



# RUEG Conference 2023 - Linguistic Variability in Heritage Language Research Conference Programme Book of Abstracts

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## Call for Papers

Linguistic research across subdisciplines has recently developed much interest in the influence of between- and within-speaker variability in language production and comprehension. While speaker diversity has always been considered in heritage language research, this new-found momentum holds much potential for the advancement of theoretical concepts and the development of a more comprehensive view of language as a fundamentally diverse phenomenon.

Capturing and modelling such diversity, especially in limited data, however, presents a substantial challenge for heritage language research among other fields. For example, numerous questions arise in relation to the empirical research practices: What quantitative and qualitative challenges do we face? How do we consider and integrate variability and diversity in our research designs, our data structures, and analyses? Other questions concern the theoretical and epistemological integration: If the baseline contains diversity, can we still identify factors that allow us to group and compare speakers? How do we account for the full diversity within the data without losing sight of unifying patterns?

The Research Unit “Emerging grammars in language contact situations: A comparative approach” (RUEG; <https://hu.berlin/rueg>) has investigated these questions over the past six years in a multi-university collaboration funded by the German Science Foundation. Research within RUEG has focused on both heritage speakers and monolinguals speaking a variety of languages in comparative contact situations. Crucially, this work has assumed that both speaker groups - heritage speakers as well as monolinguals - exhibit both intra-individual and inter-individual variation. In addition, research has targeted non-canonical patterns (unexpected from the point of view of standard grammars) in both speaker groups, not assuming that non-canonical structures are restricted to only one group.

This international conference marks the completion of RUEG’s second and final 3-year period. It aims to bring together researchers who are interested in contributing to the investigation of heritage languages (spoken and signed), especially from the perspective of linguistic variability and methodological challenges. We plan to have the following three thematic sessions, each introduced by a keynote speaker. Research presentations in the sessions can include or extend any of the following:

### **Session A: Speaker Repertoires & Intra-individual Variability**

What is the role of communicative situations in the linguistic behaviour of heritage speakers and monolinguals? Do specific communicative situations trigger unexpected linguistic patterns, and do heritage speakers and other speaker groups behave similarly in those situations? To what extent do heritage speakers show register awareness in their heritage languages?

Keynote: Anna Shadrova, Humboldt-Universität zu Berlin

## **Session B: Methodological Advances**

What methods in corpus and experimental linguistics are suitable to detect and capture possible heritage language grammars or other types of non-standard grammars? How can we best capture linguistic patterns that fall outside formal standard language? What methods in corpus and experimental linguistics are suitable to study speakers' repertoires?

Keynote: Irina Sekerina, The City University of New York

## **Session C: Baselines and Variation**

What are the appropriate groups to compare in studies on heritage languages? How homogeneous is linguistic production between individual heritage speakers? Which factors predict different outcomes in linguistic production between individual speakers? Do some linguistic levels and phenomena show greater variability than others?

Keynote: Jason Rothman, The Arctic University of Norway

# **Conference Organization**

## **Organising Committee**

İrem Duman Çakır, Sofia Grigoriadou, Kalliopi Katsika, Cem Keskin, Pia Linscheid, Onur Özsoy, Anna Shadrova, Luka Szucsich, Sabine Zerbian, Yulia Zuban

## **Scientific Committee**

Artemis Alexiadou, Shanley Allen, Oliver Bunk, Cristina Flores, Natalia Gagarina, Mareike Keller, Anke Lüdeling, Onur Özsoy, Tatiana Pashkova, Judith Purkarthofer, Vasiliki Rizou, Christoph Schroeder, Anna Shadrova, Luka Szucsich, Rosemarie Tracy, Jeanine Treffers-Daller, Wintai Tsehaye, Heike Wiese, Sabine Zerbian

## **Venue**

26th September 2023:

Humboldt-Universität zu Berlin  
Unter den Linden 6  
10117 Berlin

27th to 28th September 2023:

Humboldt-Universität zu Berlin  
Dorotheenstraße 24  
10117 Berlin

## Technology

The conference will be held in Berlin and online. Online access will be provided via Zoom. The poster session will be hosted on-site and simultaneously online via OSF (<https://osf.io/>). During the time slot of the poster session, 28th September, 10:00-12:00, the on-site presenters will present their posters in a classical way hanging on poster walls. The online presenters will be in contact with the online participants via the OSF chat of their poster subproject.

The links to attend the conference will be emailed in advance to all registrants.

## Contact

Forschungsgruppe RUEG, Hausvogteiplatz 8, R. 124, 10117 Berlin  
[hu-berlin.de/rueg](http://hu-berlin.de/rueg)

*General Requests:* [Coordination Team](#)

*Participation:* [Conference Website](#) - If you want to attend the conference as a guest listener, please register by the 16th of September 2023.

## Conference kick-off



# Familienprachenstark!

### Venue:

Humboldt-Universität zu Berlin, Unter den Linden 6, 10117 Berlin | R. 2091

13:30-14:00

### Arrival

14:00 – 14:30

**Judith Purkarthofer** (RUEG), **Rosemarie Tracy** (RUEG) and **Wintai Tsehaye** (RUEG)

*Fragen & Antworten für die mehrsprachige Gesellschaft*

14:30 – 15:00

**Ingrid Gogolin** (Universität Hamburg), **Annick De Houwer** (Habilnet, Brüssel) and  
**Vicky Rizou** (RUEG, Berlin)

*Fragen & Antworten aus der Wissenschaft*

15:00 – 15:30

**Daniela Gothe** (ES Kleinmachnow) und **Henrick Stahr** (SESB, Berlin)

*Fragen & Antworten aus der Schule*

15:30-16:00

### Break

16:00 – 16:30

**Magdalena Wiazewicz** (SenBJF, Berlin), **Mostapha Bouklouâ** (MSB NRW, Düsseldorf) und  
**Lale Arslanbenzer** (KI Oberhausen)

