P2-D-59

Dog, doggy, dogs: Characterizing variability within and across families during infancy

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Introduction

Infant-directed speech includes a lot of word-level variability.[1] For nouns, this commonly includes morphemes that mark plurals, compounds, and diminutives.
Not all morphology has clear syntactic or semantic implications.[2]
E.g. diminutives in IDS: "doggy" and "dog" refer to same object.
Here, semantic-syntactically void morphology = **wordplay.**

Research Questions:
1. Is wordplay consistent within families?
2. Is wordplay consistent across families?
3. What are the effects on infant vocabulary from wordplay?

Methods

Corpus analysis of SEEDLingS: 44 infants from 6-17 months

Data collection:
- Monthly day-long audio recordings
- Monthly hour-long video recordings

Annotation of object words (i.e. concrete nouns):
- Words coded as said and in lemma form (e.g. birdies, bird)

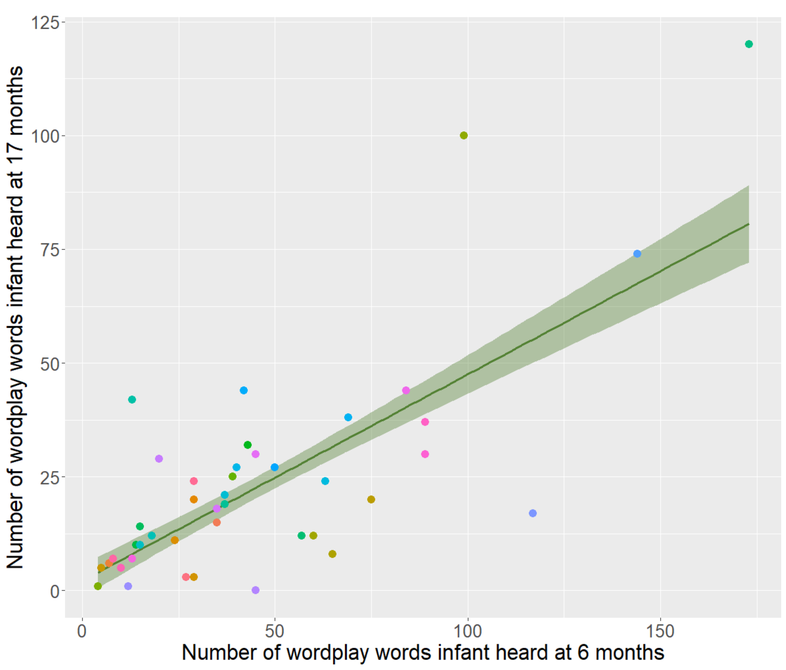
(Also coded for speaker, utterance type, and object presence)

Variability analysis:
Spoken words and lemma that differed were coded for up to 3 alternations (i.e. divergences from lemma)
E.g. "birdy-birdies": plural, reduplication, y-epenthesis

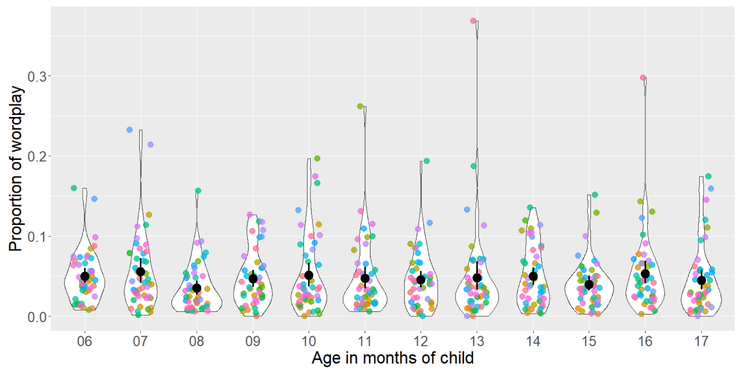
Parental Report Measures:
Parents completed monthly Words & Gestures MCDI questionnaires up to 18 months.

Within-Family Variation

Within families, wordplay remains **consistent across time.**
Correlation between wordplay heard at 6 months and wordplay heard at 17 months: Spearman's ρ = 0.71, $p < 0.001$

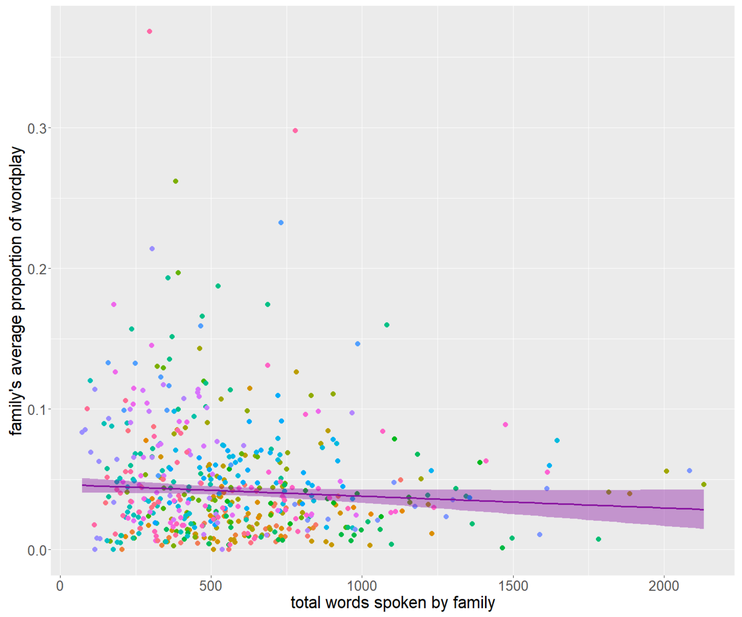


Average amount of wordplay across infants was consistent month-to-month, although individual outliers varied over time.



