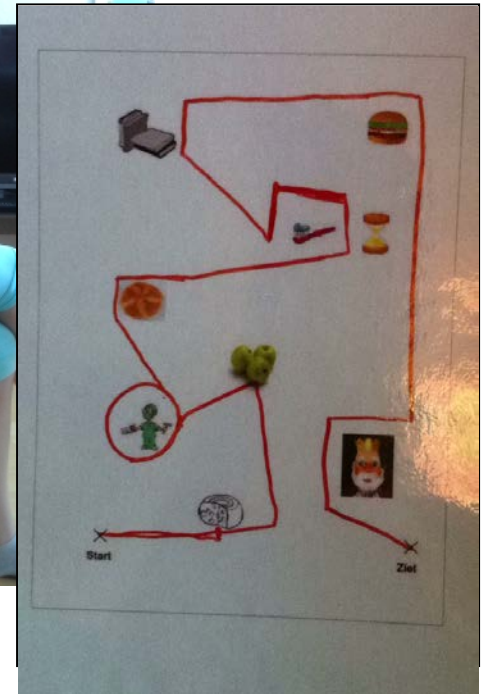
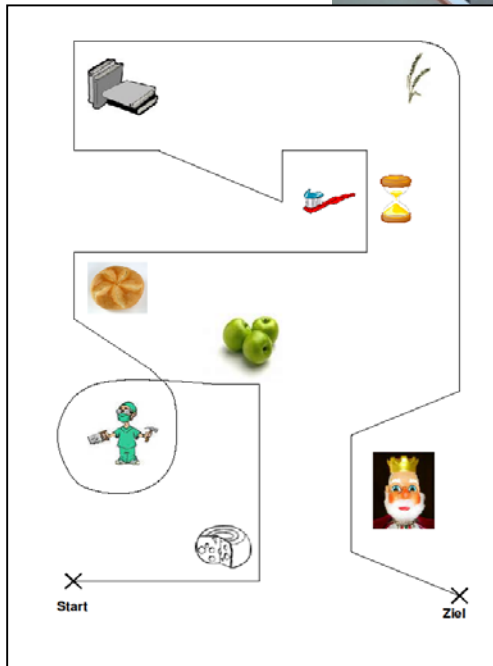
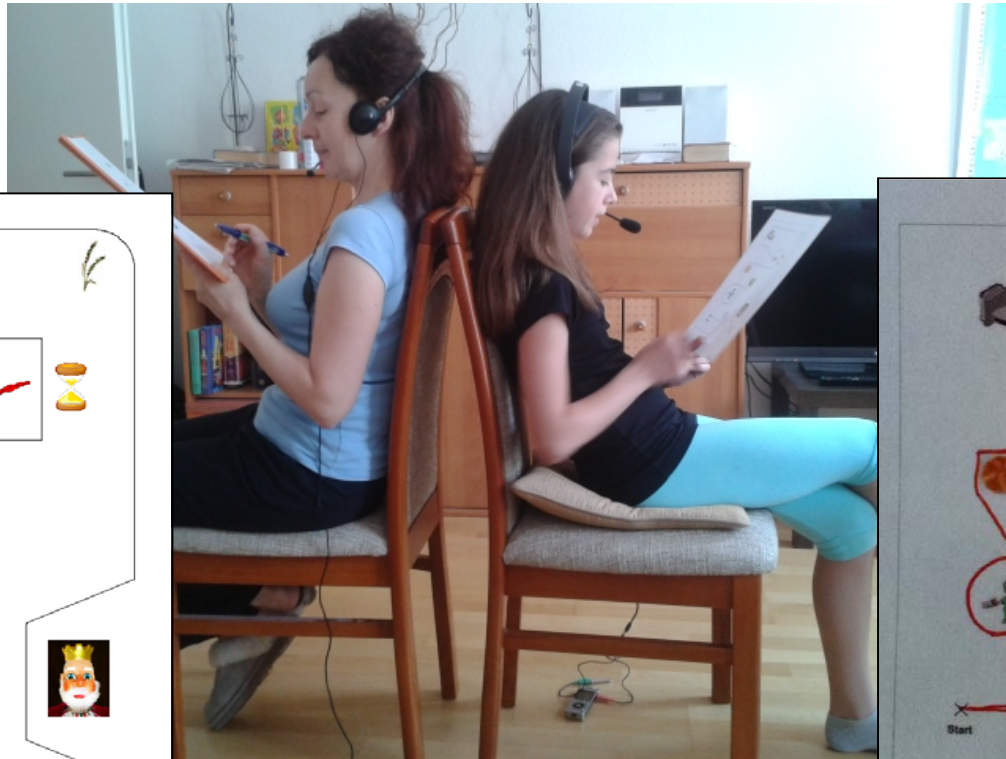


