Evaluating models of typical lexical development using CYLEX

Introduction: One of the most influential models of lexical development is the four-stage model proposed by Caselli and her colleagues (2000), aiming to describe the manner in which the composition of children's early lexicons changes as more words accumulate. Although variation in lexical development is considered the norm, these four stages proposed by the model are thought to be universal across children and across languages. Notable similarities have been found between English and Italian, a highly-inflected language. In the current investigation we studies the lexicons of typically developing Cypriot Greek toddlers in their third year of life and created their semantic profiles in an effort to identify whether Caselli's model can be successfully applied a new language.

Methodology: 74 toddlers in their third year of life were tested divided into four age groups, 20 24-month-olds, 17 28-month-olds, 20 32-month-olds and 17 36-month-olds. In order to study their language abilities the CYLEX was used, a parental questionnaire designed for Cypriot Greek toddlers. We focused on word production and measured children's total expressive vocabulary, as well as the percentage of the following categories as part of their total vocabulary: Verbs, Nouns, Adjectives, Adverbs, Function Words and Other Words (Routines and Games).

Results: A one-way ANOVA showed significant differences in total expressive vocabulary between the four age groups. Post-hoc tests showed significant differences between the 36-month-olds and all the rest of the groups, but not between any of the other age groups, with a notable increase in vocabulary size as age progresses. One-way ANOVAs with the percentage of the different categories as dependent variable and age group as fixed factor showed a significant increase in Function Words as age progresses and a significant decrease in Nouns with age. Pearson r correlations compared the size of the lexicon to the percentage of the different categories, irrespective of age, and showed a significant increase in Verbs, Adjectives and Function Words, as well as a significant decrease in Other Words.

Discussion: These results fit nicely with the Caselli's four-stage model of lexical development, showing a progression from lexicons mainly made up of Nouns and Other Words to more rich lexicons with Predication (Verbs and Adjectives) and Grammar (Function Words) appearing as the size of the lexicon increases. Implications for the model will be further discussed.