*Fragen & Antworten aus der Politik*

16:30 – 17:00

**Tatiana Linke** (AIM Heilbronn) und **Julia Rath** (VHS Servicezentrum Berlin)

*Fragen & Antworten aus der Erwachsenenbildung*

17:00-17:30

**Break**

17:30 – 18:00

**Marie Leroy** (Verband binat. Partnerschaften, Frankfurt), **Mehmet Alpbek** (FÖTED, Berlin),

**Marita Orbegoso Alvarez** (Projekt migra up! - Sources d'espoir e.V + Lingua Pankow Berlin)

*Fragen & Antworten der Eltern(vertreter:innen)*

18:00 – 19:00

**Sofia Grigoriadou** (RUEG)

*Diskussion und gemeinsamer Ausklang*

# Schedule

Venue: Dorotheenstraße 24, 10117 Berlin | House 1 | R. 1.101

**Wednesday, 27 September**

**All times CEST**

## Session A: Speaker Repertoires & Intra-individual Variability

9:00-9:30 *Opening*

9:30-10:30

**Keynote 1 – Anna Shadrova** (Humboldt-Universität zu Berlin)  
*Speaker Repertoires and Intra-Individual Variability* | p. [15](#)

10:30 – 11:00

**Jeanine Treffers-Daller** (University of Reading)

*Variability in multiword units in the speech of Turkish-German heritage speakers and returnees* | p. [15](#)

11:00-11:30

**Break**

11:30-12:00

**Birger Schnoor** (University of Hamburg) and **Irina Usanova** (University of Hamburg)

*Factors influencing multilingual writing skills in multilingual adolescents in Germany* | p. [16](#)

12:00-12:30

**Kristin Melum Eide** (NTNU) and **Arnstein Hjelde** (Østfold University College)

*Intra-speaker variation in North-American Heritage Norwegian (NorNAHL): Input and baseline(s)* | p. [16](#)

12:30-13:00

**Ioli Baroncini** (University of Mannheim)

*Metalinguistic knowledge can affect priming across languages in heritage language children* | p. [17](#)

13:00-14:30

**Lunch break**

## Session B: Methodological Advances

Wednesday, 27 September

14:30-15:30

**Keynote 2 – Irina Sekerina** (The City University of New York)

*How corpus and experimental studies of heritage languages can inform each other* | p. [18](#)

15:30-16:00

**Anamaria Bentea** (University of Konstanz) and **Theodoros Marinis**

(University of Konstanz)

*Syntactic Processing in Child Heritage Language Bilinguals: An Eye-tracking Study with Which-questions in Romanian* | p. [18](#)

16:00-16:30

**Karoline Kühl** (University of Flensburg), **Jacob Thoegersen** (University of Copenhagen), **Jan Heegård Petersen** (University of Copenhagen) and **Gert Foget Hansen** (University of Copenhagen)

*Classifying and predicting inter-speaker differences in heritage language performance. A corpus-statistical approach* | p. [19](#)

16:30-17:00

**Break**

17:00-17:30

**Yuhyeon Seo** (Purdue University) (online)

*Bayesian approach to analyzing individual acoustic-phonetic variability in heritage speakers* | p. [20](#)

17:30-18:00

**Figen Karaca** (Centre for Language Studies, Radboud University), **Susanne Brouwer** (Centre for Language Studies, Radboud University), **Sharon Unsworth** (Centre for Language Studies, Radboud University) and **Falk Huettig** (Max Planck Institute for Psycholinguistics & Centre for Language Studies, Radboud University)

*Predictive use of case-marking cues in child heritage speakers of Turkish* | p. [21](#)

18:00-18:30

*Interim sum-up by Rapporteurs*



## Thursday, 28 September

9:00-9:30 *Opening*

9:30-10:00

**Aleksandra Tomic** (University of Tromsø), **Yulia Rodina** (University of Tromsø), **Fatih Bayram** (UiT The Arctic University of Norway) and **Cecile Decat** (University of Leeds)

*Individual variation in heritage language morphosyntactic processing: Causal modeling of sensitivity to clitic placement in Bosnian and Serbian in Norway* | p. [21](#)

10:00-12:00

**Poster session**

12:00-13:30

**Lunch break**

### Session C: Baselines and Variations

13:30 - 14:00

**Divyanshi Shaktawat** (University of Glasgow) (online)

*The effect of Age of Entry, Length of Residence and Contact on the Backward Transfer of Glaswegian English (L2) on Hindi and Indian English (L1)* | p. [22](#)

14:00-14:30

**Irati Hurtado** (University of Illinois, Urbana-Champaign) (online)

*New Insights into the Relationship between Heritage Speakers' Linguistic Innovations and Diachronic Language Change* | p. [23](#)

14:30-15:00

**Gemma Repiso-Puigdelliura** (McMaster University) and **Katrina Blong** (Universitat Pompeu Fabra) (online)

*Exploring the role of input in the production of VOT in English as a heritage language* | p. [23](#)

15:00-15:30

**Liliana Correia** (University of Minho), **Cristina Flores** (University of Minho), **Carina Eira** (University of Minho) **and Maria Lobo** (Universidade NOVA de Lisboa)

*How do cumulative input and input richness modulate heritage language development? A study with child heritage speakers of European Portuguese* | p. 24

15:30-16:00

**Break**

16:00-16:30

**Stefanie Schröter** (TU Dortmund)

*Subject expression in Turkish heritage language narratives: Exploring inter- and intragenerational variation* | p. 25

16:30-17:00

**Serkan Uygun** (Bahçeşehir University)

*Optional subject-verb agreement in Turkish heritage speakers* | p. 26

17:00-18:00

**Keynote 3 - Jason Rothman** (The Arctic University of Norway)

*Individual differences in Heritage Language bilingualism research are not random, but are rather illustrative* | p. 26