Results III

Input and the acquisition of null subjects

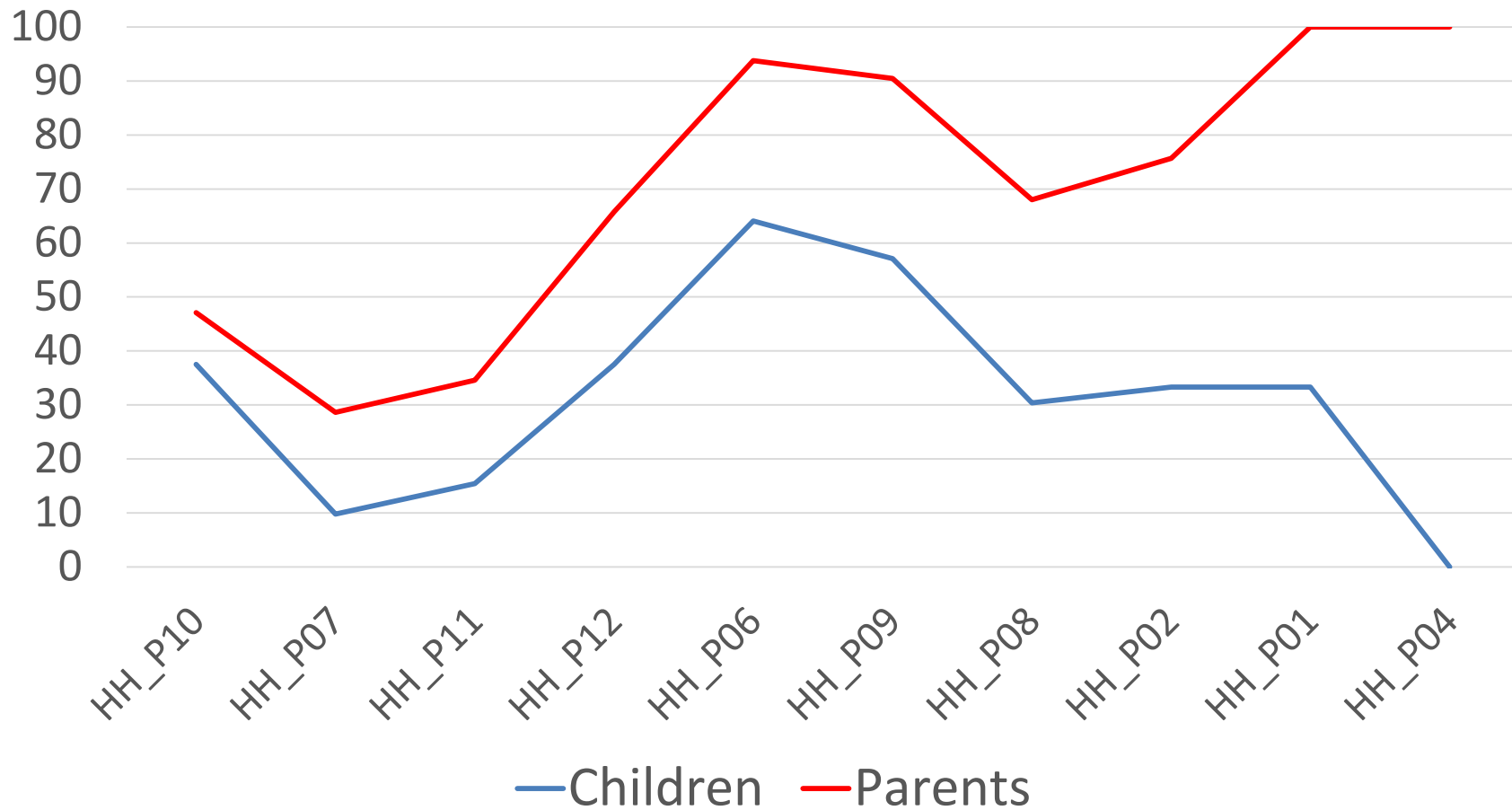
Bernhard Brehmer

Test: Map Task



Results III

Ratio of null vs. pronominal subjects (%)



Results IV

Input and vocabulary acquisition

Bernhard Brehmer

