

**INTERNATIONAL SYMPOSIUM ON  
MONOLINGUAL AND BILINGUAL SPEECH 2022**



**ISMBS 2022  
PROGRAM  
BOOK OF ABSTRACTS**

**EDITOR**

**ELENA BABATSOULI, PhD**

**6-9 APRIL 2022  
DEPARTMENT OF COMMUNICATIVE DISORDERS, COLLEGE OF LIBERAL ARTS  
UNIVERSITY OF LOUISIANA AT LAFAYETTE**



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(ISMBS 2022)**

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## INTRODUCTION & WELCOME

On behalf of the organizing and scientific committees, I am delighted to extend a warm welcome to all delegates of the hybrid (in-person & virtual) *International Symposium on Monolingual and Bilingual Speech (ISMBS) 2022*. It is a unique privilege to head this four-day conference with you as honored guests and participants and to be editing its Book of Abstracts.

ISMBS sprang from yearning for a specialized conference on speech that cuts across dividing boundaries between language sub-fields: first language, second language, bilingual, multilingual; child or adult; normal or disordered. The Symposium aspires to encourage investigations that go to the heart of matters, widening existing horizons and perspectives, kindling a holistic viewpoint, fostering collaborations across the board and, ultimately, sparking innovative thought and approaches. The initial, and continuing goal of ISMBS has been to acquaint speech and language scientists and disseminate their research findings.

This is a time of *firsts* for the Symposium, as it is amiably referred to at the Department of Communicative Disorders, University of Louisiana at Lafayette. It is the first time that the Symposium becomes hybrid following the world-wide pandemic, thus having both an in-person and a virtual forum, but also the first time that it crosses the Atlantic Ocean to convene at the University of Louisiana at Lafayette in the heart of Louisiana, USA, well-known for its rich cultural and linguistic diversity. This is a long way from Chania, on the island of Crete, Greece, where the Symposium started in 2015, and was held again in 2017 and 2019, but your interest and participation reaching out from around the world has facilitated its 4<sup>th</sup> meeting, thus making time and place obsolete.

We are happy to welcome *Y'All* at the Department of Communicative Disorders and its Speech, Language and Hearing Center, whose standing tradition in research and clinical practice epitomize the empirical, theoretical, and clinical implications of this Symposium in child and adult monolingual and bilingual speech in typical and atypical contexts. We are thrilled to welcome *Y'All* at the College of Liberal Arts that commemorates its first *Centennial* this month. I am enthused to welcome *Y'All* to Louisiana this month of April, a unique place that celebrates cultural diversity on an annual basis with its long-established *Festival International de Louisiane*.

Thank you for bringing your valuable expertise to this gathering and assisting to pave the way of research on monolingual and bilingual speech into the future. Expectations have been surpassed by your contributions. Like the ancient Greek orator, Demosthenes, himself "a citizen of the world", let's yet again come together saying: "as a vessel is known by the sound, whether it be cracked or not, so men are proved by their speeches ...".

ISMBS 2022 features 4 plenary talks, a special lecture, a workshop on Phon functions for multilingual speech, 67 contributed oral presentations, and 16 contributed poster presentations. Participants come from 33 countries in Asia, Australasia, Europe, North America, and South America: Australia, Belgium, Brazil, Bulgaria, Canada, China, Cyprus, Denmark, France, Germany, Greece, Hong Kong, Hungary, India, Iceland, Ireland, Israel, Italy, Japan, Kosovo, Lebanon, Norway, Poland, Puerto Rico, Slovakia, Spain, Sweden, Switzerland, Taiwan, The Netherlands, United Kingdom, United States, Vietnam.

May your participation in the symposium be stimulating, fruitful, and enjoyably memorable, as in Demosthenes' words, "small opportunities are often the beginning of great enterprises".

Please join me in thanking all named and anonymous members of this campus who have assisted in making this year's Symposium possible.

"To be" at the University of Louisiana at Lafayette is to partake in the Cajun legacy of the wider community. Geaux Cajuns.

Elena Babatsouli  
chair, ISMBS 2022

## GENERAL INFORMATION

### Location

The International Symposium on Monolingual and Bilingual Speech (ISMBS) 2022 takes place at the Department of Communicative Disorders, College of Liberal Arts, University of Louisiana at Lafayette (UL Lafayette) in the parish of Acadiana, Louisiana, USA. The in-person meeting is held in the Doris B. Hawthorne Conference Room (236B), on the upper floor of Burke-Hawthorne Hall, 231 Hebrard Blvd, Lafayette, LA 70504.

### Free Parking Tickets

The Department of Communicative Disorders provides free parking tickets for in-person participants. Information will be emailed by April 2<sup>nd</sup>.

### Symposium Material

All material will be posted online. Symposium badges and the printed Program/Book of Abstracts will also be provided to in-person participants. Badges should be worn throughout the symposium events.

### Internet Access

Free internet access is available to guests on UL Lafayette campus. Information on how to connect to the Campus Network may be found at [Connecting to the Campus Network](#) and [GeauxGuest](#).

### Oral and Poster Presentations

Both the in-person and the virtual presentations will be accessible to all participants. Oral presentations are allocated 18 minutes (15 minutes talk, 3 minutes Q&A) and 2 minutes to allow time between speakers. Poster presentations are allocated 8 minutes each; each poster will also be displayed online in pdf during its allocated poster session.

### Zoom Familiarization Session

A practice session will be held on Monday, April 4<sup>th</sup> for familiarization with the Zoom platform. The times are 9:00 am-12:00 noon, and 1:00 pm-4:00 pm. More information at: [ISMBS 2022 Program](#).

### Publications

Submission of full papers is optional. Full papers are welcome to be submitted after the Symposium, by 30 June 2022, for publication in special issues of the *Journal of Monolingual and Bilingual Speech* (Equinox Publishing), co-edited by Elena Babatsouli and Martin J. Ball, and an Edited Volume with an established publishing house. More information on this in due time. Also, brief articles (4-5 pages/2,500-3,500 words) may be submitted after the Symposium, by 30 June 2022, for publication in the *ISMBS 2022 Proceedings* (the Proceedings will have an ISBN number). For updates, see: [ISMBS 2022 Publications](#).

### Symposium Dinner (in-person participants)

The Symposium dinner will take place at a restaurant in downtown Lafayette on Thursday, April 7<sup>th</sup>.

### Lunch/Refreshments (in-person participants)

Lunch will be provided on April 6<sup>th</sup> – 8<sup>th</sup> on campus; refreshments will also be available throughout.

## COMMITTEES

### Scientific Committee

Åsa Abelin (Gothenburg, Sweden)  
Martine Adda-Decker (Paris, France)  
John Archibald (Victoria, Canada)  
Elena Babatsouli (Lafayette, Louisiana)  
Maria de Fátima de Almeida Baia (Bahia, Brazil)  
Anna Balas (Poznań, Poland)  
Martin J. Ball (Bangor, UK)  
Avivit Ben-David (Jerusalem, Israel)  
Barbara May Bernhardt (Vancouver, Canada)  
Catherine T. Best (Sydney, Australia)  
Maria Grazia Busà (Padova, Italy)  
Galina Chirsheva (Cherepovets, Russia)  
Gloria Cocchi (Urbino, Italy)  
Laura Colantoni (Toronto, Canada)  
Annick De Houwer (Erfurt, Germany)  
Veronique Delvaux (Mons, Belgium)  
Jelske Dijkstra (Leeuwarden, The Netherlands)  
Katarzyna Dziubalska-Kończyk (Poznań, Poland)  
Eleftheria Geronikou (Patras, Greece)  
Tetsuo Harada (Tokyo, Japan)  
David Ingram (Tempe, USA)  
Maria Kambanaros (Adelaide, Australia)  
Margaret Kehoe-Winkler (Geneva, Switzerland)  
Sophie Kern (Lyon, France)  
Ghada Khattab (Newcastle, UK)  
Laila Kjærbaek (Odense, Denmark)  
Tanja Kupisch (Konstanz, Germany)  
Shinsook Lee (Seoul, Korea)  
Giovanna Lenoci (Pisa, Italy)  
Juana M. Licerias (Ottawa, Canada)  
Viorica Marian (Evanston, USA)  
Sharynne McLeod (Bathurst, Australia)  
Karen Miller (State College, USA)  
Yoichi Miyamoto (Osaka, Japan)  
Peggy Mok (Hong Kong)  
Eleni Morfidi (Ioannina, Greece)  
Nicole Müller (Cork, Ireland)  
Elena Nicoladis (Edmonton, Canada)  
F. Hulya Ozcan (Eksisehir, Turkey)  
Michelle Pascoe (Cape Town, South Africa)  
Kakia Petinou (Limassol, Cyprus)  
Karen Pollock (Edmonton, Canada)  
Brechtje Post (Cambridge, UK)  
Lucrecia Rallo-Fabra (Palma, Spain)  
Irene Ricci (Pisa, Italy)  
Valerie Shafer (New York, USA)  
Anna Sosa (Flagstaff, USA)  
Dimitrios Sotiropoulos (Chania, Greece)  
Joseph P. Stemberger (Vancouver, Canada)  
Enlli Thomas (Bangor, UK)  
Isao Ueda (Osaka, Japan)



Magdalena Wrembel (Poznań, Poland)  
Naomi Yamaguchi (Paris, France)  
Virginia Yip (Hong Kong)  
Mary L. Zampini (Syracuse, USA)  
Elisabeth Zetterholm (Stockholm, Sweden)

**Organizing Committee** (University of Louisiana at Lafayette, Louisiana, USA)

Elena Babatsouli, chair  
Ryan Nelson  
Haley Faulk  
Allen M. Latour

**Graduate Student Support**

Samantha Armentor  
Haley Faulk  
Ashton Holmes  
Caitlin Lemoine  
Maria Mengis  
McKenzie Weddle  
Marissa Young

**ISMBS 2022 PROGRAM AT A GLANCE**  
**US Central Daylight Time (CDT)**

<b>Time</b>	<b>Wednesday, 6 April</b>
08:15-08:30	OPENING REMARKS
08:30-09:30	SESSION 1
09:30-10:30	PLENARY: <i>Silvina Montrul</i>
10:30-12:10	SESSION 2
12:10-13:00	BREAK/LUNCH
13:00-14:00	PLENARY: <i>Janna B. Oetting</i>
14:00-15:40	SESSION 3
15:40-17:00	SESSION 4
<b>Time</b>	<b>Thursday, 7 April</b>
08:10-09:30	SESSION 5
09:30-10:30	PLENARY: <i>Viorica Marian</i>
10:30-11:30	SESSION 6
11:30-12:30	SESSION 7
12:30-13:30	BREAK/LUNCH
13:30-14:30	PLENARY: <i>Ruth Bahr</i>
14:30-15:10	SESSION 8 – POSTERS I
15:10-15:50	SESSION 9 – POSTERS II
15:50-16:50	SESSION 10
18:00-20:00	SYMPOSIUM DINNER
<b>Time</b>	<b>Friday, 8 April</b>
08:10-09:30	SESSION 11
09:30-10:30	SPECIAL LECTURE: <i>Angela Medina, Nicole Müller, Martin J. Ball</i>
10:30-12:10	SESSION 12
12:10-13:10	BREAK/LUNCH
13:10-14:30	SESSION 13
14:30-15:30	SESSION 14
15:30-16:50	SESSION 15
<b>Time</b>	<b>Saturday, 9 April</b>
08:10-09:30	SESSION 16
09:30-10:30	PHON WORKSHOP: <i>Yvan Rose</i>
10:30-12:10	SESSION 17
12:10-12:50	BREAK/LUNCH
12:50-14:10	SESSION 18
14:10-15:30	SESSION 19
15:30-16:50	SESSION 20 – POSTERS III
16:50-17:00	CLOSING REMARKS

**ISMBS 2022 FULL PROGRAM**  
**US Central Daylight Time (CDT)**

**WEDNESDAY, 6 April**

<b>OPENING REMARKS</b> 08:15-08:30	Chair: <i>Elena Babatsouli</i>
<b>SESSION 1</b> 08:30-09:30	Chair: <i>Chiara Meluzzi</i>
08:30-08:50	<b>Acoustic analysis of heritage Konkani speaker's vowel production</b> <i>Reshma Jacob</i> Christ University
08:50-09:10	<b>Do girls differ from boys in the monolingual acquisition of English dative alternation?</b> <i>Silvia Sánchez Calderón<sup>1,2</sup>, Raquel Fernández Fuertes<sup>1</sup></i> <sup>1</sup> University of Valladolid, <sup>2</sup> National University of Distance Education
09:10-09:30	<b>Minority languages in migratory contexts: Sardinian Italian speakers in York</b> <i>Roberta Bianca Luzietti<sup>1</sup>, Chiara Meluzzi<sup>2</sup></i> <sup>1</sup> University of Padova/University of Pisa, <sup>2</sup> University of Milan
<b>PLENARY LECTURE</b> 09:30-10:30	<b>The Impact of Schooling on Bilingual Children's Language Development</b> <i>Sylvina Montrul</i> University of Illinois at Urbana-Champaign
<b>SESSION 2</b> 10:30-12:10	Chair: <i>Christiane Ulbrich</i>
10:30-10:50	<b>Effects of context and age on VOT in children with cochlear implants</b> <i>Georgia Kouпка<sup>1</sup>, Areti Okalidou<sup>1</sup>, Katerina Nicolaidis<sup>2</sup>, Jannis Constantinidis<sup>3</sup>, Georgios Kyriafinis<sup>3</sup></i> <sup>1</sup> University of Macedonia, <sup>2</sup> Aristotle University of Thessaloniki, <sup>3</sup> AHEPA Hospital
10:50-11:10	<b>The different implementations of rhotic consonants in L2 Italian affect L1 Mandarin learners' perceptual accuracy</b> <i>Qiang Feng, Maria Grazia Busà</i> University of Padova
11:10-11:30	<b>Morpho-syntactic structure of code-switched sentences produced by Albanian bilingual students</b> <i>Festa Shabani</i> University of Prishtina
11:30-11:50	<b>Bilinguals speaking two prevoicing languages produce language-specific voice onset time</b> <i>Christoforos Souganidis<sup>1,2</sup>, Nicola Molinaro<sup>2</sup>, Antje Stoehr<sup>2</sup></i> <sup>1</sup> University of the Basque County – UPV/EHU, <sup>2</sup> Basque Center on Cognition, Brain and Language
11:50-12:10	<b>Speech accommodation in non-native speech</b> <i>Christiane Ulbrich</i> University of Konstanz
<b>BREAK/LUNCH</b> 12:10-13:00	
<b>PLENARY LECTURE</b> 13:00-14:00	<b>Disorder within Dialects: Changing the Narrative about Developmental Language Disorder with Evidence</b> <i>Janna B. Oetting</i> Louisiana State University

## WEDNESDAY, 6 April

<b>SESSION 3</b> 14:00-15:40	Chair: <i>Olivia Hadjadj</i>
14:00-14:20	<b>Acoustic analysis of lexical stress in Greek preschool children</b> <i>Ioannis Papakyritsis, Panagiota Adamopoulou, Ioanna Kerouli, Maria Sifaki</i> University of Patras
14:20-14:40	<b>Whistled word perception by monolingual and high-level L2 speakers</b> <i>Anais Tran Ngoc<sup>1</sup>, Julien Meyer<sup>2,3,4</sup>, Fanny Meunier<sup>3</sup></i> <sup>1</sup> University of Côte d'Azur, <sup>2</sup> Grenoble Alpes University, <sup>3</sup> The French National Center for Scientific Research (CNRS), <sup>4</sup> GIPSA-Lab
14:40-15:00	<b>How to diagnose DLD in bilingual children using dynamic assessment?</b> <i>Olivia Hadjadj, Margaret Kehoe, Hélène Delage</i> University of Geneva
15:00-15:20	<b>Variable production of differential object marking in bilingual heritage speakers of Spanish</b> <i>M. Cole Callen</i> The Pennsylvania State University
15:20-15:40	<b>Changes in the phonology of Vietnamese-English speakers across generations</b> <i>Vivian Luong, Todd Gibson</i> Louisiana State University
<b>SESSION 4</b> 15:40-17:00	Chair: <i>Sharynne McLeod</i>
15:40-16:00	<b>Different languages, different contexts, different gestures: A cross-linguistic comparison of bilingual mothers' and children's nonverbal communication</b> <i>Sirada Rochanavibhata, Jessica Chuang, Viorica Marian</i> Northwestern University
16:00-16:20	<b>Early mixing in a Spanish-English early simultaneous bilingual in a Japanese context at age 2;4</b> <i>Rebekka Eckhaus</i> International Christian University
16:20-16:40	<b>Age at migration and heritage language proficiencies: The case of Chinese immigrant children in Australia</b> <i>Yining Wang</i> Macquarie University
16:40-17:00	<b>VietSpeech: Vietnamese-Australian children's speech and language competence</b> <i>Sharynne McLeod<sup>1</sup>, Sarah Verdon<sup>1</sup>, Kate Margetson<sup>1</sup>, Van Tran<sup>1</sup>, Cen Wang<sup>1</sup>, Ben Phạm<sup>2</sup></i> <sup>1</sup> Charles Sturt University, <sup>2</sup> Hanoi National University of Education

## THURSDAY, 7 April

<b>SESSION 5</b> 08:10-09:30	Chair: <i>Silke Fricke</i>
08:10-08:30	<b>Can onomatopoeia come to rescue? A study on Mandarin verb acquisition via onomatopoeic reduplication</b> <i>Yu-Hsuan Tsai, Janice Fon</i> National Taiwan University
08:30-08:50	<b>The feature [ +spread glottis] in Icelandic children with protracted phonological development</b> <i>Thora Másdóttir<sup>1</sup>, Barbara May Bernhardt<sup>2</sup>, Joseph Stemberger<sup>2</sup></i> <sup>1</sup> University of Iceland, <sup>2</sup> University of British Columbia
08:50-09:10	<b>The acquisition of the null subject parameter in Catalan as a heritage language</b> <i>Caroline Daniel<sup>1</sup>, Laia Arnaus Gil<sup>1</sup>, Amelia Jiménez-Gaspar<sup>2</sup></i> <sup>1</sup> University of Wuppertal, <sup>2</sup> University of the Balearic Islands

## THURSDAY, 7 April

09:10-09:30	<p><b>Phonetic inventories measured via picture naming or stimulability tasks: Does the task make a difference?</b>  <i>Silke Fricke<sup>1</sup>, Laura Kubaschk<sup>2</sup>, Deema Turki<sup>1</sup>, Sara Lavaggi<sup>1</sup>, Annette Fox-Boyer<sup>1,3</sup></i>  <sup>1</sup>The University of Sheffield, <sup>2</sup>RWTH Aachen, <sup>3</sup>University of Lübeck</p>
<b>PLENARY LECTURE</b> 09:30-10:30	<p><b>How Bilinguals Process Spoken Language: Consequences for Mind and Brain</b>  <i>Viorica Marian</i>            Northwestern University</p>
<b>SESSION 6</b> 10:30-11:30	<p>Chair: <i>Elena Kkese</i></p>
10:30-10:50	<p><b>Development of phonetic complexity in multilingual Lebanese children</b>  <i>Nour Chami<sup>1</sup>, Sophie Kern<sup>2</sup>, Camille Messarra<sup>1</sup></i>  <sup>1</sup>Saint Joseph University, Beirut, <sup>2</sup>CNRS - University of Lyon 2</p>
10:50-11:10	<p><b>Production of geminate stops in Hungarian children and adults</b>  <i>Tilda Neuberger</i>            Hungarian Research Centre for Linguistics</p>
11:10-11:30	<p><b>Audio-visual speech perception of plosive consonants by CG learners of English</b>  <i>Elena Kkese<sup>1</sup>, Dimitra Dimitriou<sup>2</sup></i>  <sup>1</sup>Cyprus University of Technology, <sup>2</sup>University of Central Lancashire, Cyprus</p>
<b>SESSION 7</b> 11:30-12:30	<p>Chair: <i>Peng Li</i></p>
11:30-11:50	<p><b>The role of input variability in vocabulary learning in proficient L2 learners and what it can tell us about lexical representations</b>  <i>Kaja Gregorc<sup>1</sup>, Theo Marinis<sup>1</sup>, Tanja Kupisch<sup>1</sup>, Henrik Gyllstad<sup>2</sup></i>  <sup>1</sup>University of Konstanz, <sup>2</sup>Lund University</p>
11:50-12:10	<p><b>What can disfluencies tell us about macrostructure skills of bilingual children in both their languages?</b>  <i>Hadar Yaari<sup>1</sup>, Sveta Fichman<sup>2</sup>, Pola Osher<sup>1</sup>, Fedor Dorokhov<sup>1</sup>, Carmit Altman<sup>1</sup></i>  <sup>1</sup>Bar Ilan University, <sup>2</sup>Hadassah Academic College</p>
12:10-12:30	<p><b>Bilingual (dis)advantages interact with foreign language proficiency: Evidence from Japanese plosives produced by Shanghainese-Mandarin and Mandarin speakers</b>  <i>Peng Li<sup>1</sup>, Chengjia Ye<sup>2</sup></i>  <sup>1</sup>University of Oslo, <sup>2</sup>University of Amsterdam</p>
<b>BREAK/LUNCH</b> 12:30-13:30	
<b>PLENARY LECTURE</b> 13:30-14:30	<p><b>Insights into the Word Formation Process through the Analysis of Misspellings</b>  <i>Ruth Bahr</i>            University of South Florida</p>
<b>SESSION 8 POSTERS I</b> 14:30-15:10	<p>Chair: <i>Irina Potapova</i></p>
14:30-14:40	<p><b>The influence of family language policy on child motivation and linguistic success</b>  <i>Karen Rose, Sharon Armon-Lotem, Nir Madjar, Carmit Altman</i>            Bar-Ilan University</p>
14:40-14:50	<p><b>Linguistic stereotypes in childhood: when and how Italian children develop language attitudes towards different Italian accents</b>  <i>Camilla Masullo</i>            Rovira i Virgili University</p>