18:00-18:30 *Closing*

Thursday, 28 September

10:00-12:00

## Poster Session

### Contributions by RUEG

**Clara Fridman** (Bar-Ilan University), **Onur Özsoy** (ZAS), **Nisa Büyükyıldırım** (ZAS), **Mariya Burbelko** (ZAS), **Prabhjot Multani** (ZAS)

*Sentiments towards Heritage Languages in Research*

**Annika Labrenz, Yeşim Bayram and Heike Wiese** (all Humboldt-Universität zu Berlin)

*Emoji as graphic discourse markers: a cross-linguistic study*

**Marlene Boettcher** (Kiel University), **Annika Labrenz** (Humboldt-Universität zu Berlin), **Franziska Groth** (Humboldt-Universität zu Berlin), **Kateryna Iefremenko** (University of Potsdam) and **Kalliopi Katsika** (University of Kaiserslautern)

*Using discourse markers and filler particles to mark discourse boundaries: a corpus study across speaker groups and communicative situations*

**Onur Özsoy** (ZAS), **Kateryna Iefremenko** (University of Potsdam), **Nisa Büyükyıldırım** (ZAS), **Christoph Schroeder** (University of Potsdam) and **Natalia Gagarina** (Humboldt-Universität zu Berlin, ZAS)

*Accusative and dative case alternations in heritage and majority Turkishes*

**Vasiliki Rizou** (Humboldt-Universität zu Berlin), **Maria Martynova** (Humboldt-Universität zu Berlin), **Onur Özsoy** (ZAS), **Luka Szucsich** (Humboldt-Universität zu Berlin), **Artemis Alexiadou** (Humboldt-Universität zu Berlin, ZAS) and **Natalia Gagarina** (Humboldt-Universität zu Berlin, ZAS)

*Is it over yet? Verbal aspect in heritage Greek, Russian and Turkish*

**Heike Wiese** (Humboldt-Universität zu Berlin)

*What is special about heritage languages?*

**Sabine Zerbian** (University of Stuttgart), **Martin Klotz** (Humboldt-Universität zu Berlin) and **Yulia Zuban** (University of Stuttgart)

*Prosodically-annotated corpus of spontaneous narrations in mono- and heritage Russian*

**Yulia Zuban** (University of Stuttgart), **Tatiana Pashkova** (University of Kaiserslautern), **Erica Conti** (Humboldt-Universität zu Berlin), **H. Lee, Shanley Allen** (University of Kaiserslautern), **Oliver Bunk** (Humboldt-Universität zu Berlin) and **Sabine Zerbian** (University of Stuttgart)

*Left dislocation in contact: The case of Russian*

### External Contributions

**Norielle Adricula, Tvishi Yendamuri and Juanita Hurtado** (all University of Colorado Boulder)

*Examining the Role of Actor Discourse Accessibility in Tagalog-English Bilinguals' Sentence Choices*

**Nooshan Ashtari and Yixuan Ji** (both University of Southern California)

*Creating Reading Materials for Heritage Language Acquirers*

**Sara Andreatta** (University of Nova Gorica), **Matic Pavlič** (Faculty of Education, University of Ljubljana), **Penka Stateva** (Center for Cognitive Science of Language, University of Nova Gorica) and **Artur Stepanov** (Center for Cognitive Science of Language, University of Nova Gorica)

*Sentence comprehension in indigenous heritage speakers' communities compared to mainland baseline*

**Laia Arnaus** (University of Wuppertal) and **Amelia Jiménez-Gaspar** (Universitat de les Illes Balears)  
*Tapping into linguistic competence in early heritage language acquisition: the receptive vocabulary task as a measure for monolingual and bilingual baselines*

**Antigoni Bazani** (Independent Researcher)  
*Heritage Language Learners – Walking the Tightrope Between an “Ideal” Monolingualism and a Dynamic Plurilingualism*

**Kate Bellamy** (Leiden University)  
*Dialectology meets heritage languages: A systematic method for identifying appropriate baselines among P’urhepecha speakers*

**Olia Blacher, Bernhard Brehmer, Tatjana Kurbangulova, Chingiz Poletaev and Anastasiia Teniaev** (all University of Konstanz)  
*Variability in Case Government among Russian Heritage Speakers in Germany: Assessing the Impact of Language Contact Across Three Generations*

**Bernhard Brehmer** (University of Konstanz)  
*Apologies for my apology: Register variation in Russian and Polish heritage speakers in Germany – expressing apologies in the heritage language*

**Katharina Brizić** (University of Freiburg) and **Sara Fürstenau** (University of Hamburg)  
*Romani multilingual pedagogies*

**Yasmin Crombez** (Vrije Universiteit Brussel & Fonds Wetenschappelijk Onderzoek Vlaanderen)  
*Heritage languages of the past: Capturing sociolinguistic and pragmatic influences on 19th-20th century English – Belgian Dutch language contact*

**Rebekka Eckhaus** (International Christian University)  
*Do Bilingual Spanish-English Heritage-Speaker Siblings Follow Typical Spanish Heritage Speaker Patterns?*

**Eman El Sherbiny Ismail** (University of Potsdam)  
*Control and intimacy in multilingual families’ interaction*

**John Escalante Martinez and Jennifer Cabrelli** (both University of Illinois, Chicago)  
*The perception and production of Spanish lexical stress by Spanish heritage speakers*

**Orlyn Joyce Esquivel** (University of Hawai’i at Mānoa)  
*Context matters: Exploring language use among second-generation Ilokano Americans in Hawaii*

**Melissa Farasyn** (Ghent University / Research Foundation Flanders)  
*Capturing unusual left dislocation patterns in French Flemish in an annotated spoken corpus*

**Clara Fridman, Adina Livni, Sagit Bar On and Natalia Meir** (all Bar Ilan University)  
*Complex networks of language experience and lexical abilities of heritage and L2 speakers across the English-Hebrew language dyad*

**Bárbara Garrido** (University of Zurich)  
*Heritage language yes or not? A new proposal for border sociolinguistic profiles in Artigas (Uruguay)*