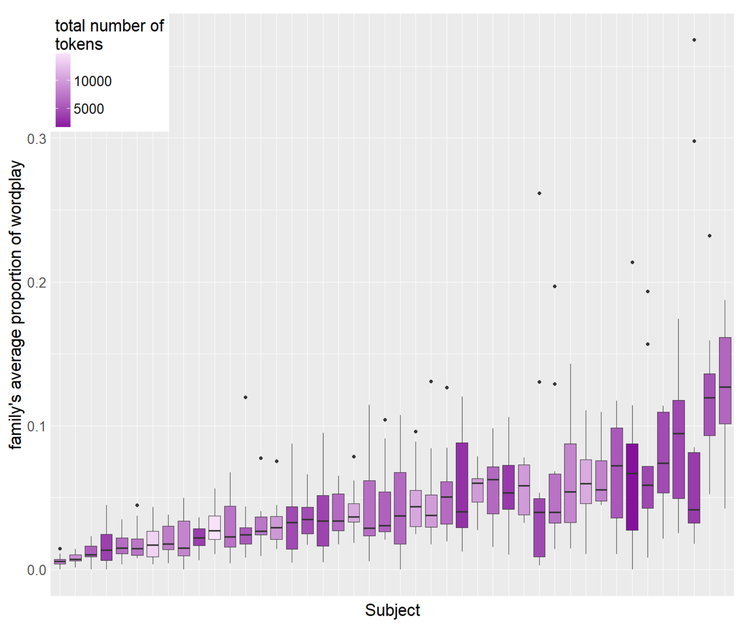
Across-Family Variation

Global family *talkativeness* and average proportion of wordplay in a family **do not correlate**. (ρ = -0.27, $p > 0.05$).



Families vary (independently!) in their
- Talkativeness
- Wordplay proportion

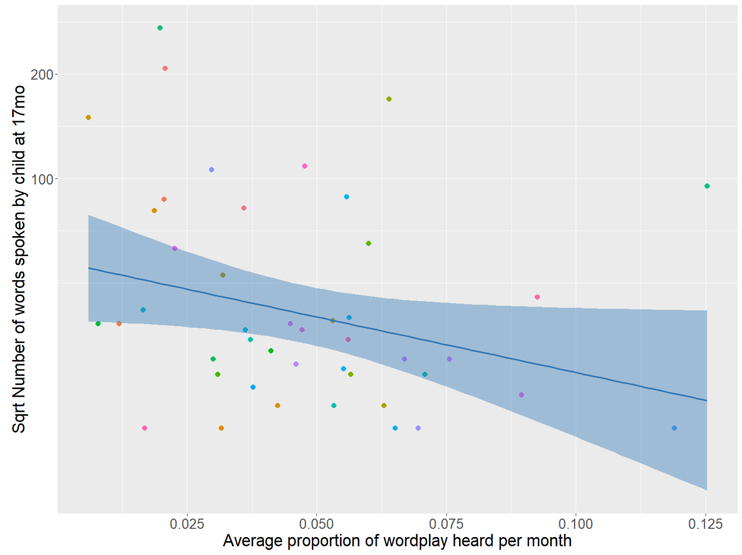
Infants experience varying levels of wordplay across families.



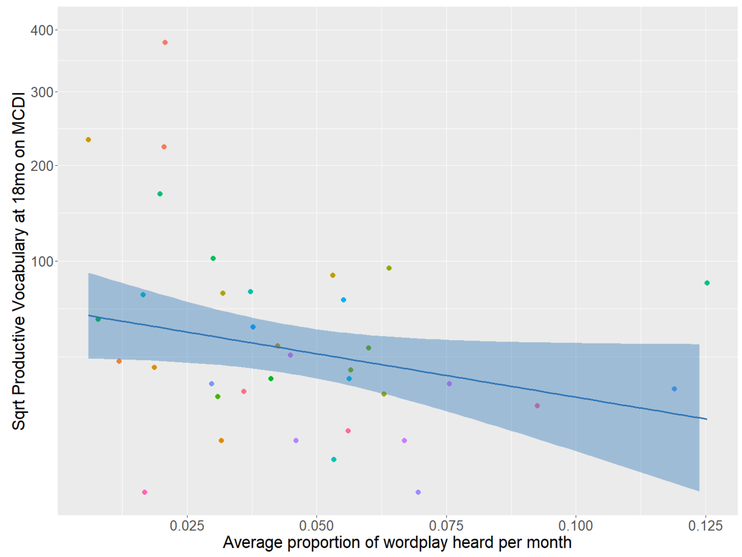
Effects on Infant Vocabulary

Average proportion of wordplay and infant talkativeness at 17 months are **negatively correlated** (ρ = -0.32, $p = 0.03$).

Infants who hear a higher proportion of wordplay are less talkative (i.e. fewer noun tokens) at 17 months.



Productive vocabulary as measured by MCDI also **negatively correlates** with wordplay (ρ = -0.34, $p = 0.04$).



Conclusions

1. A family's wordplay rate is consistent across time, although some families vary more than others between months.
2. Families are idiosyncratic in the amount of wordplay they use, separate from the amount they talk overall.
3. Increased proportions of wordplay in the input correspond to fewer infant noun tokens in recordings and smaller vocabulary scores on MCDI.

References

1. Feldman, N., Myers, E., White, K., Griffiths, T., & Morgan, J. (2013). Word-level information influences phonetic learning in adults and infants. *Cognition*, 127(3):427-438.
2. Savickiene, I., & Dressler, W. U. (2007). *The Acquisition of Diminutives: A cross-linguistic perspective.* John Benjamins Publishing.