## THURSDAY, 7 April

14:50-15:00	<p><b>Cross-linguistic generalization in phonological intervention for bilingual children</b>  <i>Philip Combiths<sup>1</sup>, Alicia Escobedo<sup>2,3</sup>, Jessica Barlow<sup>2</sup>, Sonja Pruitt-Lord<sup>2</sup></i>  <sup>1</sup>University of Iowa, <sup>2</sup>San Diego State University,  <sup>3</sup>University of California, San Diego</p>
15:00-15:10	<p><b>Patterns of grammatical productivity in young Spanish-English bilinguals</b>  <i>Irina Potapova<sup>1</sup>, John Gallagher<sup>2</sup>, Alicia Escobedo<sup>1,3</sup>, Sonja Pruitt-Lord<sup>1</sup></i>  <sup>1</sup>San Diego State University, <sup>2</sup>The College of New Jersey,  <sup>3</sup>University of California San Diego</p>
<b>SESSION 9 POSTERS II 15:10-15:50</b>	Chair: <i>Navin Viswanathan</i>
15:10-15:20	<p><b>Linguistic development in early bilinguals and monolinguals. Are the heritage and dominant languages of early bilinguals less complex and less fluent than that of monolinguals?</b>  <i>Magdalena Grose-Hodge, Ewa Dabrowska, Dagmar Divjak</i>  University of Birmingham</p>
15:20-15:30	<p><b>Foregrounding linguistic diversity through multilingual storytime</b>  <i>Iulia Pittman, Jamie Harrison</i>  Auburn University</p>
15:30-15:40	<p><b>The role of audiovisual information during linguistic release from masking: Comparing bilingual and monolingual perceivers</b>  <i>Brittany Williams<sup>1</sup>, Navin Viswanathan<sup>1</sup>, Susanne Brouwer<sup>2</sup></i>  <sup>1</sup>The Pennsylvania State University, <sup>2</sup>Radboud University</p>
15:40-15:50	<p><b>Comparing monolingual and bilingual listeners' perception of impaired speech</b>  <i>Anne Olmstead, Jimin Lee, Janet van Hell</i>  The Pennsylvania State University</p>
<b>SESSION 10 15:50-16:50</b>	Chair: <i>Ferenc Bunta</i>
15:50-16:10	<p><b>Crosslinguistic influence: Is the distribution of null and overt subjects in Guajiro Spanish permeable to the existence of two different conjugations (analytical and synthetic) in Wayuunaiki?</b>  <i>Nelson Mendez Rivera<sup>1</sup>, Juana Licerias<sup>1,2</sup></i>  <sup>1</sup>University of Ottawa, <sup>2</sup>Nebrija University</p>
16:10-16:30	<p><b>The VietSpeech Multilingual Transcription Protocol: A 4-step process for transcribing Vietnamese-Australian children's speech</b>  <i>Kate Margetson, Sharynne McLeod, Sarah Verdon, Van Tran</i>  Charles Sturt University</p>
16:30-16:50	<p><b>Phonological skills of English-speaking children with hearing loss who use cochlear implants and their peers with normal hearing</b>  <i>Ferenc Bunta<sup>1</sup>, Haley Houston<sup>2</sup>, Alex Sweeney<sup>3</sup>, Michelle Ivey<sup>1</sup></i>  <sup>1</sup>University of Houston, <sup>2</sup>Indiana University, <sup>3</sup>Baylor College of Medicine</p>

## FRIDAY, 8 April

<b>SESSION 11 08:10-09:30</b>	Chair: <i>Magdalena Wrembel</i>
08:10-08:30	<p><b>Perception of naïve L3 tones: The role of Mandarin experience in pitch and phonation perception for native English speakers</b>  <i>Yufei Niu, Peggy Pik Ki Mok</i>  The Chinese University of Hong Kong</p>

## FRIDAY, 8 April

08:30-08:50	<b>Intraword variability in 2-year-old typically developing Danish-speaking children</b> <i>Marit Carolin Clausen<sup>1</sup>, Pernille Ege Jørgensen<sup>1</sup>, Mia Studsgaard Bøgh<sup>1</sup>, Annette Fox-Boyer<sup>2</sup></i> <sup>1</sup> University of Southern Denmark, <sup>2</sup> University of Lübeck
08:50-09:10	<b>The development of alveopalatal fricatives in French-speaking monolingual and bilingual children</b> <i>Margaret Kehoe<sup>1</sup>, Marie Philippart de Foy<sup>2</sup></i> <sup>1</sup> University of Geneva, <sup>2</sup> University of Toulouse
09:10-09:30	<b>Natural Growth Theory of Acquisition: New data support for a revised theory of multilingual acquisition of speech</b> <i>Katarzyna Dziubalska-Kołaczyk, Magdalena Wrembel</i> Adam Mickiewicz University, Poznań
<b>SPECIAL LECTURE</b> 09:30-10:30	<b>Attitudes to Languages and Bilingualism in the Context of Residential Care for Older Persons</b> <i>Angela Medina<sup>1</sup>, Nicole Müller<sup>2</sup>, Martin J. Ball<sup>3</sup></i> <sup>1</sup> Florida International University, <sup>2</sup> University College Cork, <sup>3</sup> Bangor University
<b>SESSION 12</b> 10:30-12:10	Chair: <i>Eleftheria Geronikou</i>
10:30-10:50	<b>Narrative abilities and grammaticality of Russian heritage children: Evidence from Cyprus</b> <i>Sviatlana Karpava</i> University of Cyprus
10:50-11:10	<b>Bilingual disadvantages and bilingual advantages compensate each other in a trade-off pattern: A PRISMA review</b> <i>Vittoria Dentella, Camilla Masullo, Evelina Leivada</i> Rovira i Virgili University
11:10-11:30	<b>The identity of Polish-Portuguese bilingual people</b> <i>Agata Kukawska</i> Cardinal Stefan Wyszyński University in Warsaw
11:30-11:50	<b>Spectral differentiation between alveolar and post-alveolar sibilants: Evidence from Bulgarian</b> <i>Milena Milenova</i> Sofia University "St. Kliment Ohridski"
11:50-12:10	<b>Comprehension of non-canonical sentences by Greek-speaking children: Developmental and clinical aspects</b> <i>Eleftheria Geronikou, Arhonto Terzi, Grigoris Kalogeropoulos</i> University of Patras
<b>BREAK/LUNCH</b> 12:10-13:10	
<b>SESSION 13</b> 13:10-14:30	Chair: <i>Liang Chen</i>
13:10-13:30	<b>The relationship between age of acquisition and language dominance among early French-English bilinguals in Montreal</b> <i>Rachel Poulin</i> The University of Texas at Austin
13:30-13:50	<b>Predicting perceptions of truthfulness: Investigating the effects of accent familiarity</b> <i>Mateja Pavlic, Brooke Breaux</i> University of Louisiana at Lafayette

## FRIDAY, 8 April

13:50-14:10	<b>Common features of mothers' vocabularies in their conversations with children with ASD</b> <i>Liang Chen<sup>1</sup>, Ruixia Yan<sup>2</sup>, Xiaojun Wu<sup>3</sup>, Xiao Feng<sup>1</sup></i> <sup>1</sup> University of Georgia, <sup>2</sup> North Carolina Central University, <sup>3</sup> Hunan University of Technology and Business
14:10-14:30	<b>Measuring the stage overlapping of consonant clusters in developmental speech</b> <i>Elena Babatsouli</i> University of Louisiana at Lafayette
<b>SESSION 14</b> 14:30-15:30	Chair: <i>Daniel Bérubé</i>
14:30-14:50	<b>Markedness, word order and the prosody of coordination</b> <i>Juana Licerias<sup>1,2</sup>, Marco Llamazares<sup>2</sup></i> <sup>1</sup> University of Ottawa, <sup>2</sup> Nebrija University
14:50-15:10	<b>Subject pronoun expression among Bubi-Spanish speakers in Equatorial Guinea</b> <i>Lillie Padilla</i> Sam Houston State University
15:10-15:30	<b>Towards an ecosystemic model of bilingual phonological development</b> <i>R. Sabah Meziane<sup>1</sup>, Daniel Bérubé<sup>2</sup>, Andrea A.N. MacLeod<sup>3</sup></i> <sup>1</sup> University of Montreal, <sup>2</sup> University of Ottawa, <sup>3</sup> University of Alberta
<b>SESSION 15</b> 15:30-16:30	Chair: <i>Kate Margetson</i>
15:30-15:50	<b>Perception of L3 Kaqchikel (Mayan) stop consonants by Spanish-English multilingual listeners</b> <i>Brett C. Nelson</i> University of Calgary
15:50-16:10	<b>The Perception of L3 Quebec French tense and lax vowels contrasts by L1 Mandarin-L2 English learners</b> <i>Junyu Wu</i> University of Victoria
16:10-16:30	<b>Cross-linguistic transfer during multilingual speech acquisition: A longitudinal Vietnamese-English case study</b> <i>Kate Margetson, Sharynne McLeod, Sarah Verdon, Van Tran</i> Charles Sturt University
16:30-16:50	<b>Bi/multilingual diminutive constructions: a cross-community analysis of Spanish-English code-switching in Miami and Belize</b> <i>Margot Vanhaverbeke<sup>1</sup>, Renata Enghels<sup>1</sup>, Osmer Balam<sup>2</sup></i> <sup>1</sup> Ghent University, <sup>2</sup> The College of Wooster

## SATURDAY, 9 April

<b>SESSION 16</b> 08:10-09:30	Chair: <i>Agnes Jordanidisz</i>
08:10-08:30	<b>A preliminary study on L2 Mandarin neutral tone production by Japanese and Korean learners</b> <i>Tong Shu, Peggy Pik Ki Mok</i> The Chinese University of Hong Kong
08:30-08:50	<b>A peculiar case of parent losing its children</b> <i>Bipancho Bhattacharyya, Nang Wesufa Loungchot</i> Tezpur University
08:50-09:10	<b>A thematic role therapy protocol for a Greek child with Down Syndrome: A case study</b> <i>Ioannis Papakyritsis, Aikaterini Daskalaki</i> University of Patras



## SATURDAY, 9 April

09:10-09:30	<b>Screening the narrative skills of Hungarian kindergarteners by dynamic assessment</b> <i>Agnes Jordanidisz<sup>1</sup>, Judit Bóna<sup>2</sup>, Tímea Vakula<sup>1</sup></i> <sup>1</sup> Association for Educational Needs - NILD Hungary, <sup>2</sup> Eötvös Lorand University
<b>PHON WORKSHOP</b> 09:30-10:30	<b>Demonstration of Phon Functions for the Study of Phonology and Phonetics in Multilingual Speakers</b> <i>Yvan Rose</i> University of Newfoundland
<b>SESSION 17</b> 10:30-12:10	Chair: <i>Elisabeth Zetterholm</i>
10:30-10:50	<b>Child-directed speech in a native vs. a non-native language</b> <i>Jana Vozníková</i> Pavol Jozef Šafárik University, Košice
10:50-11:10	<b>The effects of secondary acoustic cues on the perception of Spanish intonation contrasts between native Mandarin and Spanish listeners</b> <i>Peizhu Shang<sup>1</sup>, Zishan Qin<sup>2</sup></i> <sup>1</sup> University of Barcelona, <sup>2</sup> University of Shanghai
11:10-11:30	<b>Same, same, but different: Properties of (in)definiteness in heritage Greek, Russian and Turkish in Germany and the US</b> <i>Maria Martynova<sup>1</sup>, Onur Özsoy<sup>2</sup>, Vasiliki Rizou<sup>1</sup>, Artemis Alexiadou<sup>1</sup>, Natalia Gagarina<sup>2</sup>, Luka Szucsich<sup>1</sup></i> <sup>1</sup> Humboldt University Berlin, <sup>2</sup> Leibniz-Centre General Linguistics (ZAS)
11:30-11:50	<b>Korean-English bilingual speakers' productions of English /l/</b> <i>Adam J. Hogan, Hyunju Chung</i> Louisiana State University
11:50-12:10	<b>Pronunciation teaching for adult L2-learners</b> <i>Elisabeth Zetterholm</i> Linköping University
<b>BREAK/LUNCH</b> 12:10-12:50	
<b>SESSION 18</b> 12:50-14:10	Chair: <i>Juana Liceras</i>
12:50-13:10	<b>The role of word stress on the comprehension of clitic pronouns in children with cochlear implants and children with normal hearing</b> <i>Talita Fortunato-Tavares</i> City University of New York, Lehman College
13:10-13:30	<b>Turkish phonology: The monolingual vs bi-/multi-linguals discrepancies and what the synchronic data can tell about contemporary residues of the past</b> <i>Nicolas Royer-Artuso</i> University in Saguenay, Quebec
13:30-13:50	<b>Language learning beliefs in multilingual speakers of Korean as a third language</b> <i>Robert J. Fouser</i> Independent Scholar
13:50-14:10	<b>The narrative abilities of monolingual and bilingual speakers with Prader-Willi Syndrome: Not losing is winning</b> <i>Estela Garcia-Alcaraz<sup>1</sup>, Juana M. Liceras<sup>2,3</sup></i> <sup>1</sup> University of the Balearic Islands, <sup>2</sup> University of Ottawa, <sup>3</sup> Nebrija University
<b>SESSION 19</b> 14:10-15:30	Chair: <i>Ramses Ortin</i>
14:10-14:30	<b>Voluntary language switching within counting sequences</b> <i>Ana Románach Álvarez, Rosa E. Guzzardo Tamargo</i> University of Puerto Rico - Río Piedras

## SATURDAY, 9 April

14:30-14:50	<b>Monolingual and bi/multilingual children's Mandarin Chinese speech parameters</b> <i>Qin Xiang, Veronika Makarova</i> University of Saskatchewan
14:50-15:10	<b>English time at Núcleo Saber Down: Study on adaptation of codas filled with occlusive consonants</b> <i>Lucas Alencar, Marian Oliveira, Maria Baia, Glaubia Moreira, Lucrecia Santos, Priscila Ribeiro</i> State University of Southwestern Bahia
15:10-15:30	<b>Spanish heritage speakers' processing of lexical stress</b> <i>Ramsés Ortín</i> The University of Texas Rio Grande Valley
<b>SESSION 20 POSTERS III 15:30-17:00</b>	Chair: <i>Talia Walker</i>
15:30-15:40	<b>Reading velocity and reader proficiency: A study on readers with T21</b> <i>Glaubia Ribeiro Moreira, Marian Oliveira, Lucas Alencar, Lucrecia Santos</i> State University of Southwestern Bahia
15:40-15:50	<b>A study on mid vowels: Dialectal characteristics and T21</b> <i>Lucrecia Santos, Marian Oliveira, Glaubia Moreira, Lucas Alencar, Priscila Ribeiro</i> State University of Southwestern Bahia
15:50-16:00	<b>Dialectal knowledge and use in African American English: A Southern Louisiana perspective</b> <i>Warren Brown</i> University of Louisiana at Lafayette
16:00-16:10	<b>The use of verbal inflections in Inuktitut child-directed speech</b> <i>Hannah Lee<sup>1</sup>, Alice Johnson<sup>2</sup>, Shanley Allen<sup>2</sup></i> <sup>1</sup> Northeastern University, <sup>2</sup> University of Kaiserslautern
16:10-16:20	<b>The chance of getting the gender right between French, Greek, and Spanish: Loan nouns vs. frequent nouns</b> <i>Maria-Sofia Sotiropoulou</i> Episcopal School of Acadiana
16:20-16:30	<b>Apology emails by Australian learners of Italian: A focus on providing explanations to academic staff</b> <i>Talia Walker</i> The University of Sydney
16:30-16:40	<b>Language modeling: Unlock potential in children with complex communication needs</b> <i>Xing Wei</i> University of Georgia
16:40-16:50	<b>Family language policy: An analysis of language use patterns and factors enabling active use of heritage languages in a multilingual family</b> <i>Serli Tomita</i> Rikkyo University
16:50-17:00	<b>CLOSING REMARKS</b> Chair: <i>Elena Babatsouli</i>

## **ABSTRACTS**

## PLENARY LECTURES

### Insights into the Word Formation Process through the Analysis of Misspellings

*Ruth Bahr*

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Many believe that English is a hopelessly irregular orthography, when in fact, it is a morphophonemic orthography (Venezky, 1970, 1999; Nunes & Bryant, 2006), where sound and meaning are interconnected through the orthography. As such, both decoding and encoding rely on the increasing orchestration of three linguistic codes: a) the sounds in heard/spoken words (phonology); b) the letters in read/written words (orthography); and c) the morphological relationships between base words and their affixed forms. Misspellings provide a window into the linguistic aspects that underlie vocabulary knowledge. Information gathered from a research program that considered misspelled words taken from spelling tests and written samples produced by typically developing students, Spanish-English bilingual students, and those with specific language learning disabilities in grades 1-9 will be described. Spelling will be presented as a word formation process that is affected by task variables and lexical knowledge. The following observations are noted: 1) Spelling errors change with time, as students incorporate new linguistic knowledge into their understanding of word formation. At first, there is a reliance on word-general knowledge, which gradually develops into word-specific knowledge (i.e., an accurate spelling). 2) Spelling errors are inconsistent and will vary across students dependent upon task or lexical knowledge (Bahr, Silliman, Berninger, & Dow, 2012; Bahr, 2015; Bahr, Leiby, & Wilkinson, 2020). There are multiple ways to misspell a target word and certain orthographic patterns are less frequently misspelled, alluding to the impact of statistical learning during spelling development. 3) The nature of spelling errors seems to vary more by the strength of the cross-code integration of phonological, orthographic and morphological knowledge interacting with task demands than by diagnostic category (Bahr et al., 2020). 3) The nature of spelling errors seems to vary more by the strength of the cross-code integration of phonological, orthographic and morphological knowledge interacting with task demands than by diagnostic category (Bahr et al., 2020). 4) Morphology plays an important role in spelling, despite language transparency. Spelling plays a key role in the development of richer, lexical level cognitive representations (Bahr et al., 2009; Adlof & Perfetti, 2014).

**Keywords:** misspellings, orthography, phonology, morphology, decoding/encoding, English

## **How Bilinguals Process Spoken Language: Consequences for Mind and Brain**

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Learning another language changes the human linguistic, cognitive and neural architectures. In this talk, I will show that a bilingual's two languages constantly interact and influence each other during spoken language processing. Bilinguals' experience managing two languages sculpts the brain and translates to changes not only in the domain of language (such as language learning), but also in other domains (such as visual search and audio-visual integration). Using eye-tracking, mouse-tracking, EEG, and fMRI data, I will show that the highly interactive and dynamic nature of bilingual language processing results in profound changes to cognition and the brain.

**Keywords:** bilingual processing, linguistic, cognitive, neural architectures, eye-tracking, EEG, fMRI

## The Impact of Schooling on Bilingual Children's Language Development

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Strong language skills are foundational for the development of literacy. How does grammatical development relate to literacy development in elementary school age monolingual and bilingual children? According to the literacy enhancement hypothesis (Armstrong & Montrul, 2022) the development of literacy skills and exposure to textual input during the school-age period leads to more robust linguistic representations of morphosyntactic structures that improve psycholinguistic processing mechanisms such as working memory, input monitoring and cue reliance. I present preliminary results of current studies designed to test this hypothesis. We developed measures to assess production and comprehension of late-developing grammatical structures that are acquired and mastered through increased exposure to written language at school. I will discuss how variation found in spoken language with early acquired morphosyntactic aspects of Spanish (gender agreement, clitic pronouns, direct object marking) affects the comprehension and production of complex syntax (verbal passive structures and relative clauses) in bilingual children who receive academic support in Spanish at school and those who do not. Our preliminary findings suggest that print exposure in the heritage language contributes to strengthen and maintain early acquired linguistic structures that form the basis for the development of more complex syntax in Spanish. Our results will inform effective assessment, instruction, and intervention strategies to promote robust language and literacy skills and academic success in the Hispanic population.

**Keywords:** literacy, grammatical development, children, monolingual, bilingual, processing

## **Disorder within Dialects: Changing the Narrative about Developmental Language Disorder with Evidence**

*Janna B. Oetting*

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Historically, speech-language pathologists and other language professionals have been encouraged to exclude grammar structures that vary across dialects when assessing and treating children who speak nonmainstream dialects of English. This recommendation is grounded in the dialect vs. disorder framework advocated by the American Speech-Language-Hearing Association's (1983) position statement. Unfortunately, this framework leads to disparities in the services provided to children. Children who speak a mainstream dialect of English receive services for their entire linguistic system, whereas children who speak a nonmainstream dialect do not. Our approach is different. Using an innovative Disorder within Dialects framework, we study the grammar profile of Developmental Language Disorder (DLD) in children who speak various nonmainstream dialects of English, and our work focuses on the very grammar structures that others exclude. In this plenary talk, I will highlight findings from a series of studies supported by the Disorder within Dialect framework and describe and share dialect-informed stimuli and a strategic scoring approach that can be applied to various grammar structures. The southern American dialects represented in the studies include urban and rural varieties of African American English (AAE), rural Southern White English (SWE), Cajun English (CE), and Gullah-Geechee-influenced AAE. Using data from language samples and three experimental tasks (i.e., a sentence recall task, elicitation probes, and a grammaticality judgment task), I will also present findings to show the DLD English profile to include tense and agreement deficits even though expressions of these structures vary across dialects.

**Keywords:** children, DLD, grammar, dialects, African American English, Southern White English, Cajun English, Gullah-Geechee-influenced AAE

## SPECIAL LECTURE

### Attitudes to Languages and Bilingualism in the Context of Residential Care for Older Persons

Angela Medina<sup>1</sup>, Nicole Müller<sup>2</sup>, Martin J. Ball<sup>3</sup>

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In earlier work (Müller, 2017), we have shown how pro-active bilingual practices and contextual adaptation of language choice supports participation, as well as positive identity construal, for nursing home residents, both with and without cognitive-communication disabilities as a consequence of dementia. In this paper, we present detailed analyses of the linguistic expression of Irish-English bilingual speakers' attitudes towards language(s), language use and speakers, in the context of widespread but not universal bilingualism in an Irish nursing home. The data analyzed are transcripts of approximately 7 hours of unstructured interviews on the general topic of experiences of Irish-English bilinguals among staff (N=4) and residents (N=2). We applied Appraisal Analysis (grounded in Systemic Functional Linguistics) in order to map out speakers' expression of attitudes towards language(s), speakers, and language use. Residents appraise speakers in terms of language skills and their own bilingual status as positive and advantageous. Talk about languages and speakers is used to construe competent and discerning self-identities. Staff members evidence a high degree of awareness of residents' language preferences and comment on residents' appraisal of language skills as positive and identity-affirming. In addition, they emphasize the importance of residents' preferred language as a contributor to quality of life and for emotional connectedness and consider linguistic inclusivity a vital ingredient in the daily life of the nursing home. Languages and bilingualism are also linked with local identity and rootedness, which is seen to create a sense of community which spans generations. Appraisal analysis permits insight into the linguistic tools speakers use to construe attitudes and identities. In a bilingual residential context, fostering positive speaker identities through language use creates a supportive bilingual environment, which in turn also fosters inclusive discursive practices: Language preferences are respected, while communication gaps are bridged by mediation (dual language use or translation, code-switching). This puts skills into the foreground and de-emphasizes cognitive-communicative impairments.

**Keywords:** attitudes to language/speakers/language use, positive speaker identity, residential care, older persons, bilinguals, Irish, interviews

#### Reference

Müller, N. (2017). 'Fear nó bean, a man or a woman?' Bilingual encounters in residential eldercare in Ireland. In C. Plejert, C. Lindholm, & R. W. Schrauf (Eds.), *Multilingual interaction and dementia* (pp. 57–73). Multilingual Matters.



## **PHON WORKSHOP**

### **Insights Demonstration of Phon Functions for the Study of Phonology and Phonetics in Multilingual Speakers**

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During this online presentation, I will present an overview of the Phon software program for the study of phonology and (acoustic) phonetics. Matching the central theme of the conference, I will then emphasize how issues in multilingualism such as code-switching can be addressed using simple codes within data transcripts.

