

**Wednesday, August 7<sup>th</sup>**  
9:00-9:15  
**Woodward Room 5**

**“Introduction to the meeting and overview of the project”**

May BERNHARDT & Joseph STEMBERGER

UNIVERSITY OF BRITISH COLUMBIA (CANADA)

**Wednesday, August 7<sup>th</sup>**

9:15-9:40

**Woodward Room 5**

**“Preaspiration and voicing in Icelandic-speaking children  
with protracted phonological development”**

Póra (Thóra) MÁSDÓTTIR

THE NATIONAL HEARING AND SPEECH INSTITUTE OF ICELAND / UNIVERSITY OF ICELAND (ICELAND)

The purpose of this study is to examine the use of preaspiration word medially as correct realization and as substitution for voiceless sonorant and sibilant clusters.

Twenty-six words were extracted from a probe list of 110 words, including words with preaspiration, voiceless liquids + stops, voiceless nasals + stops, /s/ + stops and postaspiration of stops. Data was collected from 31 Icelandic-speaking preschoolers, 3;1 and 5;8 of age, with protracted phonological development (PPd), addressing questions regarding normative use of preaspiration in the language, frequent use of preaspiration for voiceless sonorants + stops and for /s/ + stop clusters word medially and finally, in addition to questions regarding the 'voiceless' nature of the language.

Preaspiration is acquired very early in the speech of typically developing Icelandic-speaking children. Using preaspiration for sonorant or /s/ clusters is a typical developmental pattern in Icelandic phonological development. The results show some typical developmental patterns of using preaspiration for the clusters under investigation. However, some of the children lacked preaspiration where preaspiration was expected. The data from children with PPD in this study will be compared to that of typically developing Icelandic-speaking children. Further discussion will include the nature of voicing in Icelandic.

**Wednesday, August 7<sup>th</sup>**

9:40-10:05

**Woodward Room 5**

**“Epenthesis in Slovenian children from 3 to 7 years old”**

Damjana KOGOVŠEK & Martina OZBIČ

UNIVERSITY OF LJUBLJANA (SLOVENIA)

Children’s words are approximations of the target forms of adults, characterized by various phonological processes.

This paper has the purpose to describe and analyse the epenthesis (excrescence and anaptyxis) as a phonological process in Slovenian children, aged from 3 to 7 years, the degree of use of epenthesis related to syllables shapes and according to place and manner of articulation of phonemes.

The data show that vowel epenthesis frequently occurs in consonant clusters, especially in those clusters which require different place or manner of articulation, i.e. between obstruents and sonorants, /br/, /tr/, /dr/, /sr/, /xr/, /kr/, /gr/, /tl/, /vr/, /sn/ /gn/, /gl/, /kl/, between obstruents i.e. /sv/, /dv/ and /sp/ and between sonorants, i.e. /ml/, /mr/.

Further, consonant epenthesis occurs in words with difficult phonemes, especially obstruents, i.e. before the velars /g/ and /k/ (adding glottal stop /ʔ/ or /x/), before sibilants (adding affricates), the velars /x/ (adding /k/), before sibilant /ʃ/ adding /s/ or palatalized /ç/ or interdental /θ/ (sliding from one sound to another); sometimes children add /n/ before /g/. An interesting addition is /k/ or /f/ before /s/ and /p/ before /f/ and before /x/.

**Wednesday, August 7<sup>th</sup>**

10:40-11:05

**Woodward Room 5**

**“Assessing French phonology:  
Testing and scanned analysis”**

<sup>1</sup>Daniel BÉRUBÉ, <sup>2</sup>May BERNHARDT & <sup>2</sup>Joseph STEMBERGER

UNIVERSITE DE SAINT-BONIFACE (CANADA)<sup>1</sup> & UNIVERSITY OF BRITISH COLUMBIA (CANADA)<sup>2</sup>

Till now, there has not been a phonological evaluation tool in French that allows the exploration of phonological patterns both within French and across languages. While some clinical tools for phonological analysis have been adapted to French, most have failed to account comprehensively for particular aspects of French phonology, whether the full set of nasal and non-nasal vowels, consonant distribution across word positions, right-prominent stress patterns, intonation units, or other varied word structures, such as the French iambic prosodic word structure that fundamentally differs from English. The primary purpose of this presentation was to describe an analysis procedure for French (French SCAN analysis) that comprehensively addresses French word structure and segmental patterns and allows comparison with other languages in the study. The French SCAN analysis procedure follows both traditional (inventory, substitution analysis) and constraint-based nonlinear analyses. Data from one Franco-Manitoban preschool child with a primary diagnosis of protracted phonological development (PPD) is used to illustrate the use and application of the SCAN analysis.