Test I: Semantic mapping

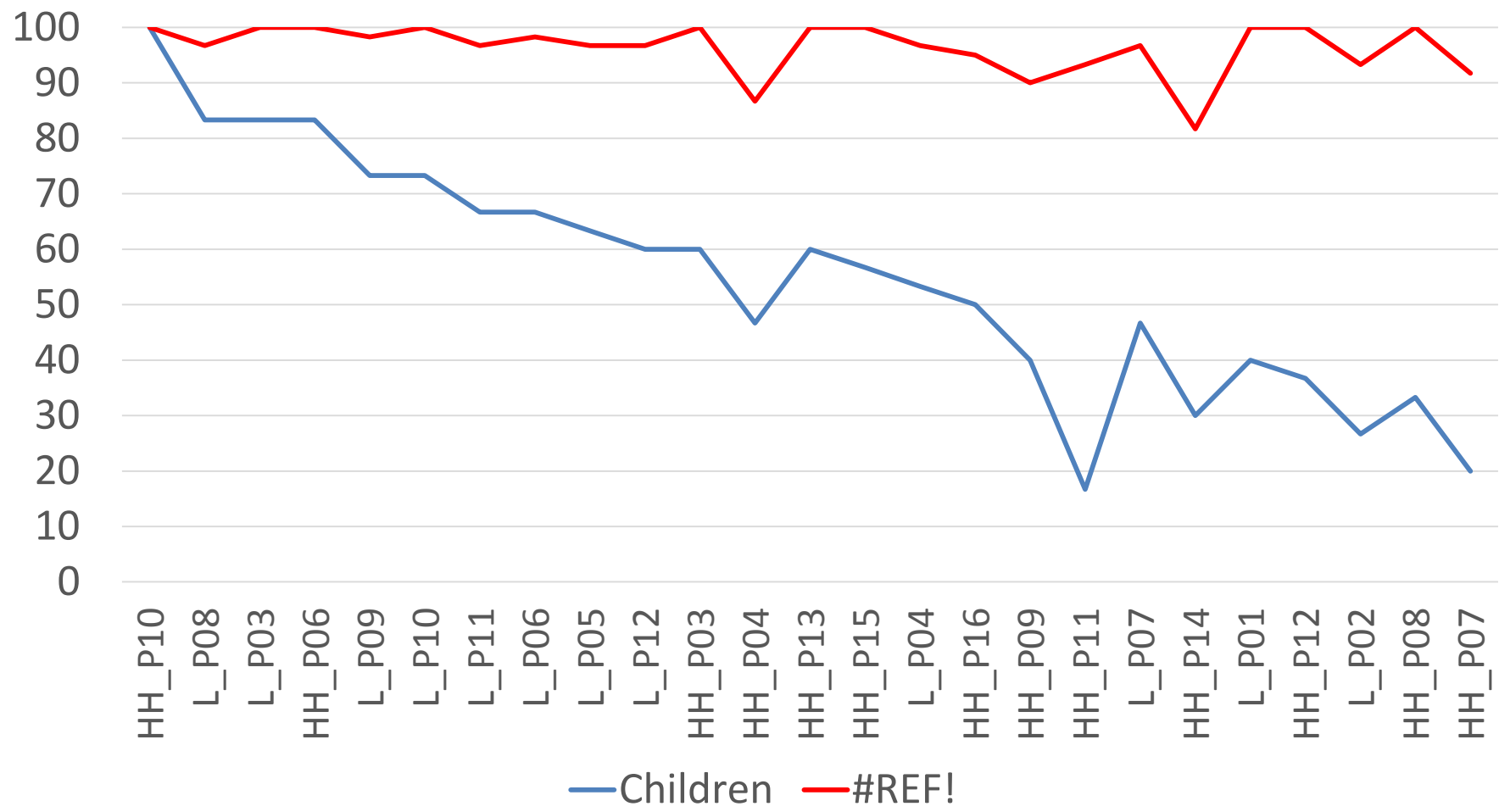
- Adapted from a German standardized version (CFT-20R, Weiß 2007)
- given item, informants had to select another item from a list of 5 that semantically matches the target item best (mostly synonyms)