**Keywords:** Phon, functions, multilingual speakers, phonology, phonetics

## CONTRIBUTED PAPERS

### **English time at Núcleo Saber Down: Study on adaptation of codas filled with occlusive consonants**

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The plosive consonants /p, b, t, d, k, g/ are part of the Portuguese and English phonological system. However, in Portuguese, these segments cannot occur in coda position (Camara, 1992; Cristofaro-Silva, 2012). For that reason, a Brazilian learner of English as an additional language might have a hard time producing a plosive consonant when it is in coda position, especially when they are beginner learners of English. For instance, the word notebook can be produced as ['nouti'buki] by a Brazilian Portuguese (BP) speaker (Silveira, 2012). The strategy to add an epenthetic vowel [i] is known to be a common syllable simplification process used by Brazilian learners of English (Zimmer, Silveira & Alves, 2009). In relation to learners with Down syndrome (DS), studies have shown that they have a cognitive deficit with delay in their linguistic development, and speech characterized by omissions and substitutions (Oliveira, Pacheco & Pereira, 2017). Thus, our main question is: how do these learners with Down syndrome produce English words that have occlusive consonants in coda position? Our hypothesis is that learners with Down syndrome will produce vocalic epenthesis. For our analysis, we transcribed the oral production of six Brazilian people with DS, that are English learners in the project "Nucleo Saber Down" at the State University of Southwest Bahia (Brazil). The results indicate that: i) although learners with DS have a cognitive deficit and delay in their linguistic development, they use the same strategy used by learners without DS, that is, vocalic epenthesis, and ii) that learners with DS show evidence of phonological knowledge of their native language as they obey the important phonotactic rule of BP phonology that plosive consonants do not occur in coda position.

**Keywords:** Down syndrome, Brazilian Portuguese, English learning, phonological process

## Measuring the stage overlapping of consonant clusters in developmental speech

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The production of consonant clusters is a common difficulty in developmental typical child speech as well as in atypical child and adult speech. In development, consonant cluster productions go through five main stages: complete omission, member deletion, vowel epenthesis, simplification (member substitution), and adult-like (Greenlee 1974, McLeod et al., 2001). However, there is stage overlapping for individual consonant clusters and cumulatively for classes of clusters. Widely used measures for the quantitative evaluation of clusters are the percentage of clusters correct (PCIC) and the percentage of consonants correct (PCC) (Shriberg et al., 1997). More recently, the measure for cluster proximity (MCP) was proposed (Babatsouli & Sotiropoulos, 2018) to distinguish cluster stages and it was found to be correlated with PCIC and PCC (Babatsouli, 2020a,b). With regard to informing stages, however, MCP does not measure the degree of stage overlapping either. In the present study, this is measured by adapting the Shannon entropy in which the proportion (probability) of each cluster stage that is present in the productions is included. To put the measured entropy in perspective, the entropy upper and lower bounds are obtained as a function of PCIC. Further, the measured entropy is scaled between these upper and lower bounds. Then, the measure is applied to two categories of consonant cluster data: multiple productions for individual consonant clusters for each age in development and cumulatively for single or multiple productions of classes of clusters or all clusters. Longitudinal data was employed from two children in typical speech development. Moreover, data was employed from speech tests for another child in atypical development. Results reveal that the entropy measure captures stage overlapping longitudinally as an inverted U-shaped curve. It quantitatively shows increasing stage overlapping with improving cluster performance for percentages of clusters correct (PCIC) less than 50%, and diminishing stage overlapping for improving cluster performance for PCIC greater than 50%.

**Keywords:** measures, consonant clusters, stages, overlap, development, speech, typical, atypical

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## **A peculiar case of parent losing its children**

*Bipanchi Bhattacharyya, Nang Wesufa Loungchot*

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Language is the road map of a culture, as Rita Mae Brown states and its loss has often been perceived as a cultural shock. Studies of language attrition are paying increasing attention to language discourse and researchers have realized the significance of social context to understand attrition which includes discussions of linguistic minority, migration, and the attitude of the circumambient dominant society. This paper examines a particular case of language loss as witnessed in the tribe of Tai Khampti residing in the Namsai district of Eastern Arunachal Pradesh, India. The tribe is a branch of the Tai race that is widespread across the continent of Asia. With a large history of settlement and migration, the race disintegrated and acquired local appellations as in the case of Tai Khampti. As a result, the language has also undergone transformations to the extent of attrition among its members. Tai Khampti has been registered as an endangered language in India with not more than 15,000 speakers at present in a community with an approximate population of 20,000. This paper seeks to understand the socio-cultural factors involved in the loss of language evidenced among individuals of the Tai Khampti tribe. It discusses initial stages of attrition leading to likely bigger crises that can involve loss of identity and loss of culture caused by lack of contact with the language. Case study through interview and observation methods includes language attrition in individuals in their homes, their language community, and educational institutions. The study also suggests ways for language maintenance in individuals of the tribe, with the effects this has on the bigger picture of culture maintenance.

**Keywords:** language attrition, language maintenance, identity

## **Dialectal knowledge and use in African American English: A Southern Louisiana perspective**

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Wolfram (2007) suggested that researchers study aspects of regional variation within the African American English (AAE) dialect. This would improve overall knowledge and use of the dialect among speakers and listeners. However, research on specific semantic changes and its user's knowledge and perspectives of these differences is limited. This study investigates AAE speakers' knowledge of the semantic differences in using AAE terms across different ages. Twenty-five AAE speakers participated in this study ranging from ages 15 to 75, all of whom have been residents of Southern Louisiana. A one-on-one interview with the chief investigator using a pre-script of 17 questions, followed by a spontaneous conversation using pre-script terminology throughout the conversation, was completed. The results indicated that most participants had a knowledge base of all words/phrases presented, but this did not suggest they use these terms regularly within and outside the dialect. They also indicated that the meanings of some words/phrases might change depending on the context and individual involved in the conversation. The finding that some AAE speakers use and perceive words/phrases differently within the dialect is important. This adds to the literature that helps shift the perspective regarding the notion of homogeneity in AAE. This will also aid in comprehending the dialect among researchers and clinical professionals who don't speak the vernacular. Limitations of this study were the number of participants and the difficulty of some terminology presented to participants not being used in context, only in a multiple-choice format. Future research would study the cause of perception differences with words/phrases besides changes in context.

**Keywords:** African American English (AAE), dialect, semantics, Southern Louisiana

### **Reference**

Wolfram, W. (2007). Sociolinguistic folklore in the study of African American English. *Language and Linguistics Compass*, 1 (4), 292–313.

## **Phonological skills of English-speaking children with hearing loss who use cochlear implants and their peers with normal hearing**

*Ferenc Bunta<sup>1</sup>, Haley Houston<sup>2</sup>, Alex Sweeney<sup>3</sup>, Michelle Ivey<sup>1</sup>*

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This study investigates the speech patterns of children with cochlear implants (CIs) and their peers with normal hearing (NH) by comparing group differences on typical and atypical phonological processes, phonological whole-word measures, and segmental accuracy in thirty English-speaking 5- to 7-year-olds (15 children with NH and 15 CI users) using a single-word elicitation task. Independent variables included hearing status group (CI versus NH) and typicality of phonological processes. The dependent variables included 6 typical versus 6 atypical phonological processes, phonological whole-word measures, and segmental accuracy measures. Hearing status had an effect on phonological processes [ $F(1, 28) = 30.07$  at  $p < 0.001$ , partial  $\eta^2 = 0.52$ ] as did typicality [ $F(1, 28) = 46.01$  at  $p < 0.001$ , partial  $\eta^2 = 0.62$ ]. There was an interaction effect of hearing status and typicality of phonological processes [ $F(1, 28) = 24.47$  at  $p < 0.001$ , partial  $\eta^2 = 0.47$ ], indicating that CI users had disproportionately higher percentage of atypical phonological processes than their peers with NH. Children with CIs displayed lower PMLU scores [ $F(1, 28) = 36.04$  at  $p < 0.001$ , partial  $\eta^2 = 0.56$ ], PWP scores [ $F(1, 28) = 42.35$  at  $p < 0.001$ , partial  $\eta^2 = 0.60$ ], segmental accuracy [ $F(1, 28) = 35.69$  at  $p < 0.001$ , partial  $\eta^2 = 0.56$ ], percentage of vowels correct [ $F(1, 28) = 25.74$  at  $p < 0.001$ , partial  $\eta^2 = 0.48$ ], and percentage of consonants correct [ $F(1, 28) = 36.29$  at  $p < 0.0001$ , partial  $\eta^2 = 0.56$ ] than their peers with NH. Hearing status affects phonological outcomes, but the speech patterns of CI users display unique patterns that distinguish them from their peers with NH. The speech patterns of CI users differ both quantitatively and qualitatively from patterns attested in their peers with NH, providing novel insights into phonological development.

**Keywords:** cochlear implants, phonological processes, segmental accuracy, phonological whole-word measures

## Variable production of differential object marking in bilingual heritage speakers of Spanish

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Previous research has shown that adult heritage speakers (HSs) tend to show more interspeaker and intraspeaker variability in their use of morphosyntax in the heritage language compared to other speaker groups. In this study, we investigated HSs' use of differential object marking (DOM) in Spanish with the goal of explaining some of this variability. In Spanish, DOM describes the use of the morpheme 'a' to mark certain types of direct objects (DOs), depending on the DO's animacy and specificity. Previous studies of DOM in HSs of Spanish have shown that HSs' rates of DOM with animate DOs vary greatly: some HSs use DOM consistently, some speakers rarely produce DOM, and others show variable production (e.g., Montrul & Sánchez-Walker, 2013; i.a.). While previous studies have largely overlooked the patterns among the variable speakers, more recent work has begun to explore potential sources of this variability (e.g., Hur, 2020). In this study, 27 bilingual HSs of Spanish completed an experimental task aimed at eliciting DOM with the same verbs across three animacy conditions (human, animal, or inanimate DOs). HSs' relative language dominance was measured using a bilingual category fluency task. Most participants produced DOM variably in this experiment. In a mixed-effects logistic regression model, DO animacy significantly predicted the use of DOM as expected by previous accounts of DOM. The model also revealed a significant trend for increased dominance in Spanish to predict higher rates of DOM. Finally, linguistic factors are revealed to play an important role in HSs' individual performance. The examination of individual variability provides a more comprehensive perspective on morphosyntactic knowledge in HSs. Even when general patterns demonstrate divergent usage, linguistic factors reveal important trends at the individual level. Our findings will be discussed in light of recent proposals regarding bilingual morphosyntax (e.g., Sánchez', 2019 proposal for bilingual alignments).

**Keywords:** morphosyntax, bilingualism, language maintenance, heritage language, variation

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## Development of phonetic complexity in multilingual Lebanese children

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Children's early phonetic development is constrained by universal biological limitations (Davis & MacNeilage, 1995), but it is also influenced by the target language characteristics. Several studies on monolingual children have examined phonetic complexity showing its increase with age and/or lexical size as well as a gap between the actual and the targeted complexity (Charlier & Juhem, 2007; Bellemmouche, 2016). Moreover, the only cross-linguistic study (Gayraud et al., 2018) to our knowledge, showed first that languages differ in terms of phonetic complexity but also the influence of these differences on the development of children's phonetic complexity. The aim of our study is to describe the development of phonetic complexity in multilingual children speaking Lebanese Arabic and French and/or English. Concerning methodology, we recorded spontaneous utterances of 16 Lebanese multilingual children aged between 16-30 months. Recordings lasted 30 minutes per child and took place at home in natural communication settings with the mother. Using an adaptation of Jakielski's (2000) Index of Phonetic Complexity (IPC), we carried out an analysis to assess the phonetic complexity in all three languages, of both produced and targeted words by two groups of children aged between 16-20 months and 27-30 months. Expressive vocabulary size was estimated by using the Lebanese Trilingual Communicative Development Inventory - 16-30 months (IDC-L trilingue 16-30 mois). Our findings show that children's IPC increases significantly with vocabulary size only at 16-20 months of age, at the lexical spurt stage. Moreover, we showed that although children's actual productions' IPC increases with age, its value is always inferior to that of target words in all the three languages, indicating that children still have articulatory limits. Furthermore, the cross-linguistic comparisons of children's IPC scores of their produced words do not reveal any differences between languages showing that these children's first lexical productions seem to be more influenced by articulatory constraints than by the ambient language.

**Keywords:** phonetic complexity, acquisition, multilingual, Lebanese Arabic, cross-linguistic, lexical size



## **Common features of mothers' vocabularies in their conversations with children with ASD**

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Research on the structure and content of parental input to children with ASD is an important, yet largely neglected, area of study (Fusaroli, Weed, Fein & Naigles, 2019). It is not clear which input features are similar or different between children with ASD and typically developing (TD) children (Conti-Ramsden, 1994; Nadig & Bang, 2017). The purpose of the present study was to examine some common features of mothers' vocabularies in their speech to children with ASD. The tools available in the Child Language Data Exchange System (CHILDES) were used to analyze transcripts of spontaneous conversation between six children with ASD and their mothers, who were followed over a period of between 12 and 26 months (Tager-Flusberg, Calkins, Nolin, Baumberger, Anderson & Chadwick-Dias, 1990; MacWhinney, 2000). Analyses focused on the composition and function of the shared vocabularies of the mothers of children with ASD and compared with Hu's (1994) study of shared vocabularies of mothers of TD children. Results first indicated the small core lexicon shared by all the mothers (9.5%) made up a total of 78.1 % of the mothers' actual speech. This is similar to the feature of core lexicon in the maternal speech to TD 2-year-old children (Hu, 1994). Results also showed that, in contrast to maternal speech to TD children, the core lexicon of the mothers of children with ASD was composed of slightly more content words (particularly verbs) than function words (68.3% vs. 31.7%). Mothers restrict their choice of lexical items to a small pool of highly frequent words when conversing with their children, TD as well as with ASD. The use of more verbs in maternal speech to children with ASD may reflect these mothers' explicit efforts to orient and direct their ASD children's attention to an ongoing activity.

**Keywords:** shared vocabularies, maternal speech, ASD

## Intraword variability in 2-year-old typically developing Danish-speaking children

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Variability, also referred to as token-to-token inconsistency, has been reported to be part of children's early typical speech development. Reaching consistent word production, however, is an important milestone since variability (inconsistency) in speech is known to be a marker for childhood apraxia of speech or inconsistent phonological disorder (American Speech-Language-Hearing Association, 2007; Dodd, 2014). Reaching a level of <40% of inconsistent speech has been claimed to indicate consistent word production in typically developing children (Holm et al., 2007). Intraword variability has been investigated in French (Kehoe & Cretton, 2021), Finnish (Martikainen et al., 2019), Dutch (Faes & Gillis, 2018), Brazilian Portuguese (de Casto & Wertzner, 2011), German (Schäfer & Fox-Boyer, 2006), and English (e.g., Sosa, 2015). Studies indicate that children typically are consistent between 2;6-3;0 years but differences in variability rates have also been reported across languages. These differences may be ascribed to differences in the complexity of the phonological systems of the languages. Since the phonological development of Danish-speaking children has been found to be among the fastest across languages, the question arises at which age Danish-speaking children are reaching the milestone of consistency in speech. The aim of the study was to investigate the variability in word production in Danish-speaking 2-year-old children. The participants were 54 typically developing monolingual Danish-speaking children aged 2;0-2;5 years. The children were assessed with a Danish version of the 25-word-test (Clausen, 2016). Each word had to be named three times in one session. The inconsistency score per child was calculated. Results showed that all children showed scores below 40% indicating that consistency of speech was reached at an earlier stage in comparison with other languages. The results and the influence of Danish phonology on this age of acquisition will be discussed.

**Keywords:** variability, speech inconsistency, speech development, Danish

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## **Cross-linguistic generalization in phonological intervention for bilingual children**

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In bilingual children, intervention for speech sound disorders must consider both the child's phonological systems, which are known to interact with each other in development. Further, cross-linguistic generalization following intervention for bilingual children with speech sound disorders (i.e., the impact of treatment in one language on the other) has been documented to varying degrees in some prior studies. However, none to date have documented the cross-linguistic impact of treatment with complex targets (e.g., consonant clusters) in bilingual children. Because complex phonological targets have been shown to induce system-wide, across-class generalization within a single language, the potential for generalization across languages in bilingual children with speech sound disorders could impact the efficiency of intervention in this population. This pilot intervention study examines the system-wide, cross-linguistic effects of treatment targeting consonant clusters in Spanish for two Spanish-English bilingual children with speech sound disorders. Treatment was provided with 45-minute sessions in Spanish via teletherapy, three times per week for six weeks. Comprehensive phonological probes were administered in English and Spanish prior to intervention and across multiple baselines. Pre-intervention data were compared to data from probes administered during and after intervention to generate qualitative and quantitative measures of treatment outcomes and cross-linguistic generalization. Preliminary results indicate system-wide generalization in Spanish (the language of treatment) and English (not targeted in treatment), for both participants. These findings have implications for cross-linguistic transfer and implicational relationships in bilingual children and continued intervention research in this understudied population.

**Keywords:** phonology, bilingualism, speech sound disorders, language transfer, treatment

## The acquisition of the null subject parameter in Catalan as a heritage language

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The acquisition of the Null Subject Parameter (NSP) in a bilingual setting and its possible cross-linguistic influence (CI) has been the focus of many studies in the last decades (Paradis & Navarro, 2003; Montrul, 2004; Villa-García & Suarez-Palma, 2016). However, there is no literature focused on bilingual children acquiring Catalan and German in this particular domain (but see Arnaus Gil & Müller, 2020, and Arnaus Gil & Jimenez-Gaspar, 2022 on the study of Catalan in Germany). As Montrul (2004) argues, the differences between German (non-null-subject, NNS) and some Romance (null-subject, NS) languages reside mainly on the richness and uniformity of the verbal agreement paradigm. Following Patuto (2012) on the simultaneous acquisition of German, Italian and Spanish, CI might take place from the NNS to the NS language. We conducted a study with 14 Catalan-German children, aged between 2;6 to 13;0 (mean age: 5;7). All children receive Catalan and German input at home. The study consists of a 30-minute spontaneous recording in every child's L1. We aimed at determining whether (a) the early acquisition of the NSP in heritage language Catalan shows CI from the NNS language German, and (b) if there exists a relation between CI and language dominance. The analysis proves that the children can differentiate between the NS and the NNS (in Catalan, omission rate: 0.61, 1 %, realization rate: 0.38,9%). Only four children showed CI, which manifests itself in a high subject realization rate and these take place in some unidentifiable pragmatic contexts. A correlation between CI and language dominance could not be found. Moreover, the children already showed pragmatic abilities from age 2;8 since they use the subject to mark contrast or emphasis. Overall, the acquisition of the Catalan NSP in a community with a NNS language does not seem to generally promote CI.

**Keywords:** bilingual acquisition; cross-linguistic influence; null subject (parameter); heritage language

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## **Bilingual disadvantages and bilingual advantages compensate each other in a trade-off pattern: A PRISMA review**

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The effects of bilingualism on cognition are a debated topic. The term "bilingual advantage" was introduced to refer to bilinguals' better performance than monolinguals in certain cognitive tasks, according to early evidence (Bialystok, 2001). At the same time, a growing number of studies report a cognitive disadvantage in bilingual populations (Gollan et al., 2002), or contradictory findings (Costa et al., 2008; Duñabeitia et al., 2014). The degree to which a bilingual disadvantage is counterbalanced by a bilingual advantage is, however, still unclear. This systematic review addresses this question. The review was conducted according to the PRISMA Statement (Liberati et al., 2009) in the following databases: PsycInfo, PsycExtra, AP A Journals, and PubMed. The keywords employed were: "bilingual", "disadvantage". Our results are presented in the following categories: (i) studies that report both an advantage and a disadvantage (Advantage & Disadvantage), (ii) studies that report neither (Neither Advantage, Nor Disadvantage), (iii) studies that report only an advantage (Advantage), (iv) studies that report a disadvantage for a population/language group for which an advantage has been also reported in the literature (Disadvantage & External Advantage), (v) studies that report a disadvantage for a population/language group for which no advantage has been found in the literature (Disadvantage). Less than half of the screened studies report only a bilingual disadvantage. Excluding category (ii), the remaining studies either report both an advantage and a disadvantage or only an advantage. To obtain the overall picture, we performed a second search of the literature targeting the specific populations mentioned in the studies of category (iv). We found that 100% of these populations have been linked to bilingual advantages in other studies. We argue that this result suggests that the terms "bilingual advantage" and "bilingual disadvantage" should be conceived as inseparable parts of an overall fitness trade-off (West-Eberhard, 2003).

**Keywords:** bilingualism, cognition, (dis)advantage

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## Natural Growth Theory of Acquisition: New data support for a revised theory of multilingual acquisition of speech

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In this paper we want to provide new evidence for our revised version of the earlier proposed Natural Growth Theory of Acquisition (Dziubalska-Kołaczyk & Wrembel, 2017; submitted). One of NGTA's main assumptions is gradual dynamic emergence of Ln phonology, shaped by input from L1 and other Ls, and influenced by typology, universal preferences and context. Viewing bilingual and multilingual acquisition as a vibrant, dynamic and diversified process is compatible with newest research outcomes across such disciplines as neuroscience, sociolinguistics or psychology (e.g., Kroll, 2020; Sorace, 2020). In its epistemological stance NGTA follows a logically determined set of principles and is firmly grounded in the theory of natural linguistics and enhanced by a dynamic perspective of complexity theory. It takes into account both linguistic and extralinguistic variables as potential sources of influence and modulating factors. Crucially, the extralinguistic variables receive an umbrella term 'the acquisition situation', which embraces all aspects of a given acquisition case. Based on our revised NGTA model (Dziubalska-Kołaczyk & Wrembel, in preparation) we reinterpreted the results generated in Multi-Phon project, in which speech perception and production of two groups of young sequential multilinguals (L1/L3 Polish, L2 English, L3/L1 German) was investigated over the first year of L3 learning. Methods employed delayed repetition, accent mimicry, ABX and FC goodness task. Investigated phonetic features included vowels, rhotic sounds and final obstruent devoicing. The results demonstrated non-linear (feature-dependent) development of foreign language phonologies; transitory stages reflected in intermediate realisations; dynamic cross-linguistic interactions; effects of L1 background, language proficiency and differential learnability of phonetic features (Wrembel et al., 2019; Kopečková et al., 2021; Kopečková et al. under review). Further, the perception-production link was modulated by phonological system stability, i.e., with both modalities aligning in L2, while dissociating in L3 (Wrembel et al., under review). Attested patterns are explained with reference to the tenets of NGTA.

**Keywords:** multilingualism, phonology, natural growth theory

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## Early mixing in a Spanish-English early simultaneous bilingual in a Japanese context at age 2;4

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This study analyzes the code-switching (CS) patterns of two Spanish-English early simultaneous bilingual siblings in a Japanese societal context (the younger at age 2;4 and the older at age 5;2) in order to test predictions about the early mixing patterns of the younger sibling. Research has found that around age 2;0 with the emergence of syntax, rates of mixing are higher and primarily function words are mixed (Vihman, 1985; Meisel, 1994; Koppe & Meisel, 1995) although Cantone (2007) has suggested higher rates due to counting tokens rather than types. In order to test the quantity and quality of mixing produced prior and subsequent to the instantiation of grammar, the two sibling's CS data has been analyzed within four family contexts. Interactions were coded by language of each word, utterance, type of code-mixing (intra- or inter-sentential), and interlocutor. Neither child's Japanese, comprising only expressions and discrete nouns/expressions, is productive. The younger child's MLU in Spanish (1.24) and English (1.29) and his lack of IP or CP structures indicates that his grammar is not instantiated.

a) Tá [está] bueno. / *Is good.*

b) No eat Dada.