**Wednesday, August 7<sup>th</sup>**

11:05-11:30

**Woodward Room 5**

**“Prosodic errors in the speech of francophone children with developmental phonological disorders: Clinical implications and demonstrations”**

Françoise BROSSEAU-LAPRÉ & Susan RVACHEW

MCGILL UNIVERSITY (CANADA)

Seventy-two French-speaking children with developmental phonological disorder (DPD), aged 4 to 6 years, were recruited for a clinical trial. The vast majority of the participants were found to have difficulties encoding acoustic-perceptual information from the speech input. We then compared the surface speech errors of 24 of these children, matched to a very similar group of 24 English-speaking children with DPD. We found that the French-speaking children had significantly lower match ratios for the major sound class features [+consonantal] and [+sonorant], reflecting the fact that they produced significantly more omission errors than the English-speaking children. The French-speaking children were less likely to omit consonants in stressed syllables, although considerable variability was observed for similar syllable shapes. We will discuss the clinical implications of these findings for the selection of treatment goals for French-speaking children with DPD. In addition, we will present a case study to briefly demonstrate the impact of an input-oriented approach to intervention on prosodic goals.

**Wednesday, August 7<sup>th</sup>**

11:30-11:55

**Woodward Room 5**

**“The adaptation of the Cross-Linguistic Child Phonology Project tool  
into European French: Preliminary results”**

Laetitia (Letícia) ALMEIDA

UNIVERSITY OF LISBON (PORTUGAL)

Very few studies have focused on phonological development of French-Portuguese bilingual children. To evaluate the phonological properties of these children’s productions, it is important to use a tool controlled for the same linguistic structures in their two languages. The adaptation of the Cross-Linguistic Child Phonology Project (CLCPP) instrument into European French and Portuguese serves this proposal.

In this talk, I will first present the adaptation of the Canadian French CLCPP tool (Bérubé et al. 2012) into European French. Then, I will present some preliminary data on the phonological development of French-Portuguese bilingual children being raised in Portugal, collected using the CLCPP European French and Portuguese tools. Data from 30 French-Portuguese simultaneous bilingual children, aged between 3 and 6, attending a French pre-school in Lisbon were collected. For this presentation, I will describe the results of the application of both instruments to a French-Portuguese bilingual child, aged 3, focusing on syllable structure, namely, singleton and branching onsets, medial codas and word-final consonants. I will compare these results to literature on monolingual and bilingual development of these two languages, taking into account patterns of cross-linguistic interaction between the two languages of the child.

[laetitia\\_almeida@sapo.pt](mailto:laetitia_almeida@sapo.pt)

Wednesday, August 7<sup>th</sup>

1:20-1:45

Woodward Room 5

**“Cross-Linguistic Child Phonology Project:  
Preliminary results for European Portuguese”**

<sup>1,2</sup>Margarida RAMALHO, <sup>1</sup>M. João FREITAS & <sup>1</sup>Laetitia (Letícia) ALMEIDA

UNIVERSITY OF LISBON (PORTUGAL)<sup>1</sup> & UNIVERSIDADE DE ÉVORA (PORTUGAL)<sup>2</sup>

Language assessment is a growing area in Portugal. The instruments available in the market include some items for the evaluation of phonological structures, although they do not allow phonologically and statistically controlled evaluations. The adaptation of the Cross-Linguistic Child Phonology instrument into European Portuguese (CLCP-EP) will provide Portuguese speech therapists with a linguistically controlled instrument based on the following variables: i) segmental inventory; ii) syllable distribution; iii) word stress; iv) word length (from 1 to 5, but predominantly 2/3 syllables per word); (v) lexicon (all stimuli are possible entrances of the Portuguese children’s lexicon at the age of 3;0).

In the first part of the talk, a presentation of the CLCP-EP structure will be performed. In the second part, we will describe preliminary results from the pilot study, which is, simultaneously, the naming test used to evaluate the images and the lexical items in the instrument. We will focus on the production of /P/ from a word length perspective, one of the less controlled properties in language assessment instruments in Portugal. The data considered is from 6 of the 50 children tested. These preliminary results point out to the productivity of the variable word length: unstressed /P/ in simple Onset shows 84,8% of success rate in disyllabic words, 71,2% in trisyllabic words and 45,8% in polysyllabic words.