**Bhim Lal Gautam** (Central Department of Linguistics, Tribhuvan University)  
*Language contact in Kathmandu: A study of causes and impacts*

**Matthew Guay** (Ca Foscari University, Kyushu University)  
*"Some don't even know where south is!": Bounded Frames of Reference and Seasonal Terms in Ishigaki Southern Okinawa and their Disappearance among New Learners*

**Jan Heegård and Caroline Cecilie Kuhlmann** (both Department of Nordic Studies and Linguistics, University of Copenhagen)

*Different patterns of gender agreement in the varieties of Heritage Danish*

**Marie-Louise van Heukelum** (Stellenbosch University) **and Theresa Biberauer** (University of Cambridge; Stellenbosch University; University of the Western Cape; Universiteit Leuven)

*From a “yes-bias” to a “no-bias”: The role of prescriptivism in determining variability in bilinguals’ judgements of structures in their L1*

**Nadine Kolb** (UiT The Arctic University of Norway & University of Stavanger), **Merete Anderssen** (UiT The Arctic University of Norway) **and Jason Rothman** (UiT The Arctic University of Norway)

*Syrian Arabic as a Heritage Language in Germany*

**Karoline Kühl** (Europa-Universität Flensburg), **Jacob Thøgersen** (University of Copenhagen) **and Gert Foget Hansen** (University of Copenhagen)

*Operationalizing the variation in proficiency of immigrant and heritage speakers*

**Sin Yee Melody Li** (National University of Singapore)

*Comparison between Cantonese Classifier Use by Singaporean and Hong Kong Speakers*

**Felicity Meakins and Bodean Sloan** (both University of Queensland)

*Intergenerational variation among Gurindji people: Comparing apparent-time & real-time data*

**Brechje van Osch** (Arctic University of Norway (UiT)), **Janet Grijzenhout** (Leiden University), **M. Carmen Parafita Couto** (Leiden University) **and Deniz Tat** (Leiden University)

*Gender assignment strategies in Dutch-Turkish code-switching: individual differences and task effects*

**Brechje van Osch (Arctic University of Norway (UiT)), Jason Rothman** (Arctic University of Norway (UiT)) **and Terje Lohndal** (Norwegian University of Science and Technology)

*Cross-generation attrition and cross-linguistic influence determining the interpretation and online processing of gender in Spanish pre-teenage heritage speakers*

**Stéphanie Papin** (Universidad Rey Juan Carlos)

*Circumstances Experienced by Children of Deaf Adults (CODAs) that Explain their Diversity in Language Proficiency in Spain*

**Clare Patterson** (University of Cologne), **Petra Schumacher** (University of Cologne) **and Irina Sekerina** (City University New York)

*Individual proficiency differences in L2 and heritage speakers’ pronoun interpretations*

**Tatiana Perevozchikova, Nelly Sagirov and Claudia Duttlinger** (all University of Tübingen)

*Inter-item and inter-speaker variability in heritage speakers’ C-test performance*

**Samantha Pérez Rodríguez** (Vrije Universiteit Brussel)

*Coda /s/ production in Spanish as a heritage language: A exploratory study of Andalusian Spanish in Brussels*

**Marta Lupica Spagnolo** (University of Potsdam)

*‘Ciao, tutto a posto, how are you?’: domains of use and code-switching in Italian-based multilingual practices in a Berlin park*

**Treysi Terziyan and Ad Backus** (both Tilburg University)

*Use of postverbal elements in Turkish by monolingual and bilingual children*

**Ekaterina Tiulkova, Vanda Marijanovic and Barbara Köpke** (all University of Toulouse 2, LNPL)

*Individual differences in Heritage Russian development in France*

**Tugba Elif Toprak-Yildiz** (University of Hamburg & Izmir Democracy University)

*A Systematic Literature Review of the Heritage Language Research: Past, Present and Future*

**Vladislava Warditz** (University of Potsdam/ University of Cologne)

*The ORD (One Speaker's Day) method in a multilingual context of migration: New perspectives in heritage languages' documentation*

**Joanna Wrzesień-Kwiatkowska** (JGU Mainz)

*How language awareness is (un)utilized in heritage language classes*

**Mehmet Yavas and Michele Suner** (both Florida International University)

*Production of Spanish laterals in early sequential Spanish-English bilinguals*

# Abstracts

## Session A: Speaker Repertoires & Intra-individual Variability

**Anna Shadrova** (Humboldt-Universität zu Berlin)

### *Speaker Repertoires and Intra-Individual Variability*

Language is not a monolithic system that speakers once acquire and then apply to new situations for the rest of their lives. Rather, different communicative needs and power dynamics, but also different procedural constraints arise in different communicative situations. Speakers therefore develop different solutions for communicative problems. When those solutions stabilize and generalize to some degree, they can be thought of as repertoires or registers. But what exactly makes a repertoire or a register? Both concepts are tricky to define in theoretical terms and even more difficult to measure.

For instance, the RUEG elicitation has chosen four communicative situations as settings to represent modality and formality, and we find different intra-individual fluctuations depending on the research question and the language in question. But beyond these differences we also observe within-text fluctuations, and between-setting similarities. We find differences between monolingual and bilingual speakers in the majority language, sometimes by setting, sometimes within the same setting, and we find similarities between heritage and monolingual speakers. When we do find differences between groups, we are tempted to attribute them to different degrees of experience with a situation. But in reality, we cannot presume that speaker status (heritage, monolingual/majority, bilingual/majority) itself corresponds to categories of experience with a given communicative situation -- it is perfectly plausible that some of our monolingual speakers are not familiar with the context of elicitation, while some of the heritage speakers are.

In order to answer the question of what constitutes various speakers' repertoires, and how they differ, we need to be able to formulate functional and procedural hypotheses as to which factors might generate variability within a given situation -- otherwise we cannot be certain that the difference between two speakers within the same setting is not random. However, corpus data in particular does not neatly divide itself into categories of similarity and variability, but requires many modeling decisions that can overemphasize or obfuscate the very variability we are looking for.