As expected, the younger's mixing consists primarily of items from functional categories and nouns. Regardless of token/type, mixing rates remained low for both children, intra-sentential ranging from 1.10-4.76%. The youngest did not always engage with the highest rates of mixing; rather, the mixing rates of both children varied depending on the context. These data support but cannot confirm that the quality of a bilingual child's mixing will change upon the instantiation of grammar. Further analysis of the younger child's CS at this age and at a later stage may reveal whether the mixing of functional categories reduces over time and whether these specific items are mixed possibly due to language dominance or individual choice.

**Keywords:** code-switching, simultaneous bilingualism, naturalistic, functional categories, function words

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## The different implementations of rhotic consonants in L2 Italian affect L1 Mandarin learners' perceptual accuracy

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The tendency to perceptually confound L2 Italian rhotic and alveolar lateral consonants by L1 Mandarin learners has been widely documented in the literature (e.g., Costamagna, 2010). However, most observations are based on subjective teaching/communication experiences; no empirical study has been conducted to investigate this issue. To fill this gap, this paper examines how L1 Mandarin learners distinguish perceptually between L2 Italian rhotic and alveolar lateral consonants. The participants were 30 L1 Mandarin learners differing in their L2 Italian learning experience: 10 first-year, 10 second-year and 10 third-year Chinese undergraduate students majoring in Italian. 10 native Italian speakers were the control group. In the perception experiment, the participants had to identify 6 Italian minimal pairs contrasting in rhotic and alveolar lateral consonants in three different positions: 2 in word-initial prevocalic position (#rV), 2 in word-internal intervocalic position (VrV) and 2 in word-internal preconsonantal position (VrC). The participants' perceptual accuracy rates were calculated. The results show that, in general, the L1 Mandarin learners were as accurate as the native Italian controls in the word-initial but not in the word-internal position. Moreover, in the word-internal intervocalic position, the L1 Mandarin learners showed a greater tendency to misperceive rhotics as laterals than lateral as rhotics; while the direction of misperception was the opposite in word-internal preconsonantal position. Also, the L1 Mandarin learners' differences in learning experience were not reflected in their acquisition pattern, that is, the more experienced learners did not perceive the Italian rhotic-lateral contrast better than the less experienced learners. Since in Italian the realization of rhotics varies across different positions (Celata et al., 2016; Romano et al., 2013), we argue that the complex picture of the L1 Mandarin learners' perception is caused by the different implementations of Italian rhotic consonants.

**Keywords:** L2 speech perception, rhotic, alveolar lateral, Italian, Mandarin

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## **The role of word stress on the comprehension of clitic pronouns in children with cochlear implants and children with normal hearing**

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Although most children with cochlear implants (CIs) seem to have a developmental pattern similar to their normal hearing (NH) peers, some still present poorer performance in a number of areas depending on their language of exposure. Morphosyntax, especially processing of clitic pronouns, appears to be a challenging area for children with CIs. Clitic pronouns are unstressed morphemes and a typical feature of Romance languages. There is also general evidence that children with CIs exhibit deficits in prosody perception. It is possible that prosodic information, such as word stress, is an additional burden for children with CIs when processing clitics. The present study specifically compared how word stress facilitates the selection of antecedents to clitics in sentences by children with CIs and NH. Fifteen children with NH and 13 children with CIs monolingual speakers of Brazilian Portuguese participated on a computerized sentence comprehension task with clitics that had stress manipulated on either the first or the second nouns as in "A avó atrás da mãe está se olhando (The grandmaN1 behind the momN2 is looking at herself)". F0 and duration of words significantly varied according to word stress - unstressed words were shorter with lower F0. Two visual stimuli reflected each interpretation. Children with CIs exhibited poorer performance than children with NH in comprehending sentences with clitics, regardless of word stress condition (N1: OR=7.5,p=0.00; N2: OR=2.95,p=0.03\*). Furthermore, children with CIs did not use prosodic information to support comprehension of sentences with clitics similarly to NH children. Accuracy of children with NH significantly increased when stress was placed on the correct antecedent (OR 3.34, p=0.002). Children with CIs did not benefit from word stress cues (OR= 1.31, p=0.38). Clitic processing and prosodic contrasts affecting sentence comprehension need to be directly addressed in intervention for children with CIs.

**Keywords:** prosody, clitics, cochlear implants, syntax, word stress

## Language learning beliefs in multilingual speakers of Korean as a third language

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In this paper, I investigate beliefs about language learning in 16 multilingual speakers of Korean. Kalaja, Barcelos, and Aro (2018) reviewed the literature on language learner beliefs and concluded that "the relationship of a learner's beliefs and practices in (or approaches to) learning L2s is today acknowledged to be more complex than before, and in undertaking further studies, research designs and methodologies used should be sensitive enough to capture all these possibilities involved in raising learners' awareness of their beliefs." Drawing on their research and that of Kramersch (2003), I define beliefs as concepts, ideas, opinions, and feelings about learning a language or languages that are inherently individual and subjective. The research for this paper is based on open-ended, 45-minute interviews with 16 multilingual speakers of Korean from diverse language backgrounds (Arabic, Chinese, English, French, German, Hindi, Japanese, Kazak, Mongolian, Polish, Russian, Turkish, and Uzbek). The interviewees were students in university degree programs in South Korea. Proficiency in Korean varied, but all the interviewees had sufficient proficiency to follow university classes taught in Korean. In addition, all the interviewees had learned at one non-native language before learning Korean as an L3, and most had learned several other languages, making Korean at least an L4. In addition to Korean, they used their native language(s) and other languages daily as they switched between languages communities. The interviews revealed strongly individual beliefs not only about language learning but also about Korean and other languages learned. In particular, experiences of childhood bilingualism, school language learning, migration, and interest in Korea affected learner beliefs. The results also offer insight into the use of extended open-ended interviews to learn about how the varied experiences and subjective states of multilingual speakers affect beliefs about language learning.

**Keywords:** language learner beliefs, multilinguals, Korean as L3, interviews

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## Phonetic inventories measured via picture naming or stimulability tasks: Does the task make a difference?

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Studies on phonetic-phonological development often investigate when phones are acquired to establish normative data on phonetic inventories. Such inventories are important for exploring speech sound development and disorders (McLeod & Crowe, 2018). Phone inventories are typically established by analyzing phones that are correctly produced at least once or twice within a picture naming task (PNT, McLeod & Baker, 2017). Alternatively, phone acquisition is assessed by using stimulability tasks on phone or syllable level (e.g., Dodd et al., 2002). Given that children have been reported to produce phones in non-lexical utterances noticeably earlier than in lexical utterances, phonetic inventories might be influenced by the task used, i.e., phones could be produced earlier in a stimulability task. The stimulability task might also be more language universal than the investigation via real words. The aim of the study was to investigate the age of phone acquisition in three different languages via stimulability tasks on phone level as well as PNTs. Seventy-seven German-speaking, 183 Italian-speaking, and 235 Hijazi-Arabic-speaking typically-developing (according to parental reports) 3-5-year-olds were individually assessed using a stimulability task and a PNT. Following a phonological pattern analysis, children with delayed or atypical patterns were excluded from the analyses presented here. The remaining children were divided into six-months-old groups and for each age group and language phone acquisition was analyzed in two ways: phones were regarded as acquired if a) children were able to imitate the sound or b) phones were produced correctly at least twice anywhere within the PNT transcript. Results indicate cross-language differences in the age of acquisition of phones. Furthermore, phones emerged as acquired at an earlier age in the stimulability task in comparison to the PNT in German, but not in Italian or Hijazi-Arabic. Findings will be discussed concerning similarities and differences across languages as well as tasks.

**Keywords:** phonetic inventory, stimulability, German, Hijazi-Arabic, Italian, development

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## **The narrative abilities of monolingual and bilingual speakers with Prader-Willi Syndrome: Not losing is winning**

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While the study of the narrative abilities of monolingual and bilingual typically developing (TD) individuals has been a fruitful field of research, the analysis of these abilities among non-TD individuals with Developmental Language Disorder and Autism Spectrum Disorder (Cleave et al., 2010; Baldimtsi et al., 2016) has been scarce and practically non-existent in the case of individuals with genetic disorders (Garcia-Alcaraz, 2021). Narrative abilities have been analyzed from different perspectives. In this paper we are interested in analyzing both the macrostructure (coherence and organization) and the microstructure (linguistic form and content) abilities. Previous research, for both the TD (Andreou, 2015) and the non-TD population (Tsimpli et al., 2016), has defended a potential bilingual advantage at the macrostructural level but not necessarily at the microstructural level. We want to contribute to this line of research by analyzing how bilingual individuals with Prader-Willi syndrome (PWS) compared to monolingual speakers with the same syndrome with respect to these two narrative dimensions. We recruited seven Spanish-Catalan bilinguals and eight Spanish monolinguals with PWS, a neurodevelopmental genetic disorder entailing mild to moderate intellectual disability (Cassidy et al., 2012) and that is not related to sex, gender, or race (Alexander et al., 1995). Both groups were comparable in terms of non-verbal IQ, receptive vocabulary, and sentence recall abilities in Spanish. Participants were presented with the picture book *A boy, a dog, and a frog* (Mayer, 1967) and were asked to narrate it in Spanish. The participants' macrostructure abilities were evaluated by two independent raters according to the Narrative Scoring Scheme (Heilmann et al., 2010) and their microstructure abilities by means of the Mean Length of Utterance and the Type-Token Ratio. Regression analyses showed similar narrative abilities for both groups at both dimensions. Thus, our results did not reveal a bilingual advantage at the macrostructural level but neither a bilingual disadvantage at the microstructural level. These results are in line with previous research showing no detrimental effects of bilingualism among non-TD individuals (Kay-Raining Bird et al., 2016).

**Keywords:** narratives, macrostructure, microstructure, bilingualism, genetics, Prader-Willi Syndrome

## Comprehension of non-canonical sentences by Greek-speaking children: Developmental and clinical aspects

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The structure of our knowledge is closely linked to the structure of language (Olson, 2017). Comprehension of non-canonical sentences may be challenging for students with learning difficulties (LD) and it is important to know in which way. The aim of the study is twofold: (1) to investigate the development of comprehension skills for non-canonical sentences, and (2) to explore performance of students with LD when different sentence types are employed. Four Groups of monolingual Greek-speaking children participated in the study. Preschool-A (N = 16, mean age = 52 months) at the beginning of preschool education, Preschool B (N = 17, mean age = 60 months) attending the second year of preschool education, a group of school aged children with LD (N= 7, mean age =105,6 months), and a group of School aged children matched on age and gender to LD participants (N= 14, mean age = 103 months). A sentence comprehension task comprising of Active, Passive, Subject and Object Relative sentences was used, along with sets of three pictures (with line drawings). One picture in each set corresponded the target sentence, the other contained the same characters as the target sentence but thematic roles were reversed, and the third was a distractor that contained one of the characters of the target picture and an unrelated character. Children would listen to pre-recorded sentences and were asked to point to the corresponding picture. Preschool-B children scored higher than Preschool-A children, yet differences in performance were not significant. School aged children outperformed Preschool-A children in all sentence types and Preschool-B children in all sentence types except from Object Relative sentences. Children with LD performed significantly lower than controls on Passive sentences ( $t(19) = 2.74, p = .013$ ), 66.7% target performance, as well as on Actives  $t(19) = 2.60, p = .018$ , 94.7% target performance, but not on Subject and Object Relatives (94.94% and 81.55% target performance respectively). A significant difference in performance was observed between Subject and Object Relative clauses for all groups of children, Object Relative Clauses being more challenging in the literature (Tavakolian, 1981, Friedman et al., 2009). Findings of the present study indicate that language comprehension skills for non-canonical sentences undergo development during preschool and school years. School aged children with LD may find the comprehension of specific sentence structures particularly challenging.

**Keywords:** non-canonical sentences, children, Greek subject/object relatives, passives, learning difficulties

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## **The role of input variability in vocabulary learning in proficient L2 learners and what it can tell us about lexical representations**

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Previous research has demonstrated that in monolingual children (Richtsmeier, Gerken, Goffman, & Hogan, 2009; Rost & McMurray, 2009) and beginner second language (L2) learners (Barcroft & Sommers, 2005; Sommers & Barcroft, 2011) input variability facilitates vocabulary acquisition, speaking in favor of exemplar models. Based on exemplar-based models, learners should be able to make use of indexical information (e.g., rate or voice of a speaker) to create lexical representations (Goldinger, 2007). These are more widely distributed representations, leading to easier retrieval of words learned from a more variable compared to less variable input (Barcroft and Sommer, 2011). Two recent studies investigated if also proficient L2 learners can benefit from multiple speakers training (Bulgarelli & Weiss, 2021; Uchihara, Webb, Saito, & Trofimovich, 2021). In both studies no facilitative effects of multiple speakers could be found. Both authors argue that this might be due to the design. In our first experiment, we used and adapted the design used by Barcroft and Sommer (2005, 2011) to be appropriate for L2 learners in order to test if then exemplar effects would arise. Again, no facilitative effects of multiple-speaker training were visible. We suggest that the inconsistent findings in the literature can be explained in light of a hybrid model. This model proposed that an effect of speakers is only visible under certain conditions, one being difficult listening conditions. To test this hypothesis, we repeated our first experiment with the addition of noise in the stimuli. The data from the second experiment is currently being collected. The results of both studies and the implications the results have on the representations of words in the mental lexicon will be presented.

**Keywords:** vocabulary, exemplar-effects, hybrid models, L2 learning, mental lexicon, input variability

## **Linguistic development in early bilinguals and monolinguals. Are the heritage and dominant languages of early bilinguals less complex and less fluent than that of monolinguals?**

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With an estimated half of the world using more than one language every day, bilingualism is a norm rather than an exception. Research into differences between monolinguals and bilinguals has produced conflicting findings, which fuels the existing social ambivalence relating to the acquisition of two languages in childhood. Therefore, studying heritage speakers (early bilinguals of a minority language, Montrul, 2008) is crucial for educational policymaking and theoretical linguistics. What makes heritage speakers interesting is that they acquire their HL in childhood, yet their linguistic competence is often different from that of monolingual native speakers, which has led to the formulation of the Incomplete Acquisition Hypothesis (Polinsky, 2006; Montrul, 2008). According to it, certain patterns are not fully acquired in HS's minds. The study focuses on 7-9-year-old children growing up in Polish families living in the UK, whose speech samples have been collected, coded for complexity and fluency, and subsequently analyzed. The results are compared to monolingual control groups through multiple regression modelling. Although bilinguals are slightly less fluent, they generally fall within the norms for monolingual speakers for most variables. The most interesting finding, though, is that their language is more complex syntactically than that of monolinguals in both languages. This provides further evidence that HS' language is not incomplete. It could also shed light on the role of creativity and imitation in language acquisition and cultural transmission, and provide further evidence that children imitate selectively when they have a better understanding of the function of a given construction or linguistic element. When the function is not fully understood, they imitate more faithfully (Klinger et al., 2016).

**Keywords:** heritage language speakers, incomplete acquisition, Polish

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## How to diagnose DLD in bilingual children using dynamic assessment?

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Dynamic Assessment (DA) of narratives and syntax can discriminate English-speaking children with typical development (TD) from those with a Developmental Language Disorder (DLD), regardless of their linguistic status, i.e., mono- or bilingual (e.g. Hasson et al., 2013; Petersen et al., 2017). The aim of this study is to create a DA of narrative and syntactic skills for French speakers and to verify if our two new tasks can differentiate DLD from TD, within a multilingual context. Participants included 78 French-speaking bilinguals (38 simultaneous and 40 consecutives) and 87 monolinguals aged 6 to 10 years; 58 children were diagnosed with DLD (31 mono, 27 bilinguals) and 111 were TD (64 mono, 47 bilinguals). Children were administered both narrative and syntactic DA tasks (based on Hasson et al., 2013 and Petersen et al., 2017). In the narrative task, children participated in a short teaching phase, in which macrostructural elements (e.g., characters, setting, problem, problem solving, final setting and characters' feelings) were taught, followed by a posttest. In the syntactic task, children had to describe pictures of simple actions and received graduated prompts when they did not produce the target structures, which included simple and complex sentences (passives, subject and object relatives, object clitic pronouns). Both tasks distinguished TD from DLD children, regardless of their linguistic status. Indeed, mono- and bilingual TD displayed similar results on the narrative task, as was the case for mono- and bilingual children with DLD who performed less well than the TDs. Similar results were found for the syntactic task. Our findings suggest that our new DA tasks can be effectively used to distinguish TD from DLD in French-speaking monolingual and bilingual children. These findings open new paths in the clinical field of language disorders assessment.

**Keywords:** bilingual and multilingual speech, speech impairment, syntax, narrative, dynamic assessment

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## **Korean-English bilingual speakers' productions of English /l/**

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This research aims to understand the effect of vowel context and word position on Korean and English /l/ produced by Korean-English bilingual (KE) speakers. Participants included six KE female adults who were residing in the United States at the time of testing. All spoke Korean as their native language and English as their second language. KE and AE participants produced target words containing word-initial and -final /l/. Ultrasound imaging of /l/ at the constriction interval was captured and analyzed. KE participants' /l/ constriction interval patterns varied between subjects in both their Korean and English /l/ productions regardless of word position or vowel context. Within-subject /l/ constriction intervals showed no consistent pattern. Listener accent ratings of each speaker were also collected. Preliminary results indicated that participants rated as being less accented produced /l/ with less variability. Results indicate that KE speakers' /l/ constriction interval gesture may not be directly associated with lighter accent and that other factors contribute to accent ratings.

**Keywords:** ultrasound, bilingual speakers, lateral liquid sound

## Acoustic analysis of heritage Konkani speaker's vowel production

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Interactions between different languages in a multilingual brain have been the interest of many linguists. However, not many studies have explored the phonetic interactions in multilinguals. This paper will analyze the extent of such interactions in heritage Konkani speakers' English. Heritage Konkani speakers migrated to Kerala, the southernmost state of India, from Goa many centuries ago. Most heritage Konkani speakers of Kerala acquire their mother tongue Konkani and the majority language Malayalam by the age of three, whereas they learn English after the age of six at school along with other Malayali students. Over the years, Konkani, an Indo-Aryan language, must have had a number of influences from its contact Dravidian language Malayalam. As a closed community, which gives much importance to language maintenance, they must have retained many of the language's features as well. Keeping both of these possibilities in mind, this paper investigates which language (Konkani or Malayalam) affects the English speech of the community. Informants were chosen based on their linguistic identity and proficiency in the language. To avoid experimental manipulation, Konkani GSBs settled in Kochi were considered as subjects for this study. To analyze the segmental features of Heritage Konkani English (HKE), data was collected from 10 male and 10 female informants whose both parents are of GSB Konkani origin and have been living in Kochi since birth. Acoustic spaces of English, Konkani, and Malayalam vowels of Heritage Konkani speakers were studied to analyze the extent of variation in their vowel productions in the respective languages using PRAAT software. First two formants corresponding to the height and frontness/backness (F1 and F2) of each vowel respectively were analyzed in Praat and the acoustic space was determined by plotting the values of  $(F2-F1)$  against that of  $(-F1)$ . Phonemic analysis of the consonant sounds and analysis of Konkani, Malayalam and English acoustic spaces suggest the dominance of Konkani in their English speech even after being a minority community in Kerala for centuries.

**Keywords:** heritage language, second language, acoustic space, heritage Konkani, phonemic interaction

## Screening the narrative skills of Hungarian kindergarteners by dynamic assessment

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Creating narratives requires the simultaneous activation of many linguistic and cognitive abilities. Research proved that children's narrative skills predict later academic success (Paul & Smith, 1993). Therefore, early assessment is essential. Picture-elicited storytelling is often used to assess the narrative abilities of children (Fekonja-Peklaj et al., 2010). Previous research among Hungarian children showed that children at the age of 6-7 can create structured text based on pictures (Murányi, 2018), although these structures are usually deficient. However, previous research investigated abilities which are already matured, using static testing. Dynamic screening would also disclose the abilities in development. Examination starts with a static testing phase, then a learning phase follows and finally, a repeated static testing phase closes the dynamic assessment (Karpov & Tzuriel, 2009). This way, we can provide more adequate recommendations for developing the narrative skills of each child. In the present research, we examined the narrative abilities of forty 6-year-old children in two groups, by both static and dynamic screening. In the case of the first group, we examined how they integrated the examiner's structured questions in the repeated storytelling. In case of the second group, we examined the differences of the first and the repeated storytelling using a sample story told by the examiner in the learning phase. The two groups included children of same age, similar social-economic background, similar kindergarten environment. As a result, children in both groups responded well to the learning phase and both types of intervention proved to be efficient. However, there were differences in the profile of development between the two groups. The presentation covers the explanation of the scoring system of the dynamic screening of narrative skills and the discussion of the results.

**Keywords:** narrative skills, picture-elicited storytelling, linguistic abilities, static & dynamic assessment

## **Narrative abilities and grammaticality of Russian heritage children: Evidence from Cyprus**

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Heritage language maintenance and development depend on family language policy, language dominance, frequency of use, linguistic distance and similarity between the minority and the majority languages or (dia)lects of the society (Polinsky, 2015, 2018; Montrul, 2016; Kupisch & Rothman, 2018), multi-directionality of cross-linguistic influence and accommodation (Rothman et al., 2019). The present study investigates narrative skills of Russian heritage children in Cyprus, with the focus on macro-structure (story structure, structural complexity and internal states terms), micro-structure and grammaticality, i.e., the extent to which utterances follow the grammatical rules of a language. The participants of the study were 40 Russian-Cypriot Greek (CG) simultaneous bilingual children. Their age ranges from 4;0 to 6;0 (mean 5;2), and they attend kindergarten and primary CG schools, where the language of instruction is Greek. The LITMUS-MAIN, the multilingual assessment instrument for narratives (Gagarina et al., 2012, 2015) was used for data collection. Their language proficiency in Russian was measured by the Russian Proficiency Test for Multilingual Children (RPTMC) (Gagarina et al., 2010). Background information was collected using parental questionnaires and interviews. The narratives were recorded, transcribed and analyzed in terms of grammaticality. The analysis of the data showed that heritage children had errors in aspect and tense, case, gender and in subject-verb agreement. Some code-switching errors were revealed in the data as well as innovation forms of words (nouns and verbs). There was a deviant production in terms of words' order, lexical stress, prepositions and prefixes. Overall, it was found that grammaticality is affected by the quantity and quality of input the child receives in the weaker (heritage) language, parents' level of education and their willingness to use, maintain and transmit Russian to their children and to develop their literacy in L1 Russian. There is also a correlation between macro-, micro-structure and grammaticality.