[amargaridamcramalho@gmail.com](mailto:amargaridamcramalho@gmail.com), [joaofreitas@fl.ul.pt](mailto:joaofreitas@fl.ul.pt), [laetitia\\_almeida@sapo.pt](mailto:laetitia_almeida@sapo.pt)

Wednesday, August 7<sup>th</sup>

1:45-2:10

Woodward Room 5

**“Patterns of prosodic structure in Spanish-speaking children  
with typical and protracted phonological development”**

C. ÁVILA<sup>1</sup>, D. PÉREZ<sup>2</sup>, M. CHAVEZ-PEON<sup>3</sup>, B. MAY BERNHARDT<sup>4</sup>, R. HANSON<sup>4</sup>, C. LLEÓ<sup>5</sup>, E. MENDOZA<sup>1</sup>,  
G. CARBALLO<sup>1</sup>, D. FRESNEDA<sup>1</sup>, J. STEMBERGER<sup>4</sup>

UNIVERSIDAD DE GRANADA (SPAIN)<sup>1</sup>, UNIVERSIDAD DE VALPARAÍSO (CHILE)<sup>2</sup>, CIESAS (MEXICO)<sup>3</sup>,  
UNIVERSITY OF BRITISH COLUMBIA (CANADA)<sup>4</sup>, UNIVERSITY OF HAMBURG (GERMANY)<sup>5</sup>

The goal of this research is to characterize the phonological patterns of Spanishspeaking children with protracted phonological development (PPD), compared to children with typical development (TD). In order to achieve this goal we selected 29 children with PPD and 31 with typical development from the city of Granada, Spain. We administered the Spanish word list (Chavez-Peon et al., 2012), and transcribed it phonetically using PHON (v. 1.5.2, Rose & Hedlund, 2012). Then we performed a statistical analysis of the data obtained.

The analysis of word structures and stress patterns provides data on the differences between the two groups analyzed. For the TD group whole-word match (WWM) differs most between the children of three (58%) and four years (83.2%), while in the PPD group, the difference between three- and five-year olds is much smaller, with less than 60% correct at age five. Both the PPD and TD group have superior performance on word-shape match (WSM) compared to WWM. In general, we observe that children with PPD show a greater number of errors in phonemes than the TD children, whereas stress is normally maintained for both. These results have clinical implications in the evaluation and treatment of children with PPD at early stage of acquisition.



**Wednesday, August 7<sup>th</sup>**

2:10-2:35

**Woodward Room 5**

**“Some functional misarticulation systems in Japanese”**

<sup>1</sup>Isao UEDA, <sup>2</sup>Yusuke TABATA & <sup>3</sup>Noriko YAMANE

OSAKA UNIVERSITY (JAPAN)<sup>1</sup>, KASHIWA EDUCATIONAL TRAINING CENTER (JAPAN)<sup>2</sup>,  
& UNIVERSITY OF BRITISH COLUMBIA (CANADA)<sup>3</sup>

The present study attempts to offer an introduction to functional (non-organic) speech disorders observed in developmental stages of Japanese-speaking children. The presentation is organized as follows.

First, a brief introduction of Japanese phonological system is presented based on Ota and Ueda (2007) including the segmental inventory of vowels and consonants, the syllable structure, and the prosodic features.

We then turn to functional misarticulation and show typical misarticulation patterns found in developing phonologies discussed in Fukusako, Sawashima and Abe (1976) and Nishimura (1979), inter alia. The commonest patterns are rhotacism (‘r’ replacement), stigmatism (stopping of sibilant fricatives) and kappacism (fronting of velars), with possible addition of backing (including palatalization) and ‘h’ omission. Also, some “minor” patterns will be touched upon.

Next, we provide a rather detailed description of the misarticulation of four children we examined based on the common framework of this project, which consists of an important part of this presentation. The four cases are specifically those of palatalization, rhotacism, stopping and backing.

We may refer to some theoretical aspects, but overall, this study is descriptive, which is expected to serve as preliminaries to further in-depth analyses of various cases of Japanese functional speech disorders.