Thus, the question of speaker repertoires and intra-individual variability is a methodological as much as a theoretical issue of heritage language research and beyond. At the heart of the debate lies the question: what constitutes meaningful variation, and how can we tell?

**Jeanine Treffers-Daller** (University of Reading)

### *Variability in multiword units in the speech of Turkish-German heritage speakers and returnees*

In this paper I analyse variability in switches and borrowings of Multiword Units (MWUs) in Turkish-German bilingual data collected among heritage speakers and returnees, with the aim to test the Simple View of Borrowing and Code-switching (Treffers-Daller in press). Under this view, the distinction between borrowing and code-switching is seen as a specific instantiation of the distinction between what belongs in the lexicon (fixed, arbitrary patterns) and what is computed online (productive rules), and should therefore be considered as part of the grammar. While according to Poplack (2018), single words tend to be borrowings, but "multiword stretches" are code-switches, recent work in Second Language Acquisition (e.g. Wood, 2020) compels us to revisit this distinction. In the current paper, German MWUs in Turkish utterances and Turkish MWUs in German utterances are analysed with Mutual Information (MI) scores to establish to what extent they can be seen as borrowings, that is elements that are listed in the lexicon. The MI scores of many MWUs were found to be above 3, which is the cut off point for formulaicity in Corpus Linguistics. This means that under the Simple View, these best seen as borrowings. Interestingly the MWUs were more likely to be borrowed than single words in this data set, which is unexpected under Poplack's view, but confirms earlier findings of Backus (2003). The morphosyntactic integration patterns were found to be highly variable, making this criterion less useful for determining the status of MWUs as borrowings or code-switches.

The data consist of bilingual utterances from the TuGeBic Turkish-German bilingual corpus, which consists of 87,000 words transcribed in CHAT format. The frequency of switches/borrowings in either direction, and their morphosyntactic integration patterns were analysed with CLAN.

I conclude by explaining that the Simple View can offer a new approach to the borrowing of lexical items (including function words), and how it can open a new avenue for research using neuroscientific methods to test whether items are listed in speakers' mental lexicons.

## References

- Backus, A. (2003). Units in code switching: Evidence for multimorphemic elements in the lexicon. *Linguistics* 41(1), 83-132.
- Poplack, S. (2018). *Borrowing. Loanwords in the Speech Community and in the Grammar*. New York: Oxford University Press.
- Treffers-Daller, J. (in press). The Simple View of borrowing and code-switching. *International Journal of Bilingualism*.
- Treffers-Daller, J. & Çetinoğlu, Ö. (2022). TuGeBiC: A Turkish German Bilingual Code-Switching Corpus. <https://doi.org/10.48550/arXiv.2205.00868>.
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### **Birger Schnoor** (University of Hamburg) and **Irina Usanova** (University of Hamburg) *Factors influencing multilingual writing skills in multilingual adolescents in Germany*

The rapid cultural, social, and technological change is altering the requirements for basic cultural skills. Particularly affected are literacy skills as the key to perhaps the most crucial social resource - education (Parveva 2017). In educational research, the concept of multiliteracies (New London Group, 1996) has evolved in order to capture ways of including the multitude of competences that converge to literacy in an increasingly diverse world. This complex view of literacy as multiliteracies (New London Group, 1996) urged the development of new theoretical perspectives on multilingual writing as a synthesized competence, including all languages in a person's repertoire (Canagarajah, 2015), and their empirical modelling (Usanova & Schnoor, 2022). The growing body of research on multilingual writing provides evidence for the interrelated nature of multilingual writing skills within multilingual repertoires (Payant, 2020; Schnoor & Usanova, 2022; Schoonen et al., 2011; Soltero-González et al.; Sparrow et al., 2014; Riehl, 2021; Usanova & Schnoor, 2021). However, little is known about factors influencing the successful development of multilingual writing skills in multilingual repertoires. Among all, studies investigating factors influencing the development of writing in heritage languages remain severely underrepresented (Böhmer, 2015; Usanova, 2019). As suggested by numerous studies on the positive interrelation between the languages, all languages need to be considered to be able to judge on the prerequisites of the successful development of multilingual writing competence. Our study investigates the factors influencing the development of multilingual writing skills in secondary students in Germany. We draw on data derived from the German panel study "Multilingual Development: A Longitudinal Perspective" (MEZ) on writing skills of multilingual students in three different languages: the majority language (German), heritage languages of migrants in Germany (Russian or Turkish) and the first foreign language all children learn at school (English) and four waves of data collection. By converting the MEZ sample into a long format (i.e., considering all waves simultaneously) and conducting fixed-effects panel path modelling, we analyzed the factors influencing multilingual writing skills in German-Russian (n = 996) and German-Turkish (n = 1832) secondary students. Our findings indicate that contextual factors have both similar and differential roles in the development of writing skills in the investigated languages. Thus, students' cognitive ability, school type, and positive reading self-concept have shown a similar influence on students' writing skills in three languages. At the same time, factors that have shown an impact on the development of heritage language skills specifically involve students' identification with heritage context, language use within a family, and mothers' literacy skills in the heritage language. Thus, the findings show that while the key factors that drive the development of writing skills in all languages in a multilingual repertoire are similar, the development of writing skills in a heritage language has its unique prerequisites additionally.

### **Kristin Melum Eide** (NTNU) and **Arnstein Hjelde** (Østfold University College) *Intra-speaker variation in North-American Heritage Norwegian (NorNAHL): Input and baseline(s)*

Emerging scientific theorizing often requires idealization, but a healthy developing framework is the capacity to gradually cope with diversification. The old monolingual bias is replaced by theories catering to a multilingual reality, and currently we observe a shift from the stable, invariant native baseline speaker to investigations of natural intra-individual variation - "the aggregate of millions of linguistic microcosms" constituting the linguistic diversity found within a speaker (Martinet 1953).