**Keywords:** narrative ability, grammaticality, Russian heritage children, code-switching

## The development of alveopalatal fricatives in French-speaking monolingual and bilingual children

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Alveopalatal fricatives /ʃ, ʒ/ are one of the last sets of sounds to be acquired; they are often substituted by alveolar fricatives [s, z]. Studies which have employed spectral moments analyses show that spectral differences between alveolar and alveopalatal fricatives are not well defined in English-speaking three-year-olds but become so in five-year-olds. Nevertheless, children who are transcribed as making errors (e.g., /ʃ/ transcribed as [s]), may display evidence of a covert acoustic contrast. We investigate the production of alveopalatal and alveolar fricatives by French-speaking children. First, we examine factors that influence the spectral realization of fricatives, including child- (age, sex, and bilingualism) and sound-related (place-of-articulation (POA), vowel quality) factors. Second, we determine whether children transcribed as making errors are realizing covert acoustic contrasts in their speech. 89 French-speaking monolingual and bilingual children, aged 2;6 to 6;10, participated in a picture naming task in which they produced words containing fricatives /s, z, ʃ, ʒ/ in different word positions. Their productions were phonetically transcribed and acoustically analyzed. Two spectral moments (centroid and skewness), known to be sensitive to POA differences, were extracted. Data were analyzed using mixed-effects models. Several factors emerged as significant in statistical models including sex, vowel quality and POA x age interactions. Girls had higher spectral values than boys and spectral differences were greater before back than front vowels. Spectral differences between alveolar and alveopalatal fricatives increased with age. There was no significant effect of bilingualism on spectral moments. Eighteen children did not evidence a contrast between alveolar and alveopalatal fricatives in perceptual analyses but did so in acoustic analyses indicating the presence of covert contrasts. Our results confirm previous findings with English-speaking children showing that spectral distinctions between alveolar and alveopalatal fricatives increase with age, and that several factors influence the spectral characteristics of fricatives.

**Keywords:** alveopalatal fricatives, French, children, monolingual, bilingual

## Audio-visual speech perception of plosive consonants by CG learners of English

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L2 speech perception can be a challenging process as listeners have to cope with imperfect auditory signals and imperfect L2 knowledge (Mayo et al., 1997; Lecumberri et al., 2010; Mendel & Widner, 2016). However, the aim of L2 speech perception is to extract linguistic meaning and enable communication between interlocutors in the language of input. Normal-hearing listeners can perceive and understand the auditory message(s) conveyed effortlessly regardless of distortions and background noise as they can endure a dramatic decrease in the amount of spectral and temporal information present in the auditory signal (Bregman, 1990; Bizley & Cohen, 2013; Stacey et al., 2016). In their attempt to recognize speech, listeners can be substantially assisted by looking at the face of the speaker. Visual perception is important even in the case of intelligible speech sounds indicating that auditory and visual information should be combined (Massaro et al., 1993; Potamianos et al., 2003; Cappelletta & Harte, 2012). The present study examines how audio-visual integration affects Cypriot-Greek listeners' recognition performance of plosive consonants on word-level in L2 English. The participants were 14 L1 CG users, who were non-native speakers of L2 English. They completed a perceptual minimal set task requiring the extraction of speech information from unimodal auditory stimuli, unimodal visual stimuli, bimodal audio-visual congruent, and incongruent stimuli. The findings indicated that overall performance was better in the bimodal congruent task. The results point to the multisensory speech-specific mode of perception, which plays an important role in alleviating the majority of the moderate to severe L2 difficulties. CG listeners' success seem to depend upon the ability to relate what they see to what they hear.

**Keywords:** auditory perception, visual speech perception, audio-visual speech perception, plosive consonants, Cypriot-Greek, second language

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## Effects of context and age on VOT in children with cochlear implants

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Voice Onset Time is defined as the temporal interval between the burst of a stop consonant and the onset of voicing. The Greek stop system consists of voiceless unaspirated and prevoiced stops. Previous research has shown that VOT varies as a function of consonant place of articulation (Cho & Ladefoged, 1999; Lisker & Abramson, 1964) and the following vowel. VOT also differs in children with Cochlear Implants (CI) compared to Normal Hearing (NH) across languages (Scarbel et al., 2013; Aksoy et al., 2017). In word initial stops followed by vowel /a/, longer prevoicing in Greek-speaking children with CIs for voiced stops and shorter VOT for voiceless stops were observed as compared to NH counterparts. The purpose of this study was to examine context and age effects on VOT in 24 children with CIs and their age- and gender -matched hearing controls. All participants were separated into two subgroups, aged 2;10 to 8;1 years and 8;2 to 13;4 years. Speech material consisted of Greek disyllabic words with voiceless and voiced stops /p, t, k, b, d, g/ in initial position, followed by the vowels /a, i, u/. Children produced each target word at least three times via a picture naming task. Recordings were analyzed via Praat for VOT measurement (Boersma & Weenink, 2019). Analyses showed significantly longer prevoicing for the voiced and shorter VOT duration for the voiceless, in children with CIs as compared to NH, across all vowel contexts. Similar age and context effects were observed across hearing status, that is, i) younger children showed significantly longer prevoicing for voiced stops and shorter VOT for voiceless ones than older children, and ii) for voiceless stops, bilabials showed longer VOT than alveolars and shorter than velars, and iii) VOT of voiceless stops was significantly longer from /a/ to /i/ to /u/. Data are discussed in relation to previous literature on Greek and other languages.

**Keywords:** VOT, cochlear implants, voicing, Greek

## **The identity of Polish-Portuguese bilingual people**

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This presentation seeks to identify the main characteristics of bilingual adults that gained knowledge of second language in their mature age. The focus is on Polish to Portuguese bilinguality with a specific interest on understanding both languages socially and in a formal setting. Within the field of bilingualism, identification of its hybrid role as dynamic phenomenon in constant change and involving both language and culture is important. Specifically, its hybrid role specifies the mix of adopted situations, cultures and environment in which bilingual speakers are placed. Being bilingual in today's society also applies to being bicultural, that is, understanding and adopting to the bases of cultures, which brings us to the next relevant point, multidimensionality. This construct explores very unique development tendencies in society. In greater detail, the paper points out problems between cultures, as well as the sense of community in speakers with combinations of languages. I will present differences in degree of socialization among people living in Poland vs. others in Portugal. The study will be gender equal in its approach of bilingualism and will show great depths of analytical data when it comes to bilinguality. Specific encounters along with possible problems will be presented. Being bilingual represents communicating in both languages, Polish and Portuguese for several years, and being aware of the distinct differences between one's second language and first languages. The study aims to further encourage exploration of Polish to Portuguese language exchange, along with helping Polish-Portuguese speakers to better familiarize themselves with the socialization process between cultures.

**Keywords:** bilingualism, Polish, Portuguese, identity



## The use of verbal inflections in Inuktitut child-directed speech

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Inuktitut is a language of the Inuit-Yupik-Unangan language family, which polysynthetic agglutinative structure allows expressing the meaning of an entire sentence in one word (1).

- (1) Illujaraalumuulaursimanninamalittauq.  
illu-juaq-aluk-mut-uq-lauq-sima-nngit-gama-li-ttauq  
house-big-EMPH-ALL.SG-go-PAST-PERF-NEG-CSV.1sS-but-also  
"But also, because I never went to the really big house." (Dorais, 2011)

Despite the complexity of its inflectional system, children acquiring Inuktitut as their native language start using inflections relatively early (Crago & Allen, 2001; Swift & Allen, 2002). One hypothesis is that caregivers simplify their child-directed speech (CDS) to help the children break into the system. To date, little research has focused on the use of inflections in CDS. The current study uses the data from eight Inuktitut-speaking children aged 1-4 years and their mothers to investigate whether and how the use of verbal inflections (VIs) in CDS changes as the children advance linguistically, and whether the children's use of VIs corresponds with the input they receive. We found that, as children progressed linguistically, they seemed to rely less on the input from their mothers. While in Stage 1, with one exception, all the VIs used by the children were also found in the mothers' CDS speech, in the following stages the children added progressively more VIs not previously found in their mothers' CDS (from 16% in Stage 2 to 75% in Stage 6). A Pearson correlation test showed that the number of different VIs (type) and the total number of VIs (token) increased significantly in the mothers' CDS as their children progressed through the stages of linguistic development (type:  $p < .05$ ; token:  $p < .001$ ). The further descriptive intergroup analysis showed that while the mothers added new VIs in each stage, they stopped using a number of VIs from previous stages as the children began to use them. These results correspond with the theory of CDS simplification.

**Keywords:** first language acquisition, Inuktitut, child-directed speech, morphology, verbal inflections

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## **Bilingual (dis)advantages interact with foreign language proficiency: Evidence from Japanese plosives produced by Shanghainese-Mandarin and Mandarin speakers**

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There is a two-way contrast in Mandarin (voiceless aspirated vs. unaspirated) and Japanese (voiceless vs. voiced) plosives, while a three-way contrast in Shanghainese (aspirated vs. unaspirated vs. voiced). However, the phonetic realization of plosives varies with position (word-initial vs. medial) in both Shanghainese and Japanese. This asymmetry may cause different difficulties for Mandarin monolinguals (MD) and Shanghainese-Mandarin bilinguals (SH) in producing Japanese plosives throughout the course of learning. In this study, 39 Chinese undergraduate students (MD = 21, SH = 18) with different Japanese proficiency (elementary vs. intermediate vs. advanced) and 9 Japanese natives (JP) completed a word list reading task and a text reading task. Participants' speech production was acoustically analyzed for the voice onset time (VOT) and the phonetic realization of the six plosives. Generally, most plosives were realized as voiceless plosives (VOT > 0), but MD produced significantly fewer voiced plosives (VOT < 0) compared to JP, while SH did not differ from either group. In the wordlist reading task, all three groups showed significantly shorter VOT in voiced than voiceless plosives; and the VOT of voiceless phonemes was shorter word-medially than word-initially. This result suggests that learners have already acquired the voicing contrast on word level regardless of Japanese proficiency. In the text reading task, SH showed longer VOT for word-initial voiceless and word-medial voiced plosives at the elementary level, which converged with JP at the advanced level. By contrast, compared to JP, MD at all proficiency levels consistently produced voiced plosives with longer VOT but voiceless ones with similar VOT. The results suggest that (a) the phonological transfer from L1(s) to L2 may be feature-specific and that (b) the bilingual effects may vary across the learners' foreign language proficiency levels.

**Keywords:** plosive, VOT, Shanghainese, Mandarin, Japanese, speech production

## Markedness, word order and the prosody of coordination

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The linear representation of the coordination of two elements with a morpho-phonologically realized coordinator presents a number of possibilities (A &B, A & B, &A B, A B&, A& B&, etc.), most of which are attested typologically. For instance, Japanese encliticizes (A& B) its coordinator while Euskara (Basque), English, Spanish and Chinese procliticize their coordinator (A &B). Indeed, some general rules seem to hold: medial coordination (the expression of the coordinator ‘&’ between the two conjuncts) seems to be almost always possible, and, importantly, if a language shows *encliticization* of the coordinator (prosodic attachment *after* a word) then that language is necessarily OV (Stassen, 2000), which is the case of Japanese. However, if a language has *procliticization* of the coordinator, we cannot say whether the language is OV or VO: English and Spanish are VO while Euskara Basque is OV. This, together with the proposal that OV is marked from the syntactic perspective (Platzack, 1996) of the Minimalist Program view of overt operations (Chomsky, 1993), leads us to formulate the following questions: How strong is the relationship between encliticization of coordination and word order? Is either en- or procliticization of coordination marked? We propose that experimental tasks given to both monolingual and bilingual speakers can help us answer these questions. With respect to monolingual speakers, we would like to determine whether a forced word order inversion task, or a forced opposite-cliticization task would be more problematic for speakers of convergent languages (Japanese, Chinese, English, Spanish) —where coordinator cliticization and word order converge— than for speakers of divergent languages (Basque) —where coordinator cliticization and word order do not converge. We will finally like to determine whether or not, for any speaker, a constructed language with VO or OV order will tend to force a given cliticization for coordination. Namely, we would like to test the hypothesis according to which Spanish and Chinese speakers would force procliticization of the Japanese coordinator while Basque speakers might not do so because Basque has OV order. As for bilingual speakers, crosslinguistic influence in early bilingual speakers could result in cliticization of a coordinator in the manner of the dominant language (i.e., an A& B dominant speaker, a speaker of Japanese, would try to enforce this pattern on an A &B language (e.g., English), and vice versa). We could further investigate whether this cliticization effect is equally strong for speakers of languages with divergent word order and cliticization (e.g., Basque). Besides expanding this hypothesis to other language combinations, we will discuss whether and how there is a correlation between the cliticization/coordination relationship and other syntactic structures.

**Keywords:** coordination, cliticization, prosody, OV /VO typology, markedness

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## Changes in the phonology of Vietnamese-English speakers across generations

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Little is known about Vietnamese-English bilingualism despite Vietnamese being the 6th most spoken language in the United States. This calls for scientific research in this area. McLeod et al. (2021) recently carried out a study on speech acquisition within a 3-generation Vietnamese-English family in Australia focusing on the effects of ambient phonology and maturation. The study found evidence to support that ambient phonology and physical/cognitive maturation influences speech acquisition. It is not known if the results would be the same in the US, however, we predict that the results will be the same. To test the prediction, we recruited a 3-generation Vietnamese-English family in the United States: sister and brother (C1 and C2) aged 16;7 and 8;11, their father (F), mother (M), paternal grandfather (GF), and paternal grandmother (GM). We are going to administer a test to see how they produce phonemes in both languages. We predict that the parents' and grandparents' Vietnamese phonemes will influence the children's phonemes (ambient phonology), and the children's English will influence their own Vietnamese phonemes (cross-linguistic transfer). This case study is important because if ambient phonology, dialect, and maturation influences speech production of bilingual children, tests administered to them must take these factors into account.

**Keywords:** bilingual, Vietnamese, English, speech acquisition, phonology

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## Minority languages in migratory contexts: Sardinian Italian speakers in York

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The work presents research on phonetic attrition of stop consonants in Sardinian Italian speakers in York as related to their social identity and the maintenance of heritage languages in migratory contexts. The main goal of this sociophonetic research is to identify which social and linguistic variables prevent the loss of characteristic phonetic features in Sardinian Italian stop consonants. The data collection has been partially obstructed by the Covid-19 pandemic in March 2020. The recording session consists in self-recordings made by each participant while reading 51 sentences (36 including target words) using their own mobile device, for health precautions. Then participants were asked to fill a questionnaire aimed at collecting sociolinguistic data on how Sardinian communities preserve their linguistic and cultural heritage in migratory settings. The acoustic analysis entailed the extraction of the duration of preceding vowels, consonants, silence period and VOT using the software Praat. Despite the obvious limitations to the dataset, the results can be indicative of the presence of phonetic attrition in stop consonants in Sardinian speakers. Indeed, the statistical analysis entailed the observation of significant differences in the duration of consonants, silence period and VOT with respect to the phonetic context, ability of speaking the local variety and sex. Furthermore, by matching the information coming from both the acoustic data and the questionnaire, it was possible to draw the attention on Sardinian Italian as heritage language. A qualitative analysis of these data shows that the maintenance of linguistic skills in Sardinian local varieties in migration settings is important for the resistance against phonetic attrition of Sardinian stop consonants. Moreover, being members of Sardinian communities and speakers of heritage languages of Sardinian is central for the maintenance of speakers' identity, especially when living in multilingual and multicultural environments.

**Keywords:** heritage languages, Sardinian, phonetic attrition, sociophonetics, sociolinguistics

## **The VietSpeech Multilingual Transcription Protocol: A 4-step process for transcribing Vietnamese-Australian children's speech**

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Assessing, transcribing and diagnosing speech sound disorders in multilingual children is challenging for speech-language pathologists (SLPs), especially when they do not speak or have no transcription experience in children's home language. The VietSpeech Multilingual Transcription Protocol was created to ensure accurate and consistent phonetic transcription of speech assessments from Vietnamese-Australian children and adults as part of the VietSpeech project. The protocol consisted of four steps: training, assessment, comparison, and rule generation and consensus. (1) Training: A monolingual English-speaking SLP, bilingual Vietnamese-English-speaking linguist and interpreter, and two bilingual Vietnamese-English-speaking SLPs completed transcription training in Vietnamese and English phonology. (2) Assessment: Children ( $n = 69$ ) and adults ( $n = 85$ ) were assessed using the Vietnamese Speech Assessment (Pham et al., 2016) and the Diagnostic Evaluation of Articulation and Phonology (Dodd et al., 2002) for English. Assessments were transcribed online and checked individually from audio and video-recordings. (3) Comparison: The team individually transcribed 10 children's and 12 adults' assessments. Inter-rater reliability was high for both Vietnamese consonants (4 transcribers: 86.57% for children; 96.05% for adults) and English consonants (3 transcribers: 92.62% for children; 88.69% for adults). Speech accuracy significantly correlated with inter-rater reliability for children's consonants in both English ( $r = .95$ ) and Vietnamese ( $r = .91$ ), and adults' consonants in English ( $r = .90$ ). Phoneme class and whether a consonant occurred in both Vietnamese and English also influenced inter-rater reliability. Patterns of transcription disagreement were also identified. (4) Rule generation and consensus: near functional equivalence (Shriberg & Kent, 2013) categories were created and used to reach consensus. The VietSpeech Multilingual Transcription Protocol effectively enabled a team of SLPs with minimal Vietnamese transcription experience to transcribe Vietnamese and English children's and adults' speech with a high level of consistency.

**Keywords:** speech, multilingual, transcription, assessment, Vietnamese

## **Cross-linguistic transfer during multilingual speech acquisition: A longitudinal Vietnamese-English case study**

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Differential diagnosis between speech sound disorder and typically developing multilingual speech can be a complex process for speech-language pathologists (SLPs). This paper presents a longitudinal case study of a bilingual Vietnamese-Australian child between the ages of 3 years; 10 months (3;10) and 5;1. She completed assessments in Vietnamese and English: the Vietnamese Speech Assessment and the Diagnostic Evaluation of Articulation and Phonology as part of the VietSpeech project. Shared, non-shared, and similar phonemes across both languages were identified, and compared with the child's phonemic inventories and error patterns. At the first assessment, there was evidence of multiple speech sound substitutions in both languages. Cross-linguistic transfer of non-shared consonants occurred in both directions, e.g., Vietnamese consonants [ʂ, ɕ] were used in English, and English consonants [ʃ, tʃ] were used in Vietnamese. The consonant [ç], which occurs in neither Vietnamese nor English, was produced on several occasions. At the second assessment, speech productions were mostly age appropriate in both languages, with few substitutions. Home language input and early childhood education had remained consistent, with no speech intervention between assessments. Her speech sound productions initially presented as atypical when compared with monolingual English- or Vietnamese-speaking peers yet improved over time to be typical of English and Vietnamese speakers. This paper provides evidence that multilingual speech acquisition is a dynamic process that differs from monolingual peers. Longitudinal assessment of children's speech sound productions in all the languages that they speak is critical for accurate diagnosis of speech difference versus speech sound disorder. SLPs are encouraged to identify shared, non-shared, and similar phonemes across languages to recognize cross-linguistic influences and assist with differential diagnosis. Focusing on non-shared phonemes and instances of cross-linguistic transfer can be beneficial for understanding underlying maturational and linguistic influences on children's speech sound productions.

**Keywords:** speech, Vietnamese, children, bilingual

## Same, same, but different: Properties of (in)definiteness in heritage Greek, Russian and Turkish in Germany and the US

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In contact situations, definiteness marking may be affected by language transfer dynamics. Depending on different combinations of heritage and majority languages (MLs), heritage speakers (HSs) use different strategies for the expression of definiteness. The present account exhibits our research on definiteness marking in heritage-Greek/Russian/Turkish in contact with MLs English and German. Our three heritage languages of interest, differ in terms of definiteness realization. Greek incorporates agreement patterns and possesses double definiteness structures in which the nominal head obligatorily agrees with articles and demonstratives. Russian is an article-less language which uses demonstratives to signal a definite interpretation. Similarly, Turkish utilizes demonstratives, additionally employing ACC/GEN-cases to mark specificity alongside definiteness. Taking into account the typological differences, we hypothesize that: i) Heritage-Greek speakers, especially in the US, will produce fewer complex double definite structures compared to monolinguals, as English lack such structures, ii) Heritage-Turkish speakers will generalize the case-marking strategy and reduce the use of alternative strategies of marking definiteness, i.e., a blocking effect on demonstratives, iii) in contrast, Heritage-Russian speakers will produce more determiners than in the monolinguals because Heritage-Russian will prefer overt determiners, e.g., demonstratives, under the influence of MLs German and English respectively. To test our hypotheses, we run a contrastive study on the RUEG corpus (number of tokens: G=74,802, T=76,173, R=95,250). Overall, the results reveal that HSs mark definiteness with determiners less frequently compared to their monolingual counterparts. However, this is only true for HSs of Greek and Turkish in Germany and the US. Interestingly, Russian HSs in our corpus pattern against this tendency which indicates direct language contact effects. The difference between Russian and Turkish, which both lack overt articles, was predicted by a blocking effect of Turkish case marking. Thus, our findings are explained by language contact dynamics of HSs in the languages discussed.

**Keywords:** heritage languages, definiteness, specificity, language contact, Greek, Turkish, Russian



## **The feature [ +spread glottis] in Icelandic children with protracted phonological development**

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Thirteen Icelandic consonants have a [ +spread glottis] ([+sg]) feature: /h/, pre- and post-aspirated stops, and voiceless fricatives and sonorants. Preliminary research (Másdóttir et al., 2016) found significant differences between three- and four-year-olds with protracted phonological development (PPD) and age-matched controls for [+sg]. The current study included typically developing (TD) two-year-olds and re-evaluated data from the 2016 cohort with PPD with more fine-grained analysis, allowing a more detailed set of predictions for development of [ +sg] with PPD. The TD two-year-old match data for [ +sg] predicted: (a) high accuracy for all but word-medial sonorant clusters, word-final sonorant singletons, and word-initial post-aspirated stops (with developing accuracy for those categories); and (b) low accuracy for WI voiceless nasals; the two-year-olds' mismatch data predicted highest prevalence of: (1) voicing of word-initial nasals and liquids; (2) de-aspiration of post-aspirated stops; (3) deletion of word-final singleton sonorants or fricatives; and (4) gemination in WM sonorant clusters and preaspirated stops. To evaluate the predictions for the cohort with PPD, words were extracted from a general 110-word list transcribed by native Icelandic speakers. Preliminary analyses show that the highest match levels for [+sg] met expectations but that overall, match levels were much lower than those of the TD two-year-olds. Mismatch patterns were more frequent, but again followed the major trends of the TD two-year-olds. Group data will be presented for the three- and four-year-olds with PPD, and any idiosyncratic individual patterns noted in order to reflect on questions of delay and divergence in PPD.