блузка а) рубашка б) ветер в) костюм д) аппарат е) сила

- n= 30 items, mostly nouns, but also three verbs and one adjective
- ordering according to frequency of target item
- score: number of correctly matched items
- Data from 25 HS of Russian

Results IV: Semantic Mapping

Correctness score (%)



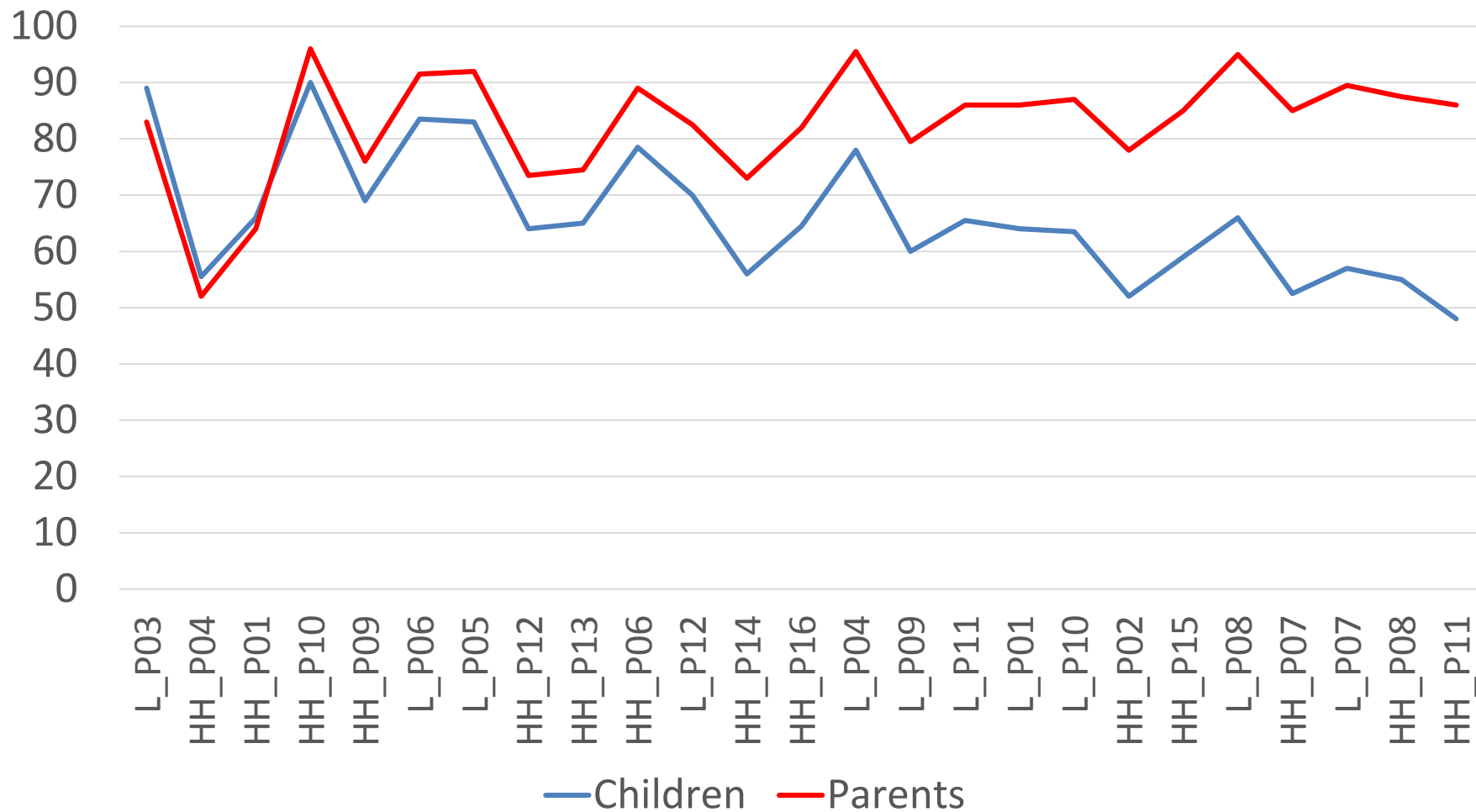
Test II: Vocabulary Translation Task

50 items to be translated from HL to German, 50 items to be translated from German to HL

- selection of items according to word frequency bands and semantic fields
- 1/3 high-frequent items, 2/3 low-frequent items, taken from different semantic fields
- items representing all word classes
- self-paced administration of task
- score: relative number of correctly translated items
- N= 26 HS of Russian

Results IV: Vocabulary Translation Task

Correctness score (%)