Specific types of intraindividual variation are often considered as flaws, typical of less stable variants (interlanguages of L2/Ln speakers and heritage speakers; cf. e.g. Pfenniger and Kliesch 2022); other types of variation are seen as a resource, e.g. the domain of registers and context-dependent variation.

Amaral and Roeper (2014: 53) claim that “[H]eritage and L2 grammars are frequently described as ill-conceived versions of [...] artificial gold standards based on idealized L1 [...] monolingual grammars [...]” This is evident in many recent studies (cf. survey in Dabrowska, Becker & Miorelli 2020) where considerable overlap is observed between L1 and L2 speakers’ performance on tasks tapping morphosyntactic knowledge. In acquisition and maintenance of registers and contextually constrained morphosyntactic features, these are seen as vulnerable in language contact (cf. e.g. the interface hypothesis, Sorace 2011) because the amount of input needed to learn contextual restrictions on specific forms is unavailable here.

In this talk we present a data set drawing on an extensive corpus of recordings of North American Norwegian Heritage Language (NorNAHL) in the Upper Midwest collected over a time span of more than 80 years, from Einar Haugen’s recordings in the 1940s up to the present-day CANS corpus. In addition, we have detailed records of the various sources of written Norwegian widely used in this heritage community. The linguistic and sociological records provide an unprecedented opportunity to study how a minority language changes over generations in a language contact situation. These records allow us to study the amount and types of variation in morphosyntactic traits across cohorts, responding to the gradually shrinking supply of register variation in the input and addressing what linguistic levels are more prone to variation.

We present a model depicting differing input contexts, utilizing the distinction between receptive and productive repertoires to address input/intake relations to production, accommodation, age grading, and linguistic change. In this model differences between speakers of Heritage Languages and other native speakers are naturally minimized, as the linguistic biography of any language user will be idiosyncratic.

In Polinsky and Scontras (2019) the baseline is “the monolingual standard of comparison”, and also the language serving as “the input of acquisition”. These are clearly two different things in the case of NorNAHL. Ever since Haugens’s own studies, the standard of comparison has been an idealized version of contemporary homeland Norwegian, whereas the input of acquisition was a lot more diversified: Though Norwegian immigrants from the same part of Norway tended to cluster in certain settlements and endogamy was wide-spread, the children growing up in these communities would always be exposed to the ever-present dialectal variation.

**Ioli Baroncini** (University of Mannheim)

### *Metalinguistic knowledge can affect priming across languages in heritage language children*

Cross-linguistic influence has been tested through acceptability ratings to investigate the tolerance of ungrammaticality in heritage language speakers [1]. Moreover, there is evidence that the exposure to a fully grammatical structure in one language facilitates the production and/or comprehension of the equivalent, but ungrammatical structure in the other language [2,3]. This mechanism is similar to that involved during priming, i.e., the speakers’ tendency to reproduce a structure that they have previously been exposed to [4].

This study explores whether the acceptability rate of a dispreferred structure in the heritage language (HL), modulates priming within- and across-languages. We tested a group of Italian HL children with Greek as their Societal Language (SL), focusing on a structure available in the SL (Greek), but dispreferred in the HL (Italian), namely verb-subject-object (VSO) word-order.

We tested 36 HL children (7;5-11;10, M: 9;5) attending an Italian immersion school in Greece. They were simultaneous or sequential bilinguals (AoO between 0 and 4), and they were relatively balanced between Greek and Italian (based on a background questionnaire and a Vocabulary Test).

We tested grammatical acceptability by using a forced-choice task in Italian. Children were asked to choose the structure that better describes a certain picture. They had to choose between SVO/VSO sentences, along with grammatical/ungrammatical sentences, (e.g., S-V agreement mismatch), and explain their choice. The task included 10 SVO/VSO sentences and 20 fillers.

Afterwards, we conducted a within-language (Italian-to-Italian) and an across-languages (Greek-to-Italian) priming experiment. Children were asked to look at a picture, listen to a prime sentence, repeat it, and then describe a new picture (Figure 1). Primes were VSOs or SVOs and were either in Italian or in Greek (according to the task). Each task targeted the production of 40 sentences in Italian, 20 preceded by an SVO-prime and 20 by a VSO-prime.

We fit a generalized-linear mixed model of the probability of producing VSOs as an effect of prime (SVO vs. VSO), task (Italian-to-Italian vs. Greek-to-Italian) and the acceptability rate of VSOs in Italian. Children produced more VSOs after VSO-primers in each task ( $\beta=1.72$ ,  $SE(\beta)=.55$ ,  $z=3.14$ ,  $p<0.01$ ), and VSOs were mostly produced in the Greek-to-Italian task ( $\beta=2.26$ ,  $SE(\beta)=.51$ ,  $z=4.47$ ,  $p<0.001$ ). Moreover, children produced more VSOs in the Greek-to-Italian task the more they accepted them in Italian ( $\beta=.07$ ,  $SE(\beta)=.29$ ,  $z=2.46$ ,  $p<0.05$ ); Figure 2.

To conclude, the acceptance of a dispreferred structure in the HL (Italian) per se, does not modulate within-language priming (Italian-to-Italian), it is crucial only when the SL (Greek) in which this structure is available is activated. This is in line with an account of cross-linguistic influence in terms of activation not only of a syntactic structure, but also of a language in a bilingual's processing system. Overall, this study shows that explicit knowledge, measured by the forced-choice task, affects the implicit mechanisms underlying priming. In addition, we suggest that formal instruction enhances the awareness of a given structure, influencing its acceptability. Therefore, such an explicit knowledge, boosted by education, could modulate priming as well as processing more in general.