**Keywords:** protracted phonological development, +spread glottis, Icelandic

### **Reference**

Másdóttir, T., Bernhardt, B. M., & Stemberger, J. P. (2016). The feature [ +spread glottis] in Icelandic. *International Clinical Phonetics and Linguistics Association Conference Presentation.*

## **Linguistic stereotypes in childhood: when and how Italian children develop language attitudes towards different Italian accents**

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Linguistic stereotypes are defined as the fact of judging people according to their linguistic output (Lippi-Green, 2012). Many studies, mainly those focusing on the perception of different English accents (Rosenthal, 1977; Kinzler et al., 2009; Kinzler & DeJesus, 2013a, 2013b), have proved the existence of linguistic stereotypes already in childhood. Since studies on children's language perception in Italy are limited, we aimed to inquire how Italian children perceive different Italian accents. We collected data in the Italian region of Piedmont, which is particularly involved in migration, and which presents a multifaced linguistic landscape. The sample included 79 school-age children between 6 and 10 years old with different migratory backgrounds. Linguistic attitudes towards six different Italian accents were examined through two perceptual experiments, both conducted with the matched-guise technique. During the first experiment, children listened to six recorded accents and filled a survey where the social, economic and cultural status of the speaker was indirectly investigated together with their hypothetical origin; responses were gathered on a three-values Likert scale with emojis being the values. In the second experiment children listened to the same accents as in the first experiment and then were asked from which speaker they would have preferred to receive a present; this permitted data elicitation on children's preferences towards specific linguistic varieties. Statistic data analysis revealed that children already show linguistic attitudes at the age of 6 with gender, age and linguistic background being crucial factors in the development of language attitudes. While younger children preferred familiar accents, older pupils favored prestige varieties. Girls demonstrated linguistic attitudes earlier than boys, and children with migratory background were better in recognizing different accents. Our study revealed that school-aged children already present linguistic stereotypes shaped by specific factors; additionally, the use of emojis appeared to be a very suitable method for eliciting child samples' data.

**Keywords:** linguistic stereotypes, language attitudes, children, Italian accents, emojis

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## **VietSpeech: Vietnamese-Australian children's speech and language competence**

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The 4-year VietSpeech Project aimed to support Vietnamese-Australian children and families to maintain their home language, enhance speech skills in Vietnamese and English and equip English-speaking professionals to support multilingual children's speech. The Vietnamese community are one of Australia's largest migrant groups and this Project was funded by the Australian Research Council. This Project integrated two conceptual frameworks: (1) the emergence approach of speech acquisition (Davis & Bedore, 2013) and (2) the linguistic multi-competence framework (Cook, 2016). It consisted of four studies: Study 1. Vietnamese-Australian families' linguistic multi-competence. Surveyed 271 Vietnamese-Australian adults and 151 Vietnamese-Australian families to map linguistic multi-competence, including language exposure and use at home, school and community, language policies/rules (phép tắc nói năng trong gia đình), and influencing factors. Study 2. Australian Vietnamese-English-speaking children's speech acquisition. Assessed 154 speakers from 53 families (69 children and 85 adults) in Vietnamese and English to determine sociocultural and ambient phonology influences on children's production of consonants, vowels and tones and to determine markers of risk for speech sound disorder. Study 3. Development of a multilingual speech program. Drew on the expertise of professionals in Australia, Viet Nam, and the world to develop an evidence-based Vietnamese-English speech program to be implemented by English-speaking professionals to support children's speech competence and language maintenance. Study 4. Feasibility of Vietnamese-Australian children's speech maintenance program. Evaluated the feasibility of VietSpeech SuperSpeech, the Vietnamese-English speech group program with 14 families to promote bilingualism as a superpower and support children's speech competence and language maintenance in Vietnamese and English. The VietSpeech Project promoted communicative competence and multilingualism for the Vietnamese-Australian participants and the scalable design has the potential to benefit multilingual children and families across the world.

**Keywords:** multilingual, speech, children, Vietnamese

## **Crosslinguistic influence: Is the distribution of null and overt objects in Guajiro Spanish permeable to the existence of two different conjugations (analytical and synthetic) in Wayuunaiki?**

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Wayuunaiki, an indigenous language spoken in Columbia and Venezuela, has a double conjugation system: an analytical conjugation and a synthetic conjugation. When it comes to the analytical conjugation, we could say that it is a [-Null Subject] language like English is, although it seems to have freedom to omit the overt subject when the subject has been mentioned in previous sentences. However, when it comes to the synthetic conjugation, Wayuunaiki is a [+Null Subject] language, which means that referential null subjects are possible and that Wayuunaiki, like Spanish, displays null expletives. This dual conjugation system of Wayuunaiki is linked to whether the verb is stative, active or intransitive. This situation creates an important difference between Wayuunaiki and Spanish and a possible locus for variation in personal pronoun usage between the bilingual and monolingual varieties of Spanish under analysis. In this paper, we present an analysis of the use of overt and null subject pronouns produced by a group of Guajiro Spanish speakers (bilingual speakers of Wayuunaiki and Spanish) from the Guajira region in Colombia and a group of Spanish monolingual speakers from the same region, who will serve as the benchmark. The results suggest that the Wayuunaiki verb class distinction might be playing a role in the distribution of overt subject pronouns in the speech of the bilingual group, a claim that is supported by the fact that overt pronouns are preferred with stative verbs by both the intermediate and the advanced bilingual groups, whereas in the monolingual group the realization of overt subjects is higher with active intransitive verbs. While we acknowledge that this use of overt pronouns may be due to non-linguistic reasons, the fact that there seems to be a relationship between the type of verb and the rate of null/overt pronouns in the bilingual cohort, but not in the monolingual data, leads us to attribute this relationship to the fact that in Wayuunaiki the conjugation linked to stative and active intransitive verbs requires obligatory subject pronouns.

**Keywords:** Guajiro Spanish, language contact, subject personal pronouns, Wayuunaiki

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## Towards an ecosystemic model of bilingual phonological development

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Bilingual language development is fundamentally different from that of monolinguals (Hambly et al., 2013). An ecosystemic model of bilingual development predicts that internal (e.g., development abilities) and external factors (e.g., language exposure) uniquely influence bilingual development (Kay-Raining Bird et al., 2016). The current study extends the ecosystemic model and examines how the internal/external factors predict bilingual phonological development. Internal factors included vocabulary skills and external factors consisted of the amount of language exposure and its social status. The study adds an analysis of how languages interact together (Meziane & MacLeod, 2021). A total of 23 four-year-old Arabic-French simultaneous bilingual children were examined once in each of their two languages. Children were assessed on parallel measures of receptive and expressive vocabulary and phonological production of single words. In addition, we gathered information from parents about the child's language use, language exposure, and the sociolinguistic context. Pearson correlation analysis revealed that internal factors were related between languages, both for receptive and expressive vocabulary. Moreover, vocabulary and consonant production were associated between and across language, even though consonant accuracy was higher in French compared to Arabic. As predicted by the ecosystemic model, a significant correlation was found between Arabic language exposure and Arabic consonant accuracy. Bilingual language development is complex, and children show heterogeneity in patterns of acquisition (Kay-Raining Bird et al., 2016). Our findings reveal that several internal and external factors predict the development of phonological productions in the two spoken languages of bilingual Arabic-French children. In addition, our results show that bilingual phonology of young children does not follow a linear development between language. Thus, we provide evidence for an ecosystemic framework that accounts for a continuum of bilingual phonology acquisition.

**Keywords:** children, bilingual, phonology, transfer, ecosystemic model, Arabic, French

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## Spectral differentiation between alveolar and post-alveolar sibilants: Evidence from Bulgarian

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This study examines the differentiation between alveolar and post-alveolar voiceless sibilants in Bulgarian using the four spectral moments metric (Forrest et al., 1988). Previous research on the spectral properties of fricatives in American English has shown that alveolar and post-alveolar sibilants are well separated in terms of M1, M2, M3 and M4 (Jongman et al., 2000; Nissen & Fox, 2005). However, evidence suggests that the magnitude of the spectral differentiation between /s/ and /ʃ/ varies across these spectral measures with M1 being the most robust acoustic cue and M2 the least accurate one (Li et al., 2009). The aim of the present study is to explore the utility of the four spectral moments for the differentiation between Bulgarian alveolar and post-alveolar voiceless sibilants in different vowel contexts and syllable stress conditions. For the purpose of the study an acoustic experiment was conducted. The participants were eight female and four male native Bulgarian speakers. The data elicitation protocol comprised real words embedded in a carrier sentence. The target sibilants were recorded in initial and medial stressed and unstressed syllables with three vowel categories /i a u/. The four spectral moments were calculated from FFT spectra derived from the mid 50% of the frication noise using Praat (Boersma & Weenink, 2017). The results of the statistical analyses revealed that Bulgarian /s/ and /ʃ/ were clearly separated only in terms of M1 ( $p < .0001$ ). The distinction in the M3 ( $p < .001$ ) and M4 ( $p < .01$ ) dimensions varied as a function of vowel context and stress condition, whereas M2 ( $p > .05$ ) did not distinguish /s/ from /ʃ/ at all. These findings from Bulgarian /s/ and /ʃ/ provide further evidence that among the four spectral moments M1 is the most reliable acoustic correlate of sibilant place contrast and M2 is the least reliable one.

**Keywords:** Bulgarian, sibilants, spectral moments

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## Reading velocity and reader proficiency: A study on readers with T21

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Reading velocity refers to the number of words read per minute. This is a stage that characterizes fluency. A proficient reader reads, on average, 150 words per minute (wpm). As word recognition is automated, he devotes greater attention to understanding the text (Komeno et al, 2015). The objective of this work is to measure and characterize the reading velocity of people with Down syndrome (DS), or trisomy of chromosome 21 (T21). People with T21 have characteristics that can impair the ability of decoding and word recognition, and this can interfere in the number of words read by him (Buckley & Bird, 1993; Oliveira et al., 2017). Three readers with T21 (SK, SE, SC) participated in this research. All are in Elementary School II in a public school, Vitoria da Conquista, Bahia, Brazil, and participate in the Nucleo Saber Down, UESB. They read, aloud, ten texts of various genres. Data was collected through the Google Meet platform, recorded, and transcribed orthographically. To calculate the reading speed, the total number of words was divided by duration into seconds and multiplied by 60. The results showed that the three participants presented low speed of reading the texts: i) SK presented better performance in the interview reading, 101.17 wpm, low performance in reading the news genre text 45.53 wpp; ii) SE has medium performance in the interview 51.25 and low level in the reading of medicine package 16.97 wpp; iii) SC had poor performance in reading the texts in general - 22.24 of instruction manual and 14.58 in the reading of medicine package leaflet. We believe that the results are related to many oral deviations and the low repertoire of known words in addition to the difficulty of memorization, as already discussed in the literature (Oliveira et al., 2019).

**Keywords:** comprehension, reading velocity, reading fluency, T21

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## **Perception of L3 Kaqchikel (Mayan) stop consonants by Spanish-English multilingual listeners**

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This paper presents the results of two tasks of perception of Kaqchikel stop consonants performed by two groups of multilingual learners of Kaqchikel. All learners spoke both Spanish and English but were differentiated based on which of those two was their first language. Kaqchikel is a Mayan language spoken in Guatemala by approximately 400,000 people (Heaton & Xoyón, 2016). Like all Mayan languages, a primary distinction among its eight (8) stop consonants is one of glottalization (Bennett, 2016). At each of four places of articulation there are two stop phonemes: one glottalized (ejective or implosive) and one unglottalized (plain) phoneme. Modelled after Wagner and Baker-Smemoe (2013), the first perception task was an AX discrimination task in which learners indicated whether pairs of Kaqchikel words were two pronunciations of the same word or two pronunciations of different words. The target difference among these words being between two of the eight stop phonemes of Kaqchikel. The second perception task was a categorization task wherein participants heard Kaqchikel words and categorized them based on what they thought their initial (first testing block) or final (second block) sound was, choosing from among Kaqchikel's eight stop phonemes. The L1 English learners were better at correctly discriminating Kaqchikel stop consonants than L1 Spanish learners, but only regarding Place of Articulation. This is surprising, as Spanish and English do not differ in their stops' place features, both having three places of articulation while lacking Kaqchikel's uvular place. The groups did not differ in their detection of glottalization differences. In the second task, L1 English learners were more consistent than L1 Spanish learners in categorization of seven of the eight Kaqchikel phoneme categories. Taken together: despite all learners' fluency in both Spanish and English, L1 English learners are better than L1 Spanish learners at distinguishing Kaqchikel stop consonants.

**Keywords:** third language, acquisition, phonology, consonants, stops, plosives, glottalization



## Production of geminate stops in Hungarian children and adults

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The acquisition of consonant length has been investigated mainly in infants' early word production (e.g., Khattab & Al-Tamimi, 2013; Vihman & Majorano, 2017). Phonological awareness does continue to develop until the first years of school, which may result in divergence of child surface forms from adult targets. At the phonological-phonetic level, the most difficult perceptual task for Hungarian children has proved to be the consonant length contrast discrimination, even at the age of 7-8 years (Gósy, 2006; Jordanidisz, 2015). The question arises how consonant length contrast is marked in their speech production. The present research aimed to analyse the durational correlates of singleton and geminate stop consonants in Hungarian school-aged children's and adults' spontaneous speech. We hypothesized that 7-8-year-old children would differentiate geminates from singletons in production based on closure duration (CD), however, the geminate-to-singleton ratio and the use of secondary cues may differ from the adult production. Twenty typically developing children (aged 7-8 years) and twenty adults (aged 21-29 years) participated in this study. Intervocalic single and geminate consonants /p, t, k/ were collected from spontaneous speech. Absolute and relative durations, including CD, VOT, C/V ratios were measured using Praat (Boersma & Weenink, 2020). Linear mixed models were constructed in R (R Development Core Team, 2019). Results showed that single voiceless stops were realized with significantly shorter total and closure duration than geminates regardless of age. VOT seemed to be irrelevant parameter in the length distinction in Hungarian. As expected, we found a significant effect of 'age' on the absolute durations, resulting from slower speech tempo and less mature motor control in children. Relative durations and the manifestation of potential secondary cues also depended on age. The study contributes to the research on phonological development during the later stages of language acquisition.

**Keywords:** geminate, stops, consonant length, phonological development, Hungarian

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## **Perception of naïve L3 tones: The role of Mandarin experience in pitch and phonation perception for native English speakers**

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Previous research has shown that after learning Mandarin, native English speakers' performance in naïve L3 tone perception improved significantly (Qin & Jongman, 2016; Schaefer et al., 2020). Tone is a multidimensional concept and in addition to the primary pitch cue, there are various secondary cues in Mandarin tone perception. The allophonic creakiness plays an enhancement role in Mandarin T3 perception (Belotel-Grenié & Grenié, 1997; Way, 2014) while in English, creaky voice is indexical which is related to mood, gender and attitude (Gobi & Ní Chasaide, 2003). In the Wenzhou Wu dialect, the linguistic status of phonation is phonemic because the eight tones contrast not only in pitch but also in phonation (modal voice in the high register vs. breathy voice in the low register). In the current study, we explored whether the L2 Mandarin experience could facilitate pitch and phonation perception for native English speakers. We recruited 20 English learners of Mandarin as the target group (with an average learning duration of 12.2 months, intermediate proficiency of HSK 3-4), 10 native English speakers and 10 native Mandarin speakers as the control groups. We conducted an AX discrimination task based on the manipulated stimuli from the Wenzhou dialect. The results demonstrated that all participants were more sensitive to pitch than to phonation regardless of their language background. Moreover, L2 learners were significantly more sensitive to pitch than native English speakers were. Exposure to one type of phonation (creaky voice) at a different linguistic level could lead to an increased sensitivity to another phonation type (breathy voice). In addition, the L2 learners even reached the level of Mandarin native speakers in terms of naïve pitch and phonation perception, which indicated that the Mandarin learning experience (even for a short period of time) could have an important impact on naïve L3 tone perception.

**Keywords:** L3 tone perception, Chinese tones, phonation

## Comparing monolingual and bilingual listeners' perception of impaired speech

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English-speaking people with dysarthria, a motor speech disorder, often produce vowels that are more tightly clustered at the "mid" height (Lee et al., 2019) than those of typical speakers. Thus, listeners systematically misidentify vowels produced by these speakers as a lower vowel than what was intended. However, overall intelligibility of speech is a function of both the speaker's characteristics and their listener's perceptual ability. In this study, we examined two potential sources of variability in listeners' ability to distinguish vowels in dysarthric speech: 1) the listener's bilingual status, and 2) the structure of the listener's vowel space. We hypothesized that bilinguals would more accurately discriminate vowels produced by a speaker with dysarthria than monolinguals, and that listeners with a more cluttered vowel space would perform better than listeners with a sparser vowel space. We tested these hypotheses by comparing three listener groups: monolingual English listeners (n=28), Spanish L1-English L2 listeners (n=24), French L1-English L2 listeners (n=30). This allowed comparison of bilingual status (bilingual listeners vs monolingual listeners) and vowel space structure (French-English bilinguals vs Spanish-English bilinguals and English monolinguals). Using an AXB discrimination task, participants heard vowels in an hVOWELd context (e.g., head-hid-hid or hod-hod-hood) and had to decide which two tokens were the same. The items were produced by English-speaking individuals with dysarthria secondary to ALS. There were 11 unique vowel comparisons that reflected common vowel confusions for these speakers. Bilingual participants also filled out the Language History Questionnaire. Results revealed significant differences among the vowel comparisons for all language groups. However, there was no effect of language group, nor did language interact with vowel comparison. The apparent primary role of acoustic structure in vowel discrimination as well as the role of vowel dispersion in each language will be discussed.

**Keywords:** vowel perception, intelligibility, dysarthria, bilingualism, cross-linguistic comparison

## Spanish heritage speakers' processing of lexical stress

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The present study examines the status of lexical stress in the processing system of heritage speakers of Spanish (HSs) who are also speakers of English. Previous research found that HSs are successful at the low-level perception of stress contrasts (Kim, 2020), as in the case of low working-memory demands. This is not surprising given their life-long experience dealing with, for example, the relevant morphological information borne by stress in their heritage language (/ˈpaso/ "I pass" and /paˈso/ "s/he passed"). It remains unknown, however, how HSs deal with lexical stress at a deeper, phonological processing stage of speech perception, such as in the presence of higher cognitive demands. This is especially interesting in English-Spanish bilingualism since monolingual speakers of both languages process stress in different ways: Spanish but not English monolinguals are at ceiling in tasks that require them to retain stress information in working memory, probably because the functional load of stress is more relevant in Spanish (Ortín & Simonet, 2021). The present study tests the processing of stress in HSs by means of an ABX task (a replication from Dupoux et al., 1997) with auditory stimuli differing in the location of stress (bédapi-bedápi) or in one consonantal sound (bédapi-nédapi). Participants also completed the Bilingual Language Profile, a Spanish cloze test, and a vocabulary test. We included a monolingual group to control ensure the fit of the experimental design. Findings reveal that HSs are more accurate in consonant-based trials than in stress-based ones, but only when matching stimuli were non-adjacent, which suggests that their stress-processing strategies are affected by cognitive load (it was harder for HSs to recall the first items' stress pattern than their consonantal configuration). Furthermore, dominance and knowledge of Spanish appear to be associated with increased phonological sensibility to stress contrasts.

**Keywords:** lexical stress, phonological processing, heritage language phonology

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## Subject pronoun expression among Bubi-Spanish speakers in Equatorial Guinea

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This paper examines the expression of the subject pronoun among Bubi-Spanish speakers in Equatorial Guinea. Unlike Spanish in which a subject pronoun can be overt or null, in Bubi, this option does not exist. "Subject prefixes" always appear in front of the verb. Thus, the study examines the subject pronoun expression rate of speakers of this contact variety, as well as the linguistic and social predictors that constrain this expression. Furthermore, the paper examines whether the tenets of the Interface Hypothesis concerning SPE, which is high SPE rates (irrespective of the language pairing) and difficulties with the pragmatic switch reference constraint, is supported in the present study. The data is made up of audio recordings of sociolinguistic interviews with 18 Bubi-Spanish bilinguals residing in Malabo in Equatorial Guinea. These interviews were recorded, transcribed, and analyzed using the mixed effects statistical software Rbrul. The linguistic predictors examined are grammatical person and number, ambiguity, the lexical effect of the verb, and reflexivity. The social predictors are gender, and education. The results of the analysis overt SPE rate of Bubi-Spanish speakers is 17.9%, one of the lowest SPE rates every found. The significant factors were grammatical person and number, ambiguity, the lexical effect of the verb and gender. The insignificant predictors were reference, reflexivity, and education. The insignificance of reference lends support to the Interface Hypothesis. It depicts that Bubi-Spanish speakers do have challenges with the pragmatic switch reference constraints. There is a decreased sensitivity to this predictor, as noted in previous studies involving bilinguals. However, this difficulty does not lead to high SPE rates, a reduction is also possible. This reduction is manifested in the low SPE rate among these speakers.

**Keywords:** subject pronoun expression, bilinguals, interface hypothesis, Spanish, Equatorial Guinea

## **A thematic role therapy protocol for a Greek child with Down Syndrome: A case study**

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The purpose of this case study was to investigate the effectiveness of a sentence coding system on the syntactic structure of a 10 year-old child with Down Syndrome. The child's communicative abilities were extensively analyzed via formal and informal evaluation protocols. Formal tests used for the assessment of morphosyntactic, semantic and pragmatic skills included the DVIQ Test (Stavrakaki & Tsimpli, 2000), the Word finding Vocabulary Test (Vogindroukas et al., 2009) and the Action Picture Test (Vogindroukas et al., 2010). Overall, the child presented with a variety of language deficits, characterized by the use of particularly poor syntax. Subsequent intervention was centered around the development of her sentence structure. To that end, the elicitation of simple SVO sentences was facilitated via the use of three cards with different colors that represented the verb and its two arguments. This technique was a simplified version of the Colorful Semantics protocol (Bryan, 2003) that essentially segments target sentences into their thematic roles. During three 45- minute sessions, the child was taught how to use the technique to achieve the basic structure of SVO sentences to describe pictures. The child was able to perform better on the baseline untreated sentence targets both with and, to less extent, without using the cueing card system. The investigation is ongoing; we are in the process of further exploring the generalization of the treatment effects and expanding the treatment protocol to target more complex sentences including transitive verbs that accept two objects.

**Keywords:** thematic roles, syntax, speech/language therapy, Down syndrome

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## **Acoustic analysis of lexical stress in Greek preschool children**

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Lexical stress carries significant functional load in Greek; there are several pairs and even triplets of words that are differentiated only by stress position. Greek stressed vowels are longer and have a greater amplitude compared to their unstressed counterparts. Lexical stress is also indirectly signaled by pitch movement (Arvaniti, 2007). The aim of this study was to investigate the acoustic realization of stress during Greek acquisition. To that end, 24 typically developing children (phonological development, vocabulary and morphosyntactic abilities were formally assessed) aged 4;7 to 6;4 (Mean 5;3, SD: 0.6) and 24 adults ages 20 to 25 (Mean: 22,5, SD: 1.18) carried out a word repetition task involving 20 minimal stress pairs (15 real words and 5 non-words) of the CVCV type. Duration, intensity and F0 range and SD ratios of stressed to unstressed vowels were calculated. Overall, although the use of intensity and duration cues for lexical stress did not differ significantly between the two groups, F0 variation ratios were significantly higher in the children real word data. Additionally in several cases children had some difficulties signaling lexical stress position in a perceptually transparent manner. This study is one of the few attempts to describe the acoustic properties of lexical stress in Greek acquisition.

