Special Language Impairment (SLI) • affects approximately 7% of kindergarteners children • Delayed language comprehension and/or production with no obvious cause or presence of developmental disability • Late language emergence (i.e., first words) • Core impairment in the emergence and mastery of morphosyntactic markers >> Third person singular (e.g., he kicks) >> Past tense (e.g., he kicked) >> Copulative and Associative (e.g., She is happy; They are happy; he is kicking; they are kicking) >> Auxiliary Do (e.g., Does she kick the ball) • Children with SLI can make errors of omission (e.g., she kick the ball) on these forms until 8-years of age • Few studies have considered how to increase the rate of growth for children with SLI to make errors of omission (e.g., she kicks the ball) on these forms until 8-years of age • Two studies have considered how to increase the rate of growth for morphosyntactic forms

Neighborhood Density • The number of similar sounding words based on a one sound substitution, addition, or deletion >> Neighbors of “kick”: kiss, click, cake, tick, pick, etc. >> Dense words have many neighbors (thick: 20 neighbors) >> Sparse words have few neighbors (narrow: 3 neighbors) • Dense and sparse words are processed differently by typically developing children in a variety of language tasks >> Dense words facilitate production, memory, and novel word learning >> Sparse words facilitate recognition and sound changes • What about neighborhood density and growth in morphosyntax? • Do certain words (dense vs. sparse) differentially trigger growth in finitones marking?

Main Research Question: • Does manipulating the neighborhood density of verbs presented during a controlled exposure learning task increase the rate of third person singular production in treated and untreated verbs for children with SLI?

General Procedures • Single subject controlled exposure design (n = 3 children per condition) • Random assignment to 1 of 2 conditions (dense or sparse exposure condition) • Baseline period (5 to 5 sessions of morphosyntax monitoring) • Exposure/treatment period (12 sessions across 6 weeks) • Post-exposure test (1 session immediately after 12 exposure sessions)

Exposure/Treatment Session Data

Within- and Across-Density Generalization

Summary & Conclusions • Sparse stimulus > dense treatment >> Greater number of sessions with accuracy above baseline >> Greater pre-post treatment difference on measures of learning >> Greater extent of generalization within- and across-density for untreated verbs • Sparse – favorable condition for triggering morphosyntactic growth • Because sparse words are similar in few other words, retrieval of these word forms might be easier compared to dense words • Easier retrieval/confusion at the word level allows additional resources for correctly using morphosyntactic markers over time • Sparse words are hypothesized to have less detailed lexical representations compared to dense words • Words with less detailed representations might be more amenable to morphosyntactic changes • Characteristics of verbs used to morphosyntactic markers might differentially influence growth • Additional verb characteristics might need to be considered when planning treatment targeting morphosyntactic omission errors

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Lexical Representations and Growth in Morphosyntax

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