**Wednesday, August 7<sup>th</sup>**

2:35-3:00

**Woodward Room 5**

**“Phonological characteristics of Korean-English bilingual children”**

Sue Ann S. LEE

TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER (USA)

This study reported accuracy of consonants produced by 3 year-old Korean-English bilingual children who demonstrated similar English and Korean language proficiencies. English and Korean consonants were collected from 7 early bilingual children using the Goldman-Fristoe Test of Articulation-2 for English and the Assessment of Phonology and Articulation for Children for Korean. All consonants of the target words in each assessment were analyzed in terms of consonant manner, place, and voicing. A total of 983 English (M = 140) and 657 Korean (M = 93) consonants were analyzed. Percentage of accuracy between English and Korean was compared using a nonparametric Wilcoxon test. The overall percentage of consonant accuracy was not significantly different between the two languages in the bilingual children. For manner of articulation, however, accuracies of stops, affricates, and glides were significantly different between English and Korean. English stops, affricates, and glides were produced more accurately than those of Korean. In terms of consonantal places, English dorsals were produced more accurately than Korean dorsals. Finally, accuracy for voiced consonants was higher for Korean than for English whereas that of voiceless consonants was higher for English than for Korean. The crosslinguistic differences of production accuracy between English and Korean in the bilingual children may be attributed to phonological characteristics and frequency of phonemes between English and Korean.

**Wednesday, August 7<sup>th</sup>**

3:30-3:55

**Woodward Room 5**

**“The phonological development of Kuwaiti Arabic monolingual pre-schoolers”**

Hadeel AYYAD

KUWAIT UNIVERSITY (KUWAIT)

This study documents the development of the phonological skills of typically developing Kuwaiti Arabic-speaking preschool-age children and lays the foundation for a speech-assessment tool for Kuwaiti Arabic. Kuwaiti Arabic is the spoken dialect in Kuwait. The segmental inventory of Kuwaiti Arabic is similar to that of other spoken Arabic dialects and that of Modern Standard Arabic, although with some variation across dialects.

The current study used a standard single-word picture- and object-based elicitation that evaluates consonants and vowels across word positions, within a variety of word lengths and structures (90 words altogether). Speech samples were collected by the author from 80 monolingual 4- to 5-year-old Kuwaiti children and were recorded on an M-Audio microtrack 24/96 recorder (Beier TGX 58 microphone). This age group was selected because previous research has shown that the Arabic phonological repertoire may be almost complete by age 4; thus, these children had reached an age where it would be essential to intervene if they showed speech delays. Children were recruited from preschools across the state of Kuwait in order to include all dialects and districts. The author, who is a native speaker of Kuwaiti Arabic, was the primary transcriber, with reliability checks conducted on 10% of the sample by phonetically trained transcribers. A nonlinear phonological framework based on Bernhardt and Stemberger (1998) was adopted for analysis of word structures, segments and features.

Preliminary data show that Kuwaiti preschoolers have a rich consonantal inventory across the places of articulation, including non-emphatic stops, nasals, approximants, and uvular and pharyngeal fricatives. Some features appear to be still undergoing development. Several word lengths have been acquired by this age, from monosyllabic to four-syllable words. Morphophonemic alternations appear to be still developing.

The data for relatively comparable groups of younger and older 4-year-olds were analyzed and showed developmental change across time. In addition, a group at-risk for protracted phonological development was identified which had notably less proficiency in phonological production than the other two groups. Finally, this study attempts to set some of the groundwork for the future development of a phonological test for Kuwaiti Arabic.

Wednesday, August 7<sup>th</sup>

3:55-4:40

Woodward Room 5

**“Bilingual acquisition of German and Spanish:  
Aspects of the interaction between a strong and a weak phonology”**

Conxita LLEÓ

UNIVERSITY OF HAMBURG (GERMANY)

The simultaneous acquisition of two first languages does not necessarily lead to delay, as sometimes assumed. However, if one of the languages is dominant, the weak language may undergo various types of interaction, including reverse order of acquisition, and also acceleration, delay and transfer. On the basis of data from children growing up in Germany, simultaneously exposed to German and Spanish within their families, several cases of interaction will be presented. We will focus on segmental phenomena showing delay and/or transfer: spirantization and place assimilation of nasals. Factors, notably internal ones, leading to such outcomes will be discussed. It will be shown that phenomena involving allomorphy or allophony are specially vulnerable, which is related to the violation of UNIFORMITY by the resulting units. Frequency of occurrence also plays a role: in case the phenomenon in question occurs in both languages, acceleration may appear under certain circumstances. If it only occurs in the weak language, it may lead to transfer from the strong language. Markedness plays a role, too, albeit a secondary one: marked categories of the strong language may also undergo some delay, if they are infrequent.