**Keywords:** lexical stress, children, acquisition, acoustics, F0

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## Predicting perceptions of truthfulness: Investigating the effects of accent familiarity

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Research has shown that foreign-accented speech is sometimes perceived as being less credible/truthful than native-accented speech (e.g., Frumkin, 2007; Lev-Ari & Keysar, 2010). Previous attempts to explain this phenomenon have focused on social factors (Dragojevic & Giles, 2016) and processing difficulties (Lev-Ari & Keysar, 2010); however, we wondered whether perceptions of truthfulness might be better predicted by accent familiarity. To test this prediction, we presented participants with spoken statements that were ambiguous in their truthfulness (e.g., I weigh the pros against the cons) and asked them to rate each in terms of its truthfulness. While attempting to hold social factors constant and collecting data relevant to processing difficulty (i.e., intelligibility, comprehensibility, and accentedness), we manipulated accent familiarity in two ways: prior exposure (the accent was either familiar to our participants or unfamiliar to our participants) and brief exposure (information about truthfulness was gathered either at the beginning of the experiment or at the end of the experiment). Surprisingly, familiarity did not have a significant influence on ratings of truthfulness (all  $p$ s  $\geq .364$ ) and neither did intelligibility, comprehensibility, or accentedness (all  $p$ s  $\geq .479$ ). We did find that ratings of truthfulness were more variable in response to the unfamiliar accent ( $SD = 0.88$ ) than in response to the familiar accent ( $SD = 0.54$ ); however, this difference was not statistically significant ( $p = .0694$ ). What these findings suggest is that the familiarity someone has with an accent may not play a significant role in perceptions of truthfulness. In fact, the same seems to be true of processing difficulty; furthermore, because we attempted to hold social factors constant, we argue that they might have the greatest impact on perceived truthfulness.

**Keywords:** L2 perception, accentedness, intelligibility, truthfulness

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## **Foregrounding linguistic diversity through multilingual storytime**

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This paper focuses on a civic engagement project to raise awareness and promote linguistic diversity in the community. During an event held at the local public library, multilingual speakers read children's stories in ten different languages. Monolingual and multilingual community members were invited to listen to stories in several languages, have follow-up conversations with the readers, and interact with other community members. The project was led by two faculty members, both with expertise in the field of multilingualism. The authors of the study are seeking to measure the impact that the project had on a) the readers and b) the attending community members. Data were collected through semi-structured interviews with select readers and community members. The interviews were transcribed, and an analysis of the transcripts revealed emerging themes. A discussion of the findings will follow. This study makes a significant contribution to promoting linguistic diversity by creating a space of dialogue between academia and community, between monolinguals and multilingual speakers, between native speakers of a language and learners of that language.

**Keywords:** linguistic diversity, awareness, storytime, civic engagement

## Patterns of grammatical productivity in young Spanish-English bilinguals

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Language assessment for bilingual children requires clinicians to differentiate grammatical errors that indicate developmental language disorder (DLD; Gutiérrez-Clellen et al., 2008) from those that reflect typical bilingual development (Paradis, 2005). To do so, a clear reference point for typical language development must be established (Oetting, 2018). Thus, the present study characterizes error patterns in young bilinguals, applying a productivity-based framework in a novel manner. Presently, productivity-based scores are used to evaluate children's accurate morpheme marking. These measures were introduced in Hadley and Short (2005) and have since been extended to preschool-aged bilinguals (Potapova et al., 2018; Potapova & Pruitt-Lord, 2019). In contrast to accuracy measures, this scoring approach awards points only for sufficiently different instances of morpheme use, with higher productivity indicating stronger language abilities. While this approach excludes errors from consideration, it is important that errors, too, indicate productivity (or lack thereof). Non-productive errors include omissions in obligatory contexts (e.g., "He running"). Productive errors are uses that otherwise deviate from adult-like targets (e.g., agreement errors, "They was ..."; extraneous morpheme use, "it broke/ed"). As children with DLD demonstrate difficulty acquiring morphosyntax, non-productive errors are expected (Armon-Lotem, 2014); typically developing bilingual children do not share this deficit and may produce relatively more productive errors. Indeed, this pattern was observed in school-aged bilinguals (Jacobson & Schwartz, 2005). Data for the present study are drawn from an existing corpus of Spanish and English language samples from a large, community-based study. Participants are preschool-aged Spanish-English bilinguals with typical language and peers with DLD enrolled in either Spanish- or English-language classrooms. Thus, the effects of language ability and language exposure on error productivity in each language will be examined. Overall, this work adds to our understanding of typical and atypical bilingual language development and supports clinical decision-making for this population.

**Keywords:** grammatical errors, DLD, bilinguals, productivity-based scores

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## The relationship between age of acquisition and language dominance among early French-English bilinguals in Montreal

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Age of acquisition (AoA) has been found to be predictive of language dominance in late bilinguals (Gertken, 2013; Birdsong, 2016). Crucially, with the recent push within the field of bilingualism to adopt more granular experimental approaches (Filipović, 2019), this study aims at uncovering whether differences among early bilinguals' acquisition histories demonstrate this same predictive strength. This study investigates 30 early French-English bilinguals in Montreal, Canada by teasing apart the prototypical "early" acquisition age group by adopting a distinction between early simultaneous (those who acquired both languages from birth) and early sequential bilinguals (those who acquired both before 6 years old, mirroring the age groupings in Sabourin and Vinerte (2015)). We measure dominance by using A Quick Test of Cognitive Speed (AQT; Wiig et al., 2002), a dual dimension naming task which provides a quantitative dominance measure. Preliminary findings from this study demonstrate that 40% of the participants' AoA aligned with our hypotheses such that either their L1 aligned with their dominant language, or those with simultaneous acquisition histories demonstrated balance according to the AQT. The remaining 60% of participants demonstrated differing trends such that only two English first-language (L1Eng) participants outperformed on the French condition while only one French first-language (L1Fr) participant outperformed on the English condition. Finally, seven L1Eng participants and two L1Fr were found to be balanced. These preliminary findings suggest that although AoA provides some explanatory power with regards to a speaker's language dominance, the inconclusive nature of these findings leads us to conclude that additional factors within a bilingual's ecosystem must be taken into account in order to fully understand the influencing factors involved in determining language dominance. Such factors to be taken into consideration should include the following: language use (Grosjean, 2010), language mode (Grosjean, 2001) and linguistic environment of testing (Wu & Thierry, 2013) among others.

**Keywords:** language dominance, L2 acquisition, bilingualism

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**Different languages, different contexts, different gestures: A cross-linguistic comparison of bilingual mothers' and children's nonverbal communication**

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Previous research has shown that gestures and spoken language are part of an integrated communicative system. Characterizing gesture use in individuals from culturally and linguistically diverse populations can further our understanding of cross-linguistic differences in nonverbal communication. Gestural patterns of Thai-English bilingual mother-preschooler dyads were examined during two sessions of prompted reminiscing, book sharing, and toy play. Specifically, we investigated differences in mothers' and children's gesture use across languages and tasks. Participants were 26 Thai-English bilingual mother-child dyads living in Thailand. Children were four-year-old preschoolers (age range: 3;11 to 5;0). Mother-child dyads participated in three naturalistic communicative tasks (prompted reminiscing, book sharing, and toy play) per session, one day in Thai and another in English. Mothers and children were instructed to recall personal experiences in response to word prompts, engage with a wordless picture book, and play with a set of toy items. The dyads' interactions were video recorded and transcribed. Gestures were categorized into the following types: conventional, deictic (indicating, pointing, showing), emphatic (attention, beat), iconic, and metaphoric. Maternal and child gesture data were analyzed using 2 (language) x 3 (task) repeated-measures ANOVAs. Results revealed that gesture use differed depending on the spoken language and the communicative task ( $p < .05$ ). Mothers and children produced more conventional gestures in English than in Thai. Mothers produced more pointing gestures in Thai than in English, while children produced more metaphoric gestures in Thai than in English. Mothers and children used more iconic gestures during prompted reminiscing and more showing gestures during toy play (relative to other tasks). We conclude that gesture use is influenced by the speaker's proficiency, language-specific features (e.g., morphosyntax), and communicative demands of each task. Findings also highlight the importance of evaluating bilingual individuals' nonverbal communication in both languages to capture a comprehensive picture of their linguistic profiles.

**Keywords:** gesture, nonverbal communication, mother-child dyads, bilingual, preschoolers, cross-linguistic

## **Voluntary language switching within counting sequences**

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Counting is considered fundamental in an individual's numerical and mathematical development. Puerto Rican Spanish-English bilingual adults have sometimes expressed difficulty with counting with one of their languages when they reach a certain number, after which they switch to their other language. Although previous studies explore the relationship between bilingualism and numerical and mathematical processing, few focus on the counting process (Bialystok & Codd, 1997; Ellis, 1992; Guagnano, 2010; Wagner et al., 2015). This research explores and examines the contexts in which voluntary language switching occurs within counting sequences and the effect of the language of instruction on the process of counting. Twenty Puerto Rican bilingual speakers completed a main task in which they were presented with unilingual or bilingual background sentences followed by a question that required them to count images aloud. A category verbal fluency test (Linck et al., 2009; Baus et al., 2013) and a letter verbal fluency test (Beatty-Martínez, 2019), in both Spanish and English, as well as the Bilingual Language Profile (Birdsong et al., 2012) were used to gather information about their language proficiency, dominance, and background as bilinguals. While the results display the participants' preference to count in Spanish and maintain its use when counting in bilingual conditions, some participants performed voluntary language switching within counting sequences. None of the participants performed language switching within counting sequences in unilingual conditions. Although all the participants who performed the voluntary language switch had taken mathematics elementary school courses in Spanish, an evenly distributed participant sample based on language of instruction would improve the analysis. Additional research on language switching in this scenario is needed to analyze the factors and circumstances that may lead to this phenomenon, therefore providing insight into the ways in which bilingual speakers manage their two languages while counting.

**Keywords:** bilingualism, production, language switching, counting, Spanish-English, Puerto Rico

## **The influence of family language policy on child motivation and linguistic success**

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Immigrant parents consider their choices and use of language to influence their bilingual children's linguistic outcomes. Bilingual children's motivation to learn both their languages may also be critical. This study aims to define and explore the relationship between family language policy (FLP), motivation, and bilingual children's linguistic success in the heritage language (HL) and societal language (SL). The FLP framework adopted for this study is the language policy model (Spolsky, 2012). FLP consists of three components: ideology, management, and language practice. The motivation framework adopted for this study is the motivational self-system of learning a second language (Dörnyei & Ushioda, 2009). It also consists of three components: the ideal self, ought-to self, and the language learning experience. Linguistic success is defined by parental and child ratings of HL and SL outcomes, and receptive vocabulary scores using The Peabody Picture Vocabulary Test (Dunn, 2019). An adapted version was administered to measure Hebrew receptive vocabulary. Data from interviews, questionnaires and standardized assessments were collected from 25 bilingual families speaking English as a HL and Hebrew as a SL, with children aged 5-6. Parents' FLP, children's motivation for maintaining and developing both languages, and linguistic success are defined. Exploratory factor analysis (EFA) with Oblimin Rotation explores the distinction between the components within each model. Correlation matrixes deduce the relationships between the components within the models. Finally, correlation analyses test the inter-relationships amongst FLP and Motivation, and FLP and linguistic success. Preliminary data suggests that most parents believe in maintaining the HL, despite management strategies and practice varying in rigidity. However, initial findings allude to children presenting with different perspectives to their parents. Furthermore, the relationship between FLP, motivation and linguistic success is expected to be complex. Our understanding of these relationships provides valuable insights into the specific needs of the HL community.

**Keywords:** bilingual children, family language policy, motivation, linguistic outcomes, heritage language, societal language

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## **Turkish phonology: The monolingual vs bi-/multi-linguals discrepancies and what the synchronic data can tell about contemporary residues of the past**

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In Bellik (2019), an experimental study of epenthetic/intrusive vowels in Turkish onset consonant clusters is offered. While the study is methodologically and theoretically sound, there is a point of contention: the subjects of the study are bilingual Turkish speakers studying in the USA. Onset consonant clusters only appeared in the Turkish language with massive borrowing. For the speakers taking part in Bellik's experiment, these consonant clusters are part of their L2, and this has consequences on the conclusions we can reach for them, as it can be argued that consonant clusters are a phonemic possibility. For monolinguals, it is not. In this contribution, I want to discuss: i) analyses of the Turkish phonemic inventory and of its phonological processes and view them in relation to the specific language contact situation to explain some problematic findings; ii) the kinds of assertions in the literature regarding these; iii) how an appreciation of the complexity brought about by the massive import of foreign words and its implications for the phonology of its speakers can shed a different light on a given set of data; and more importantly, iv) how the analyses we offer do not hold equally well for monolinguals and bi/multilinguals, both diachronically and synchronically. The data the study focuses on are well known in the analysis of Turkish phonology, as well as the problems they pose to the offering of a parsimonious and elegant analysis. Specifically, the study looks at: i) long vowels and the so-called yumuşak g (orthographic ğ) (Lewis, 2000, Göksel & Kerslake, 2005), ii) lexical stress (Kabak & Vogel, 2001), iii) vowel harmony (Pöchtrager, 2010), iv) onset consonant clusters (Bellik, 2019), v) the so-called k-Ø alternation (Pöchtrager, 2013) and, finally, vi) some exceptional final consonant non-devoicing (where devoicing is the expected output). The study extends previous fieldwork in Turkey (e.g., Royer-Artuso, 2021) that addresses empirical and theoretical problems with current phonological analyses in Turkish, and also emphasize the relevance of the mono- vs. bi-/multi-lingual dichotomy, when it comes to the conclusions we adopt, both for synchrony as well as diachrony.

**Keywords:** bilinguals, phonology, Turkish

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## Do girls differ from boys in the monolingual acquisition of English dative alternation?

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This study examines whether girls differ from boys in the monolingual acquisition of English dative alternation (DA) structures (to/for-datives (1a) and double object constructions (DOCs) (1b)). While an order in the emergence and the incidence of the two constructions would entail a derivation of DOCs from to/for-datives (Larson, 2014) or to/for-datives from DOCs (Aoun & Li, 1989), analogous ages of onset and fairly similar rates in the production could suggest the formation of two underived structures that share an underlying grammatical property (Snyder & Stromswold, 1997) or differ in the status of the head projected (Marantz, 1991; Mulder, 1992); (1a) *John gave a book to Mary* (to-dative); (1b) *John gave Mary a book* (DOC) Girls are expected to present an earlier emergence and, possibly, higher frequency rates in the English DA production, when compared to boys' data (Lovas, 2011; Cornett, 2014), regardless of the syntactic relation. We also investigate whether the exposure to English DA from the adult input shows differences in the children's output (Gleason, 1990; Clearfield & Nelson, 2006). In order to shed light on these issues, we analyze data from eight English monolingual girls and five English monolingual boys, and the adults that interact with them, as they appear in CHILDES (MacWhinney, 2000). Our findings reveal that girls ( $t(6) = -2.071$ ,  $p = .077$ ) do not differ from boys ( $t(3) = 2.231$ ,  $p = .155$ ) in the ages of onset of English DA, which suggests the two groups have acquired the syntactic non-derivational relationship between DOCs and to/for-datives. Biological gender differences are not seen in the acquisition of the additional properties required in the production of to/for-datives, given the later onset and the lower incidence of these constructions. These patterns could also be explained by the adult input frequency of exposure in the two groups

**Keywords:** double object constructions; to/for-datives; emergence; adult input; biological gender

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## **A study on mid vowels: Dialectal characteristics and T21**

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Mid vowels have generated great debate in Portuguese linguistics literature because, depending on the dialect, open mid vowels occur in pretonic position although phonologically they are only distinctive in stressed syllables. They are neutralized for the benefit of closed mid vowels (Camara, 1992). Pacheco, Oliveira, and Ribeiro (2013) show that in the city of Vitória da Conquista in Bahia (Brazil), open mid vowels are more frequent in pretonic position, regardless of the adjacent phonetic environment. Studies on speakers with Down syndrome (DS), or T21, conducted by Oliveira and Pacheco (2016) claim that DS speakers show dialectal aspects of their speech community, despite their orofacial alterations. The aim of this research, therefore, is to verify the occurrence of the mid vowels in pretonic syllable in the speech of subjects with Down syndrome from two speech communities of Bahia: Vitória da Conquista and Porto Seguro. The hypothesis is that as a Brazilian Portuguese speaker, the individual with Down syndrome will present the same dialectal characteristics as of the speaking community where he lives, i.e., open mid vowels will occur in pretonic and stressed syllable - this being a dialectal feature of Vitória da Conquista and Porto Seguro. The data were collected from two young women with DS from Porto Seguro, and the data from Vitória da Conquista was from Oliveira (2011). The analysis was performed using Praat (Boersma & Weenink, 2015). The mean values of F1, F2 of open mid vowels and front and posterior closed vowels were extracted. The results showed that DS people from both cities produced the same alternations of individuals without Down syndrome.

**Keywords:** dialect, mid vowels, T21, Brazilian Portuguese, Porto Seguro, Vitoria da Conquista

## **Morpho-syntactic structure of code-switched sentences produced by Albanian bilingual students**

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This paper examines the morpho-syntax of the code-switched sentences uttered by Albanian bilingual students in informal environments within Prishtina International Schools' settings. The analysis is done by referring to Myers-Scotton's widely applicable models in many language pairs in contact situations, MLF model and 4M model respectively. Data was gathered by means of digital audio recording and the conversation was transcribed. The findings reveal that Myers-Scotton's models apply only partially in our data. Switching is mainly unidirectional with insertions from English into an Albanian syntactic frame. Determiners (demonstrative pronouns, indefinite pronouns, adverbs of quantity), copular verbs, auxiliary verbs, clitics come from the ML, complying with the model). However, violations of the model are encountered as well, such as non-occurrence of stem/affix switching, EL islands not always constituting the maximal projection of the phrase, etc.

**Keywords:** Albanian; bilingualism; bilingual phenomena; English; language contact

## The effects of secondary acoustic cues on the perception of Spanish intonation contrasts between native Mandarin and Spanish listeners

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Intonation is the prosodic structure of linguistic expressions, usually realized with multidimensional acoustic cues (Peng et al., 2012; Feng et al., 2019). While F0 contour has been considered the primary cue for perceiving the intonation of most languages (Bolinger, 1978), the effects of other secondary cues such as duration and amplitude are far less explored, especially in environments of language contact between tone and non-tone languages. The goal of this study is twofold: first, to examine the extent to which Mandarin and Spanish listeners' perception of Spanish intonation is influenced by changes in duration and amplitude; and second, to test whether acoustic variations of secondary cues affect listeners' use of the primary cue during question-statement recognition. To this end, we designed two auditory experiments in which stimuli were synthesized by manipulating the final F0 contours from falling to rising patterns while varying the duration or amplitude of the word-final syllable. Over 110 participants were recruited for this study and asked to identify the sentence type of each stimulus. The results showed that Spanish listeners' performance was significantly affected by the duration and amplitude changes, whereas Mandarin listeners were only sensitive to duration modulation. Moreover, Mandarin listeners had lower sensitivity to duration cues than Spanish speakers, suggesting crucial differences of cue weighting between listeners from different language backgrounds in question-statement identification. Furthermore, our study revealed a trade-off relationship between primary and secondary cues during intonation processing. Specifically, we found that listeners required a higher terminal pitch to hear questions when the duration or amplitude was decreased and vice versa. Nonetheless, Mandarin listeners were less capable of compensating for acoustic variations in speech, possibly due to the overwhelming role of F0 pitch in Mandarin and their limited experience of perceiving target co-varying cues along the lines of a language-specific and well-defined intonation category.

**Keywords:** intonation perception, secondary cues, cue weighting, Chinese and Spanish listeners

## A preliminary study on L2 Mandarin neutral tone production by Japanese and Korean learners

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Mandarin has a 'toneless' category called the neutral tone, which cannot occur independently. It has a shorter duration than the lexical tones (50~70%), and its pitch pattern varies as a function of the preceding tones, i.e., falling after T1/T2/T4, and level/rising after T3 (Lin & Yan, 1980; Lee & Zee, 2008). According to whether the occurrence of neutral tone is regular or not, neutral tone words can be divided into the predictable type such as words with suffixes *-de*, *-le*, *-zi*, and the unpredictable lexeme type such as *tou2fa0* 'hair'. The acquisition of L2 Mandarin neutral tone remains under-studied. The present study is a preliminary investigation of Mandarin neutral tone production by 6 Japanese (IJ) and 6 Korean (IK) learners of Mandarin with intermediate proficiency, compared with 10 native Mandarin (NM) speakers. The preliminary results showed that both the IJ and IK groups had difficulties distinguishing the context-sensitive pitch patterns of neutral tone, and the distribution of neutral tone after different lexical tones was less dispersed than that of the NM group. In terms of duration, the IJ speakers were closer to the NM speakers. The duration ratios of neutral tone to the preceding tone produced by IJ speakers were significantly smaller than those of IK speakers in both the predictable and unpredictable contexts. Interestingly, the IJ group also showed smaller duration ratios than the NM group in the predictable context, which needs further investigation. The smaller duration ratios of neutral tone produced by IJ speakers than IK speakers may be associated with the role of duration in their L1s: Japanese has phonemic vowel length based on duration (Hirata, 2004), while Korean does not (Jeon, 2015). Thus, IJ speakers' experience manipulating duration to signify native vowel length contrast may facilitate their L2 Mandarin neutral tone production. The results are discussed under the Feature Hypothesis (McAllister et al., 2002).

**Keywords:** L2 speech production, Mandarin neutral tone, Japanese, Korean, featural transfer

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## **The chance of getting the gender right between French, Greek, and Spanish: Loan nouns vs. frequent nouns**

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Getting the grammatical gender right is one of the challenges that second language learners face. Accuracy depends on the number of genders of the first and second language, the gender match in word translation, and the learner's proficiency level of the second language. When learning a third language, matching word gender becomes more difficult as both the first and second language play a role. For native French learners of Spanish, experimental work has shown the dependence of accuracy level on proficiency level [1]. In interpreting such results for gender match between two and three languages and, also, providing a guideline for how difficult it is to get the gender right, the present study computes the chance of gender match in word translation between French, Greek, and Spanish. Specifically, the chance is calculated for two kinds of nouns, common loan nouns in the three languages and frequent nouns, for trilingual match as well as for exclusive and non-exclusive bilingual match. The results are based on 300 common loan nouns and 200 frequent nouns taken from [2, 3]. For masculine French or Spanish, the chance for trilingual match is 27% for loan words and 20% for frequent words. In contrast, it is 80% for masculine Greek or feminine French, Greek or Spanish for loan words, and 65% for masculine or feminine Greek and 48% for feminine French or Spanish for frequent words. Greek learners of French or Spanish have 3.4 times better chance of getting the masculine gender right than French or Spanish learners of Greek, and 1.3 times better chance of getting the feminine gender right, at about 73% in either case. On the other hand, French learners of Spanish have the same chance of getting the gender right as Spanish learners of French at 81%, either for masculine or feminine frequent nouns. Exclusive bilingual gender match between French and Spanish is at 60% for masculine frequent nouns, twice as much as for feminine nouns, while between Greek and French (or Spanish) is at less than 10% for either gender. The contrasts are due to a third neuter gender in Greek, the change in Modern Greek gender from Katharevousa to the contemporary vernacular Demotic Greek, employed in the present study, and the fact that French and Spanish are Romance languages and have two genders.