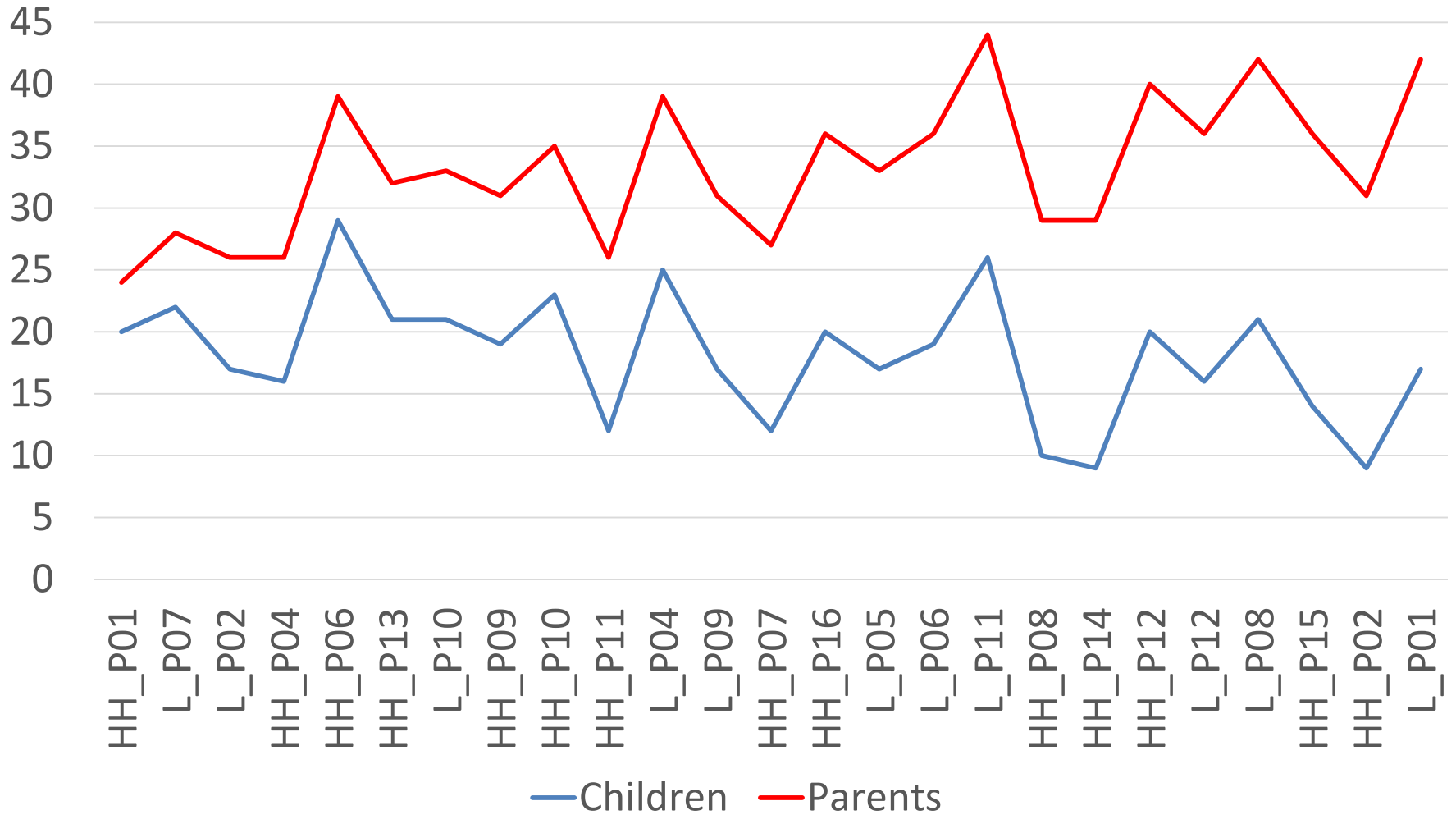


Test III: Category Fluency Task

- six different categories testes (in different sessions)
 - **noun categories:** fruits, vegetables
 - **adjectival categories:** colours, human properties
 - **verbal categories:** verbs of movement and household activities
- Time span: 60 seconds, 1-2 items given as an illustration
- Score: number of semantically correct items mentioned by the informants
- **Here: only two categories** analyzed: **vegetables** and **colours**
- N= 25 HS of Russian

Results IV: Category Fluency Tasks

Number of mentioned items



Conclusions

- For some of the investigated domains parental input clearly differs from the (proposed) baseline of monolingual speakers of Russian (esp. VOT and ratio of null subject use)
- 2nd generation speakers are already exposed to deviant input
- Data show that parental input (inter alia) seems to play a crucial role for HL development for most (although not all) of our children
- children's outcomes mirror parental input variability or at least developmental tendencies extant in the data taken from the parents
- However, not all investigated domains are reliant on parental input quality to the same extent

Conclusions

- **Phonetics/VOT:** half of the tested children fall into the range of VOT measures recorded for the parents or even approximate the norms reported for Russian monolinguals to a higher degree than the parents themselves
 - holds at least for voiceless stops series
 - VOT highly sensitive to input variability
- **Null subjects:** on average the second domain where children's outcomes reflect parental input quality
 - However, children use null subjects to a significant lesser degree than their parents ($\chi^2=37.701$, $p<0.001$)
- **Inflectional morphology:** parents exhibit ceiling effect in the task, i.e. input quality seems to approximate baseline

Conclusions

- Clear difference between parents and children: great degree of variability in children contrasts to more or less stable results of parents in the morphology task
- **Vocabulary:** task-dependent results
 - translation task: task where most children approximate parents' scores
 - category fluency task: overall similar results for children and parents, although children score on a much lower level than parents
 - semantic mapping task: huge differences between results of parents and their children

What remains to be done

- Clustering of informants according to their proximity to parental input patterns across all investigated linguistic domains
- Include (reported) data on quantity of input in HL as well as other factors that could account for individual differences with regard to (mis)match between parental input and children's outcomes
 - Exposure to schooling in HL („Saturday schools“)
 - Attitudes towards HL

Thank you for your attention!!!!

Hoping to receive some (qualitative) input from
you.....