**Thursday, August 8<sup>th</sup>**

9:00-9:15

**PHON workshop  
Friedman Room 355**

**“Introduction to day”**

May BERNHARDT & Joseph STEMBERGER

UNIVERSITY OF BRITISH COLUMBIA (CANADA)

**Thursday, August 8<sup>th</sup>**

9:15-9:55

**PHON workshop**

**Friedman Room 355**

**“Working together within PhonBank:  
An update on tools and related workflows”**

Yvan ROSE

MEMORIAL UNIVERSITY OF NEWFOUNDLAND (CANADA)

Phon is a software program that facilitates the analysis of phonological data. Built to support research in phonological development (including babbling), second language acquisition, and phonological disorders, Phon can be used for virtually all types of phonological investigations based on phonetic transcriptions. Phon also facilitates data exchange among researchers and data sharing through the CHILDES/PhonBank database Project. During this presentation, I will provide the background relevant to this project, the success of which rests on a commitment of the scientific community toward open data sharing. I will then present an overview of the most recent advances in the development of Phon as well as practical illustrations on how to take full advantage of the features available in version 1.6.2 of Phon, including the PCC/PVC calculator, query filters, and data reporting functions. I will conclude with a brief outlook on new features to be released in future versions of the application.

**Thursday, August 8<sup>th</sup>**

9:55-10:15

**PHON workshop  
Friedman Room 355**

**“Fun with Phon”**

Ruth HANSON

UNIVERSITY OF BRITISH COLUMBIA (CANADA)

The purpose of the workshop is to share what we have learned in the UBC lab about how to use Phon to expedite the analysis of large amounts of phonological data. Demonstrations of how to prepare and import data, link and segment audio files, check transcriptions and syllabify and align data will be provided, followed by hands-on practice in groups.

**Thursday, August 8<sup>th</sup>**

1:30-1:45

**PHON workshop  
Friedman Room 355**

**More Fun with Phon**

Ruth HANSON

UNIVERSITY OF BRITISH COLUMBIA (CANADA)

Continuing from the morning session, a demonstration of how to export data from Phon and perform a whole word and word shape match analysis using specially designed spreadsheets will be given. This will be followed by hands-on practice.



**Thursday, August 8<sup>th</sup>**

**3:30-4:10**

**Friedman Room 355**

**“Children’s speech development in many languages:  
Strategies for telling the world what we have learned”**

Sharynne MCLEOD

CHARLES STURT UNIVERSITY (AUSTRALIA)

This presentation will outline lessons learned from a 4-year research fellowship titled “Speaking my languages: Multilingual speech acquisition in Australia”. The aims of this fellowship were to: describe Australian children’s multilingualism, consider the association between multilingualism and communication impairment, review and re-imagine international speech-language pathology practices for working with multilingual children, and develop resources for the assessment of multilingual children. Knowledge translation has been an important component of this research. Traditional knowledge translation strategies have included dissemination within books, book chapters, journal articles, and conference presentations. The Multilingual Children’s Speech website ([www.csu.edu.au/research/multilingual-speech](http://www.csu.edu.au/research/multilingual-speech)) was created via collaboration with researchers from around the world and includes free resources for speech-language pathologists. Additionally, knowledge translation has been enhanced by using: radio, newspapers, Twitter, blogs, listservs, emails, handouts, and conversations. Participants will be invited to reflect on how knowledge translation strategies can be used to tell the world about the International Crosslinguistic Study of Children’s Speech Development.

[smcleod@csu.edu.au](mailto:smcleod@csu.edu.au)

**Thursday, August 8<sup>th</sup>**

4:10-4:50

**Friedman Room 355**

**“Disseminating research findings”**

Nicole Müller & Martin J. Ball

UNIVERSITY OF LOUISIANA AT LAFAYETTE (USA)

We will share some of our experiences in editing two international journals (Clinical Linguistics and Phonetics, and formerly the Journal of Multilingual Communication Disorders), several book series (among them Communication Disorders across Languages), and many edited collections. The objective is to spark discussion about the merit of several potential avenues for publication of the findings of this crosslinguistic study. As much as possible, we want to incorporate any questions from participants that may arise either during the course of, or prior to the workshop. Issues to be discussed can include, but are not limited to, the logistics and management of editing joint projects, possible time frames, responsibilities of authors and editors, copyright questions, and advantages and disadvantages of hybrid (print-online) formats of publication.

**Friday, August 9<sup>th</sup>**

9:00-9:30

**Totem Field Studios Seminar room**

**“Navigating the Wonderland of bilingual children:  
Their language development and assessment”**

Stefka MARINOVA-TODD

UNIVERSITY OF BRITISH COLUMBIA (CANADA)

**Friday, August 9<sup>th</sup>**

9:30-9:45

**Totem Field Studios Seminar room**

**“Introduction to Knowledge Mobilization Meeting”**

May Bernhardt

UNIVERSITY OF BRITISH COLUMBIA (CANADA)