**Keywords:** gender, nouns, match, chance, French, Greek, Spanish, bilingual, trilingual

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## **Bilinguals speaking two prevoicing languages produce language-specific voice onset time**

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It is well established that early bilinguals speaking languages that differ in the phonetic implementation of the voicing contrast have language-specific voicing systems (Antoniou et al., 2010), even if their productions are not monolingual-like (Flege & Eefting, 1987). However, combinations of languages with similar phonetic and phonological systems in terms of voicing (e.g., two prevoicing languages) have received less attention (e.g., Mayr & Montanari, 2014). This study focuses on the speech production of early bilinguals speaking Basque and Spanish, which both use the presence versus absence of prevoicing to differentiate 'voiced' from 'voiceless' plosives, in order to investigate possible voicing separation. Twenty Basque-Spanish early bilinguals, speakers of Gipuzkoan dialects of Basque, participated in a Basque and a Spanish picture naming task. We measured participants' voice onset time (VOT) production in both languages, and we performed linear mixed-effects models in R (R Core team, 2015) to investigate between-language differences in their productions. Our results show, for the first time, that adult early bilinguals speaking two prevoicing languages produce distinct VOT for each language in 'voiced' plosives. This finding demonstrates that bilinguals' phonetic systems are more nuanced than previously assumed and contributes to a better understanding of the granularity of early bilinguals' phonetic systems.

**Keywords:** VOT, speech production, language-specific categories, early bilinguals, Basque-Spanish

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## **Family language policy: An analysis of language use patterns and factors enabling active use of heritage languages in a multilingual family**

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Studies on family language policy (FLP) and bilingual first language acquisition (BFLA) have demonstrated that not all children exposed to two or more languages from birth speak all of their languages. De Houwer (2007) found that successful transmission of a minority language is more likely to occur when both parents provide input in the minority language, and at most, one of the parents speaks the societal language. This finding suggests that in families where parents have different heritage languages, and both parents speak the societal language, language transmission becomes a significant challenge. The current study explores the language use patterns of a multilingual family raising their quadrilingual child in a "double minority language" (Fukuda, 2017) situation and investigates the factors that affect the successful transmission and the active use of minority languages in their home. Each parent speaks their heritage language – the mother Japanese and the father Armenian – with their eight-year-old daughter. The common language between the family members is the societal language, Turkish, and the international language, English. Naturalistic audio data of family conversations are analyzed to demonstrate the language use patterns of the parents and the child's language choice. These findings are supported by data in interviews with family members, including the child, to identify the relationship between their ideologies and beliefs about languages and their actual language use. The results demonstrate that heritage languages are used overwhelmingly in child-parent interactions. Although the parents communicate in the societal language and English, the child demonstrates a preference to use her heritage languages when addressing her parents. The interview results reveal that in the case of this multilingual family, active use of the heritage languages depends not only on parental language use patterns' language ideologies, strong impact beliefs, realistic expectations, the influence of other caregivers, and child agency.

**Keywords:** family language policy, language use patterns, multilinguals

## Whistled word perception by monolingual and high-level L2 speakers

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A modified or degraded speech signal is harder to perceive for all speakers, with a particular difference noted between monolingual and bilingual speakers. This is demonstrated for speech in noise, tested for both sentences and words, where bilingual speakers are found to achieve lower performances than monolinguals at high noise levels (Tabri et al., 2011; Morini & Newman, 2020). Some attribute these differences to word familiarity (Schmidtke, 2016) or to the reliance on phonological cues and the use of a bottom-up analysis of the speech signal rather than treating information top-down as natives do (Rammel et al., 2019). Yet how do these results compare with speech processing of another natural form of modified speech? We took an interest in whistled speech, whose simplified speech signal helps to communicate over long distances, to investigate the differences between French monolinguals and high-level L2 French speakers. This also allowed us to explore the role of phonological cues in word perception. We analyzed the results of both native French speakers and native English speakers with a high level of French for 24 whistled words. Though the overall differences between the two groups were not significant, participants varied in terms of word and phoneme perception profiles (similarly to Meyer et al., 2017). This suggests that the phonological cues present are generally robust for the two groups of speakers. In addition, it seems that the influence of native language on modified speech perception for high-level L2 speakers may not be as important for whistled speech as for speech in noise.

**Keywords:** speech perception, whistled language, words, monolingual, L2 speakers



## Can onomatopoeia come to rescue? A study on Mandarin verb acquisition via onomatopoeic reduplication

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Verbs are generally more difficult for young children to acquire than nouns due to lower concreteness and imageability. The lack of verb conjugation in Mandarin seems to only exacerbate the problem, making novel verbs even more challenging to identify. This study thus examined whether verb learning could be boosted by onomatopoeia, which is rich in imagery and claimed to facilitate language learning. 40 three-year-old Mandarin-learning children were recruited and randomly assigned to one of four groups (two verb-learning and two noun-learning) to perform a fast mapping task. In all four groups, children were presented with two pictures in each trial, one with a familiar item, and the other a novel item. There were in total six trials. Upon hearing a novel word, children were expected to associate it with the novel item through deduction. Later, they were tested on their production and comprehension of the novel words. For the verb-learning groups, the novel words were all in the form of onomatopoeic reduplication, and were placed in a verbal sentence frame (e.g., *Nage hui \_\_?* 'Which one will\_\_?'). One group provided the novel label as is (V-R hereafter), while the other provided both the label along with the novel sound it mimicked after (V-RS hereafter). The noun-learning groups placed the novel words in a nominal sentence frame (e.g., *Nage shi \_\_?* 'Which one is \_\_?'). One group provided the novel label in monosyllabic form (N-M hereafter) and the other provided the novel label in reduplicative form (N-R hereafter). Results showed that V-RS performed better than V-R, while no difference was found between N-S and N-R. Crucially, V-RS did not differ significantly from both of the noun-learning groups. This implies that onomatopoeia can indeed facilitate verb-learning as long as the association between the mimicking label and the mimicked sound is established.

**Keywords:** onomatopoeia, fast mapping, verb learning, reduplication, language acquisition, Mandarin

## Speech accommodation in non-native speech

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In this talk, I am presenting first results of a series experiments on the role of speech accommodation alignment in the acquisition of L2 prosody. Even though research has dealt with accommodation effects since the 1970s, the mechanisms behind the process(es) are still not understood. Some believe that accommodation is a dynamic process that speakers strategically apply to gain social approval and to attain communicational efficiency (Bourhis et al., 1972; Bourhis & Giles, 1977; Giles et al., 1991; Shepard et al., 2001). Others propose accommodation to be largely automatic (Fowler et al., 2003; Mitterer & Müsseler, 2013; Dias & Rosenblum, 2016; Enzinna, 2018). And still others suggest alignment to be caused by some interactional motivations, but in a general, automatic way as 'overlearned social behaviours' (Nass & Moon, 2004). The question addressed in the experiment presented is how these mechanisms can be observed in non-native speech. In other words, provided that a desire of non-native speakers to archive a high level of intelligibility can be assumed, does insufficient proficiency impede the application of accommodation strategies to affiliate with native speakers of their L2 and for automatisms to kick in? I am presenting the results of an analysis of word stress, speaking rate and pitch accent obtained from learners of L2 German with varying L1s elicited in repetition tasks and collaborative tasks, the latter recorded during peer interaction and in computer assist interaction. The results indicate that accommodation depends on the task, and they suggest an interaction of prosodic features with both, social and linguistic variables. Implications are discussed in terms of the potential role of accommodation activities in helping L2 speakers practice and improve pronunciation.

**Keywords:** speech accommodation, prosody, advanced learners of L2 German

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## **Bi/multilingual diminutive constructions: A cross-community analysis of Spanish-English code-switching in Miami and Belize**

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The present study sheds new light on when, how, and why Spanish/English bilinguals alternate their languages in diminutive constructions. The linguistic category of diminutiveness can be used to convey a reduction, but it can also serve to express a wide array of affective connotations and personal attitudes towards the diminutivized entity (Vanhaverbeke & Enghels, 2021). Morphologically, various apparatus can be employed to form diminutives (e.g., affixation, periphrastic constructions, etc.) (Schneider, 2013), and this varies across languages. While Spanish mainly makes use of synthetic diminutive suffixes (-ito/a, -illo/a, -ico/a, etc.; RAE, 2010), English primarily relies on analytic periphrastic constructions (e.g., small, tiny, etc.) (Schneider, 2003). Diminutive constructions, therefore, are a potential conflict site in Spanish/English code-switching (CS), one that remains largely unexamined (Enghels & Vanhaverbeke, 2020). Drawing on data from the Bangor Miami corpus and a corpus of sociolinguistic interviews carried out in Belize (Balam, 2016), the present study comparatively analyzes monolingual and bilingual diminutive constructions in order to cast light on the morphological structure and semantic functions of these forms across two Spanish/English CS communities. Results show that with regard to token and type frequency, Miami bilinguals use significantly more analytic markers than Belize multilinguals. With respect to synthetic markers, -ito was the most frequent suffix in both communities. Notably, Belize bi/multilinguals code-switch to a significantly higher degree than (e.g., unos lee kids, un lee pursito, un poquito mas de freedom, etc.) than Miami bilinguals. In terms of semantic function, only Miami bilinguals employ English markers mainly to express objective meanings (e.g., un little estante) and Spanish ones for affective connotations (e.g., un partimecito). Contrariwise, Belize bi/multilinguals use both Spanish and English markers to communicate diminutive meaning. We discuss our findings in relation to recent research on the deterministic role that community linguistic norms have on CS outcomes.

**Keywords:** Spanish/English code-switching, bilingual morphology, diminutives, code-switching variation

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## **Child-directed speech in a native vs. a non-native language**

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Child language development is a long-term process critically dependent on the language input the child is exposed to, because without it no language acquisition takes place (Pearson, 2007). Parental speech is the most important source of language behavior for children and is at the same time the goal gradually reached by children in the process of acquisition (Slančová, 2018). When talking to little children, parents and caregivers generally communicate in a special way, labelled as child-directed speech (CDS). Its typical features include a higher pitch and exaggerated intonation (Corie, 2019) as well as slower pace of speech and simplified lexis (Spáčilová, 2018). But what happens when a mother alternates two languages (native and non-native) in communication with her children? This paper examines child-directed speech of a Slovak mother regularly speaking both Slovak and English to her children (aged 4;8 and 1;6) in order to make them bilingual. Since English is not her native language, this type of bilingualism is referred to as intentional bilingualism (Štefánik, 2000). The analysis is based on the self-observation of the mother-researcher, drawing upon the audio recordings of the everyday interactions with her children in both languages. It is focused on the linguistic differences of CDS in the two languages (e.g., diminutives as part of CDS contrast significantly in Slovak and English; Slovak having a much wider range of diminutive productivity than English), as well as the characteristics of CDS related to the mother's use of both her L1 and L2. The aim of this paper is to describe the investigated features of CDS in both languages and to demonstrate the impact of a native vs. non-native language on the use of CDS.

**Keywords:** diminutives, bilingual first language acquisition, child-directed speech

## **Apology emails by Australian learners of Italian: A focus on providing explanations to academic staff**

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This paper will discuss differences in (i) apology strategy realisation between Australian learners of Italian and native speakers of Italian, and (ii) participants' perceptions of their language use. The data are part of an ongoing doctoral research project which investigates the performance of written apologies by Australian learners of Italian to academic staff at university, in a comparative perspective with native speakers of both Italian and Australian English. Utilizing a mixed methodology to holistically explore these apologies, the project considers how learners of Italian perform emailed apologies, the perceptions of these learners regarding their performance, and the perceptions of academic staff to whom the emails are hypothetically addressed. The paper will focus on one apology strategy emerging from the data, namely, providing an explanation, which will be explored through an analysis of elicited emails written in Italian by both the learners and Italian native speakers. It will be demonstrated that while many Australian learners of Italian tend to construct explanatory stories as an obligatory stage in the performance of apologies, native Italian speakers frequently omit this. In addition to the linguistic analysis of the elicited emails, such difference between the two groups will be explored through the investigation of interview data and fieldnotes, which yield insights into the rationale underlying such linguistic choices of constructing and/or omitting stories in order to account for offences. The analysis of this data, and of this strategy in particular will explore the position of Australian learners of Italian as being on the borderline of two sometimes conflicting linguistic and cultural systems. More broadly, it will highlight the Australian and Italian students' understanding of the different institutional roles of professors and tutors in the two contexts, also pointing to some potential linguistic and pragmatic difficulties faced by Australian university students studying Italian.

**Keywords:** apologies, learners of Italian, Italian L2, apology emails, explanations

## **Age at migration and heritage language proficiencies: The case of Chinese immigrant children in Australia**

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This study investigated heritage language proficiencies of 22 Chinese immigrant children and examined major factors resulting in their language proficiency patterns. These focal children were mostly adolescents or young adults, with age of arrival in Australia ranging from 3 to 13 years, and with at least 4 years of residence in the host country. Data were obtained through open-ended interviews with both parents and children, informal conversations, observations, collection of evidence of literacy practices, and WeChat postings. The exhibited proficiency outcomes were based on participants' self-perceptions and further evidenced by language samples they provided. Several findings emerged: (1) These young immigrants demonstrated a wide range of heritage language proficiency levels, in which poor maintenance of Chinese or deterioration of Chinese literacy proficiency constitutes the main pattern of heritage language trajectory, while language maintenance achievements or high levels of literacy attainment are also observed, (2) Age at migration presented as the best predictor of the risk of language loss or the degree of language attrition, whether orality or literacy. (3) Parental support and children's agency effectively reduce and counterbalance age factor, and thus alter the language attrition trend.

**Keywords:** age at migration, heritage language, proficiency, maintenance, attrition, agency

## Language modeling: Unlock potential in children with complex communication needs

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Children with complex communication needs (CCN) employ alternative modalities for language input and output, such as augmentative and alternative communication (AAC). Providing both natural spoken models and models of AAC-based language which is in concert with their expressive language system is imperative in promoting language acquisition in children with CCN. AAC modeling enhances comprehension and shows the children with CCN how to use AAC to produce language. Prior studies had claimed that a majority of individuals with CCN have no or delayed acquisition of language skills and limited access to gain language knowledge (Kent-Walsh & Light, 2003). There are two major issues in the experience of language learning in children with CCN. First, children with CCN are often excluded or marginalized in communication activities which has an adverse effect on the development of language skills (Kaiser et al., 2001). In addition, children with CCN have limited opportunities to access language models provided in AAC-based language. To promote language acquisition and use in children with CCN, providing AAC models in addition to natural spoken models is integral (Binger & Light, 2007). Studies investigating AAC modeling in this population using evidence-based designs are limited and this area is underdeveloped (Drager et al., 2006; Sennott et al., 2016). Thus, this study examines the implementation of language modeling approach and its effect on language learning in a child with Rett syndrome (a rare neurological disorder) who uses an eye-tracking AAC device (Tobii i-13) for bilingual speech (English and Bengali). Data collected through participant observation of story reading activities between a caregiver and the child in home settings was analyzed. The findings of this study highlight the substantial role of language modeling using AAC devices in language learning for children with CCN and provide practical implications for language acquisition and education in this population.

**Keywords:** language modeling, children, AAC, neurolinguistics, educational linguistics, new technologies

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## **The role of audiovisual information during linguistic release from masking: Comparing bilingual and monolingual perceivers**

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Although all perceivers experience challenges understanding a person (i.e., target) in the presence of competing talkers (i.e., masker), this task may present different challenges for bilinguals. One phenomenon is Linguistic Release from Masking (LRM), in which masking of a target language (e.g., English) decreases with increasingly dissimilar language backgrounds (e.g., Dutch) (e.g., Williams & Viswanathan, 2020). LRM may occur due to differences in the target and masker languages or because one language is not understood by the listener. By using bilingual perceivers, we examine a situation in which both languages are understood. In addition, visual speech information from a person's face (e.g., lip movements, degree of mouth opening, etc.) during natural conversation improves speech-on-speech perception. In Experiment 1, we evaluated whether there would be LRM effects when perceivers understood the masker languages and whether these effects persist in bilinguals when they had access to visual speech information. Results showed audiovisual LRM effects for bilinguals. We also found larger LRM effects in the audio-only compared to the audiovisual condition. This shows that visual speech information helps the listener not to rely solely on LRM to understand the target. In Experiment 2, monolinguals were tested under the same conditions as the bilinguals to directly compare effects. Results showed LRM effects for monolinguals that were comparable to the bilingual perceivers. When comparing the monolinguals to the bilinguals, the latter experienced significantly more interference from the Dutch masker in the audio-only condition. However, bilinguals and monolinguals did not differ significantly in the audiovisual Dutch condition. This might suggest that bilingual perceivers may be able to overcome informational masking exerted by the known language by relying on visual speech information. Overall, this study demonstrates that bilinguals experience LRM under audiovisual listening conditions.

**Keywords:** speech perception, bilingualism, adult L2 perceivers, audiovisual speech perception

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## The Perception of L3 Quebec French tense and lax vowels contrasts by L1 Mandarin-L2 English learners

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The Linguistic Proximity Model (LPM) (Westergaard et al., 2017) proposes property-by-property transfer: learners select a property, such as verb raising from one of the previous language sources to analyze L3 input based on comparison between the L1 and L2. However, the investigation of the LPM in L3 phonology remains a neglected area. Inspired by the LPM, my hypothesis is: Mandarin speakers are able to select the [ +front] and [ +round] features (used to distinguish /i/ from /y/) from L1 Mandarin and the [ +tense] feature (used to distinguish /i/ from /I/) from L2 English to learn L3 Quebec French (QF) tense and lax vowels. To test this, the study examines the perception of L3 QF tense and lax vowels (both allophonic [y, ʏ] and phonemic contrasts /ε, e/) by L1 Mandarin-L2 English learners at the high intermediate level of QF proficiency. An ABX discrimination task (with 1500ms ISI) was conducted by embedding [y, ʏ] and /ε, e/ in CVC syllables ([bVb], [dVt], [sVz]) in 36 trials. Eleven native Mandarin speakers and four native Quebec French speakers were recruited. The results indicate that Mandarin and Quebec French speakers perform similarly on all contrasts (above 94% accuracy), with no significant difference for [y, ʏ] ( $R=0.21$ ,  $p>0.48$ ) or for /ε, e/ ( $R=0.24$ ,  $p>0.41$ ). Mandarin speakers show no significant difference between the two QF contrasts ( $R=0.015$ ,  $p>0.9$ ). These findings support the LPM's view of transfer and suggest that learners are able to select phonological features from both previous language sources to help them learn L3 target sounds, which is a novel finding.

**Keywords:** L3 phonology, the Linguistic Proximity Model, Quebec French learners

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## Monolingual and bi/multilingual children's Mandarin Chinese speech parameters

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By-language comparisons of child bi/multilingual and monolingual speech yield controversial results, whereby some studies demonstrate that monolinguals outperform bilinguals already in young age (e.g., Jia & Paradis, 2015; Montrul, 2016), and others show no major differences (Antonova-Ünlü & Wei, 2016; Makarova & Terekhova, 2017). These comparisons help to identify mechanisms and thresholds in heritage language development. Mandarin Chinese as a heritage language has widely spread in Chinese diasporas world-wide (He, 2015), and in Canada (Sun, 2016). However, monolingual and bi/multilingual speech comparisons across diverse parameters are rare, and most studies focus on some specific aspects of language acquisition (e.g., Chen et al., 2004; Tsoi et al., 2019). This study is aimed at investigating multiple speech parameters in Mandarin monolingual vs. bi/multilingual speech in order to clarify the timelines of heritage language development. The participants are 60 monolingual children from China and 60 bi/multilingual (Mandarin, English (+)) children from immigrant families in Canada coming from two age groups: 5-7 and 10-12. The speech samples were obtained from children's narratives elicited with picture prompts. Parameters (25) representing fluency, vocabulary, syntax, and non-canonical forms were extracted for analysis, tabulated, and subjected to bivariate ANOVAs (SPSS 28). The results demonstrate the significant effects of language (monolingual/bi-multilingual) and age groups on speech parameters. The number of significant differences in the language parameters between the monolingual and bilingual groups is higher in the older age group. Furthermore, while monolingual participants show a significant difference of most analyzed parameters between the younger and the older groups, bi/multilingual's speech does not change much with age. The results suggest that speech parameters differentiation between monolingual and bi/multilingual children is already present in the age group of 5-7, but by the age of 10-12, bi/multilinguals' Mandarin becomes a heritage language, as its development has slowed down.

**Keywords:** Mandarin, heritage language, children, proficiency, Canada, China

## **What can disfluencies tell us about macrostructure skills of bilingual children in both their languages?**

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Disfluencies in oral speech reflect underlying planning and are of interest in bilingual speech since they may reveal difficulties related to the interaction of two languages while producing a narrative task. The goal of the current study is to investigate the relationship between disfluencies and macrostructure skills in the narratives of bilingual children in both their languages. Twenty bilingual Russian-Hebrew children aged 60-78 months produced narratives using a wordless picture book *Frog, Where Are You?* (Mayer, 1969) in both languages. Narratives were transcribed. Transcripts were divided into five episodes and coded for the following macrostructure elements: character, setting, initial event, internal response, plan, attempt and outcome in each of the five episodes (Squires et al., 2014). The following disfluencies were coded manually: filled pauses, repetitions, and self-corrections. In addition, silent pauses were coded using PRAAT software. All disfluencies were mapped on to macrostructure elements per episode. The second and fourth episodes contained more pauses than the first episode, all other disfluencies were similarly distributed across episodes. Children produced more pauses in Russian than in Hebrew, while the difference across languages was not significant for other disfluencies. The link between macrostructure and disfluencies differed in Russian and Hebrew, such that children telling more complex stories in Hebrew tended to use fewer disfluencies, whereas in Russian there is no influence of story complexity on disfluency rate across all narratives. Disfluencies reveal a complex interaction of macrostructure skills and linguistic knowledge in bilingual speech.

**Keywords:** bilingual, children, narrative, macrostructure, disfluency

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## **Pronunciation teaching for adult L2-learners**

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Pronunciation teaching is the focus for a project in which five teachers in the program Swedish for immigrants (sfi) and a researcher participate. Sfi is an education program at different levels in Swedish for adult immigrants with different mother tongue, education and school background, from no schooling to highly educated. The teachers have expressed that they need more knowledge about how to teach Swedish for those who have studied the language for a while without any clear progression, students with a fossilized Swedish pronunciation. The students' knowledge in grammar and vocabulary has reached a more advanced level. The aim of the study is for the teachers to gain more knowledge and awareness about pronunciation teaching, and for the researcher to practice theoretical knowledge together with teachers in the classroom. The overall research question is: How can the teachers develop their pronunciation teaching so that students get the opportunity to learn a comprehensible and intelligible pronunciation in Swedish? This is an ongoing project, but the teachers have already reported that their teaching is more explicit, concerning both the articulation of segments and the prosody such as word stress, and that some students are making progress in their pronunciation. The teachers also say that they are more motivated in their teaching since they know more about how to guide the students, and how different mother tongue can affect learning through transfer. During the project, audio recordings are made of some focus students, selected by the teachers, in order to study and understand their progression over time. Recordings are made preferably of spontaneous speech in dialogues between students with different mother tongue. In addition, the teachers write logbooks for documentation of their own teaching and thoughts.

**Keywords:** pronunciation teaching, adult L2-learners, L2 teacher

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