## Session B: Methodological Advances

**Irina Sekerina** (The City University of New York)

### ***How corpus and experimental studies of heritage languages can inform each other***

Knowledge about heritage language (HL) grammars is dependent on a large amount of (psycho)linguistic resources of three types (Keuleers & Morielli, 2020): (1) corpora that contain objective data about properties of HLs, (2) behavioral experiments that rely on design and stimuli provided by researchers; and (3) abstract concepts, such theories, formalisms, and algorithms. In this talk, I will describe methodological advances in how these resources form a dynamic system in the field of HL bilingualism. I will illustrate (1) with our new Brazilian Portuguese-Russian corpus (*BraPoRus*, Sekerina et al., 2023) of elderly bilingual heritage Russian speakers living in Brazil and compare it to RUEG (Emerging Grammars in Language Contact Situations), and (2) with the eye-tracking experiments in the Visual World Paradigm that can be conducted with heritage speakers in-person and online (eye-tracking without an eye tracker, Özsoy et al., 2023). I will conclude that both types of resources are suitable and necessary to study heritage speakers' grammars.

**Anamaria Bentea** (University of Konstanz) and **Theodoros Marinis** (University of Konstanz)

### ***Syntactic Processing in Child Heritage Language Bilinguals: An Eye-tracking Study with Which-questions in Romanian***

Although experimental research on adult Heritage Speakers/HSs has demonstrated that they are highly heterogeneous in terms of Heritage Language/HL acquisition outcomes and typically diverge from monolinguals in their first language, most of these studies assessed the HL in offline comprehension and production [1-5] and very few studies have explored real-time morphosyntactic processing in child HSs [6].

This study focuses on the processing of which-questions in the HL of early bilinguals and aims to understand whether a. online processing and offline accuracy patterns in child HSs are congruent with those in child monolingual speakers; b. child HSs make use of morphosyntactic information to incrementally interpret sentences during HL processing; and c. the presence/absence of similar properties in the dominant societal language modulates access to morphosyntactic cues in the HL. In a webcam-based visual-world eye-tracking experiment, we compare the real-time processing of subject and object which-questions in 24 child HSs of Romanian with German as second language (L2) and 30 Romanian monolingually-raised children (6-to10yo). Wh-dependencies in Romanian present morphosyntactic properties that lend themselves well to assessing the use of grammatical cues for processing: a Differential Object Marker/DOM, *pe*, precedes the object wh-phrase and thus indicates an object interpretation; additionally, number agreement on the verb distinguishes between a subject and object interpretation. The choice of German as L2 is motivated by the grammatical cues that which-questions in German provide compared to Romanian to disambiguate between a subject and an object reading: (i) case marking on the wh-word and the article of the second noun (singular masculine determiners in German are overtly marked for nominative and accusative case) and (ii) number agreement on the verb. We therefore investigate whether number agreement (present in both HL and L2) represents a stronger cue for HSs in disambiguating between subject and object which-questions during real-time processing, than DOM only (present in HL, but not in L2).

Participants saw a pair of pictures on a screen (Fig. 1). While looking at the pictures, they heard a subject or an object which-question (ex. 1-4) and were asked to choose the picture matching the question. Eye-movements and offline responses were recorded. Offline results revealed significantly better performance with subject-questions ( $p < .001$ ) and an effect of age ( $p < .01$ ) in both groups, as well as no significant difference in accuracy between the two groups for the comprehension of object which-questions. Online results (Fig. 2) showed overall similar processing patterns in the monolingually-raised and Romanian child HSs, as well as faster looks to Target in object-questions disambiguated through case only for the HS children compared to the monolingually-raised children.

The data indicate that, as a group, Romanian child HSs use morphosyntactic cues for online processing and they do not exhibit a delay in processing time-course and timing of effects relative to monolingual L1 processing. In discussing the results we will also delve into the issue of variability among HSs by assessing how the quantity and quality of exposure to the HL (as measured through the Q-Bex questionnaire) impacts on the heritage children's processing patterns.

**Karoline Kühl** (University of Flensburg), **Jacob Thøgersen** (University of Copenhagen), **Jan Heegård Petersen** (University of Copenhagen) and **Gert Foget Hansen** (University of Copenhagen)  
*Classifying and predicting inter-speaker differences in heritage language performance. A corpus-statistical approach*

In this paper we present a test of a so far unexplored combination of corpuslinguistic and statistical methods in order to predict language maintenance and attrition in heritage language speakers' speech production. This is motivated by the potential shortcoming in those studies of heritage language which have treated developments in heritage speakers' linguistic performance as a unidimensional process in which, e.g., vocabulary and speaking rates are seen as two sides of the same coin: "More proficient speakers seem to have less of a problem with lexical access and general construction of the clause. This in turn accounts for a faster speech rate. Speakers who are less proficient are naturally hindered in their lexical access, which slows down their utterance" (Polinsky 2008: 20).

We challenge the assumption that speech performance is a unidimensional phenomenon, and question whether, e.g., some speakers may be highly fluent with a limited vocabulary or vice versa. Secondly, we test what socio-biographical backgrounds such as age, gender and involvement in a heritage community best predict the performance of individual speaker on different dimensions of speech production.

We approach variation in linguistic performance through a corpus study of 337 heritage and immigrant speakers of Danish in North and South America (the 'Corpus of American Danish', containing approx. 1.3 million tokens) (Kühl, Heegård Petersen & Hansen 2019). Data were collected through sociolinguistic interviews, and the linguistic performance of each speaker was measured on 13 quantitative measures (e.g., speech rate, the number of Danish and majority language words, type-token ratio and the ratio of sub-clauses to main clauses).

The novel analysis consists of a two-step statistical approach: We first apply Factor Analysis/PCA to explore which of the 13 performance variables behave more similar to each other. Preliminary analyses point towards four underlying factors, i.e. (a) lexicon, (b) structural complexity, (c) utterance planning and (d) fluency (see Heegård Petersen et al. 2018, also Kühl, Thøgersen & Hansen's proposed paper for the RUEG2023). We expand on this, by adding a second step in which we apply Multiple Regression analysis to explore which biographical and social factors best predict an individual speaker's performance in the various dimensions identified by the Factor Analysis. Preliminary analyses indicate that performance in the different dimensions may correlate with different socio-biographical factors, e.g., age group may be a predictor of fluency, but not of lexicon. Other biographical factors include majority language, gender, immigrant vs. heritage speaker, involvement in minority group networks, etc.

