Testing two different models of verb-marking error in children with Developmental Language Disorder and language-matched controls

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Introduction

- Comparison of two different models who describe the pattern of verb-marking error in German-speaking children with Developmental Language Disorder (DLD) and language-matched controls

(Extended) Optional Infinitive ((E)OI) Hypothesis
(Wexler, 1994; Rice et al., 1995)
children's verb-marking errors reflect a stage in which their grammars allow non-finite forms (e.g. *build*) in contexts in which finite forms (e.g. *builds*) are required

↓ Innate mechanisms: OIs ↓

Dual-Factor Model
(Freudenthal, et al., 2007, 2015)
children's verb-marking errors reflect the learning of non-finite forms from compound-finite constructions (*He ~~can~~ a house build*-INF), and to default to high-frequency non-finite forms in simple-finite contexts

↑ Input based learning: OIs ↑

Hypotheses

- Children with DLD would make more OI errors than language-matched controls, particularly in simple-finite contexts (EOI Hypothesis)
- Both groups would make more OI errors in compound-finite than in simple-finite contexts (Dual-Factor Model)

Methods

Sample

- 100 German speaking children: 50 children with DLD (3;0 to 5;5)
  50 language-matched controls (2;2 to 2;11)

TESTs

- K-ABC 2 (2015) & Battery of German language Test (PDSS (2009), SETK-2, SETK 3-5 (2015))

Experiment

- Standard verb-elicitation paradigm
- Used to collect responses for a range of verbs that varied in the relative frequency with which they occur in non-finite and finite form in German child-directed speech
- Two conditions: Condition 1: Simple-finite (e.g. *Lisa builds a tower. Peter …*)
  Condition 2: Compound-finite (e.g. *Peter can a house build-INF. Lisa …*)

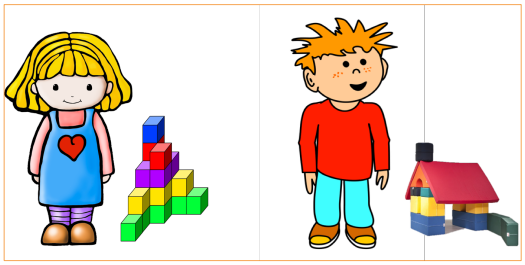
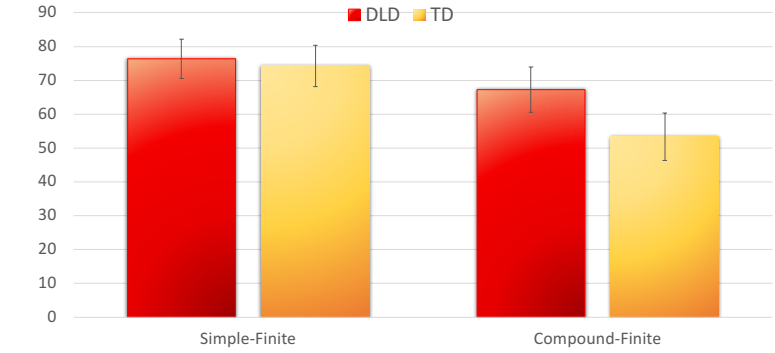


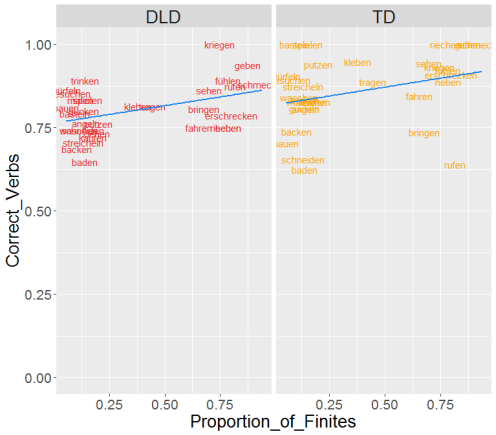
Figure 1: Example context for build taken from the experiment

Results

- Rates at which the children produced correct responses (as opposed to OI errors) were entered into a 2x2 Mixed ANOVA
- Results show a significant main effect of condition, with higher rates of correct responses in simple-finite contexts and no significant main effect of group



- Analysis in R shows input effect, when focused on simple-finite condition



Discussion

Testing of Hypotheses

→ EOI Hypothesis – False → Dual-Factor Model – True

- Results count against EOI Hypothesis, since they fail to show higher rates of OI errors in DLD children than in language-matched controls
- They are broadly consistent with the Dual-Factor Model, since they show higher rates of OIs in the compound-finite than simple-finite Condition
- Analysis in R using mixed effect models shows significant effect: children tend to produce OI errors on a verb-by-verb basis in terms of the relative frequency with which verbs occur in infinitive and finite form in German child-directed speech.

References

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