

Title: Consonant acquisition in Manitoba French preschool children within a nonlinear phonology framework

Theoretical approach: A crosslinguistic research program is underway, evaluating the phonological acquisition of children with typical (TD) and protracted phonological development (PPD, often called speech sound disorders). The project is grounded within nonlinear phonology framework (Bernhardt & Stemberger, 1998) that has two tenets: (1) hierarchical representation (each phonological element, such as consonants, vowel, syllables, foot, and prosodic word, is situated on a unique tier) and (2) autonomous representation (each level of the hierarchy is considered to be independent, but linked to other levels of the hierarchy). The overarching goals of the project are to: (a) determine both universal and language-specific phonological development patterns; and (b) assist interventionists in assessing and treating children from multilingual backgrounds.

In Canada, more than 10% of children present with PPD and this clientele represents the largest proportion of the speech-language pathologist caseload (Beitchman et al., 1986). Yet, few studies on Canadian French phonology exist (Rvachew & Brosseau-Lapr e, accepted). One of the largest studies to date was conducted with preschool children in the province of Qu bec (MacLeod et al., 2011). The authors analyzed the children's consonant productions within a linear approach where each consonant was compared to the adult target in a sound-by-sound sequence. Productions were then compared with English acquisition norms.

Two important limitations exist when analyzing consonant acquisition within a linear framework and comparing French data to English acquisition norms: (1) it is impossible to account for several phenomena (e.g. interaction between consonant production and prosodic structure), and (2) French-speaking children acquire a different phonology than English-speaking children.

Objectives: (1) To present criterion-referenced phonological data within a nonlinear framework for preschool Francophone children with typical development. We compared consonantal data between the Manitoba French children and the Qu bec French participants (MacLeod et al., 2011) and took into account word length and prosody (i.e. stressed and unstressed syllables). (2) To compare the phonological acquisition of French-speaking preschool children from Manitoba with TD and PPD.

Research questions: (1) How can we use a nonlinear framework to expand our knowledge of the French phonological acquisition of preschool children, and (2) Which aspects of phonological development are universal in French and which are unique in children with TD versus PPD?

Description of the data: We compared the phonology between 20 children with TD and 8 children with PPD in Manitoba in younger (24 months to 36 months) and older (48 months to 60 months) children with the Qu bec French participants (MacLeod et al., 2011). All children from Manitoba completed the Test de phonologie du fran ais canadien (B rubb e, Bernhardt, and Stemberger, 2015), a picture-naming task to elicit 111 target words. The data was transcribed by native French speakers (high inter-rater

reliability was obtained) and analyzed using a nonlinear theoretical approach.

Results and conclusion: Children with PPD had a significantly lower percentage of correct consonants (PCC) and whole word match (WWM) than TD children. Within the TD group, children from Manitoba acquired a similar consonant inventory to the children from Québec. Nonlinear phonology analysis further revealed that younger children had lower PCC scores in unstressed syllables (as compared to stressed syllables) in dissyllabic and multisyllabic words. The additional information from the nonlinear framework will help interventionists better understand the complexities of consonant acquisition and inform assessment and intervention practices with children.

References:

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