The study shows that (i) Heritage speakers are not simply 'more' or 'less' proficient, but perform differently on different parameters, they may be fluent with a limited grammar and vocabulary or vice versa; (ii) it is (to some extent) possible to predict linguistic performance from socio-biographical information and thus different lived experiences – the variation is not random; (iii) speakers belonging to different groups perform differently. This leads us to conclude that the socio-cultural setting (both the minority language community and the majority society) play fundamental roles in the emergence of performance norms.

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**Yuhyeon Seo** (Purdue University)

### *Bayesian approach to analyzing individual acoustic-phonetic variability in heritage speakers*

Language produced by heritage speakers (HS) is characterized by a high degree of individual variability, as compared to other categories of bilingual speakers, not only in the morphosyntactic but also in the phonetic/phonological domains (Polinsky, 2018). A growing consensus in the scientific community indicates that by-subject intercepts and slopes (Baayen et al., 2008) need to be incorporated in the statistical modeling of heritage language to account for this variability. However, such complex statistical designs in the frequentist approach often lead to overfitting and convergence issues, forcing researchers to eliminate random slope effects, following the maximally allowed random effects structure approach (Bates et al., 2015).

This presentation discusses both the advantages and disadvantages of the Bayesian approach to the analysis of heritage language (HL), using a case study examining the production of Korean stop consonants. Productions by HSs of Korean residing in the US are compared to stops produced by Korean (L1)-immersed native speakers (L1-L speakers). Korean stops exhibit a three-way laryngeal distinction (lenis-fortis-aspirated), implemented via two acoustic parameters: onset  $f_0$  and voice onset time. Unlike in English, where the voicing contrast in stops is primarily cued by VOT, the similar Korean counterparts, lenis and aspirated stops, are primarily contrasted via onset  $f_0$ . The current study hypothesized that HSs would implement Korean laryngeal contrasts using VOT more and  $f_0$  less than L1-i speakers, due to HSs' extensive exposure to and dominance in English, while exhibiting more individual variability than L1-i speakers. To test this hypothesis, two Bayesian mixed-effects linear regression models were implemented with the dependent variables of onset  $f_0$  and VOT, respectively. These models included Group (L1-i vs. HS), Stop Type (aspirated-lenis-fortis), and their interaction, while also incorporating by-subject intercepts and slopes for Stop Type and by-word intercepts as random effects. This design enabled the model to predict not only group-averaged effects of Stop Type but also individual variability in the use of VOT and onset  $f_0$  by stop type in each group. These models converged successfully, and the results supported the hypothesis, demonstrating HSs' greater variability in the two acoustic parameters than L1-i speakers.

The presentation will focus primarily on describing the specific parameters of Bayesian model implementation and the model interpretation. The models adopted weakly informative priors for both intercepts and conditional effects, resulting in estimated coefficients approaching 0 unless the models detect sufficiently large effects, with priors having little influence on the posterior distributions (Albert & Hu, 2019; McElreath, 2020). The models were fitted using 4 Hamiltonian Markov Chain Monte Carlo (MCMC) chains to draw 4000 samples with 1000 warm-up iterations, using Stan (Carpenter et al., 2017) and the 'brm' package (Bürkner, 2017) in R (R Core Team, 2022). The study adopted 95% credible intervals for each estimate and reported the Probability of Direction (pd, Maximum Probability of Effect) to help readers familiar with the frequentist framework interpret the effects of the Bayesian models. The presentation will highlight Bayesian framework's exceptional utility for detecting individual variability in HL, as compared to the frequentist framework.

**Figen Karaca** (Centre for Language Studies, Radboud University), **Susanne Brouwer** (Centre for Language Studies, Radboud University), **Sharon Unsworth** (Centre for Language Studies, Radboud University) and **Falk Huettig** (Max Planck Institute for Psycholinguistics & Centre for Language Studies, Radboud University)

*Predictive use of case-marking cues in child heritage speakers of Turkish*

Research on predictive processing in monolinguals has shown that in languages with strict Subject-Verb-Object word order, listeners may use verb-semantics (e.g., eat) to predict an upcoming object (e.g., cake) (e.g., Altmann & Kamide, 1999), whereas in languages with flexible word order (e.g., Turkish) listeners may also generate predictions based on case-marking cues (e.g., Özge et al., 2019). Previous studies on bilingual predictive processing has mainly focused on adult L2 speakers (see Karaca et al., 2021 for a review). As a result, our understanding of prediction skills of bilingual speakers has almost exclusively been shaped by a certain group of bilinguals who have learnt an L2 later in life with a fully-fledged L1 system in place. Surprisingly little is known about predictive processing in heritage speakers, a bilingual group that is exposed to both languages in early childhood and whose two languages develop more or less in parallel (e.g., Fuchs, 2022; Parshina et al., 2022; Sekerina, 2015). To this end, the present study investigated to what extent child heritage speakers of Turkish use case-marking cues predictively in their heritage language.

In a visual world eye-tracking paradigm, 49 monolingual children (Mage=7;1, SD=0;5) and 30 Turkish-Dutch bilingual children (Mage=7;6, SD=1;1) listened to Turkish sentences in which case-marking on the first noun (NP1) (accusative, nominative) and the verb position (sentence-medial, sentence-final) were manipulated (e.g., Speedy rabbitACC/NOM soon there foxNOM/carrotACC eat vs. Speedy rabbitACC/NOM soon eat there foxNOM/carrotACC) while looking at a visual display with three pictures. The pictures represented the NP1, an agent and a patient (e.g., rabbit, fox, carrot) (Özge et al., 2019). In verb-final sentences, case-marking was the only predictive cue, whereas in verb-medial sentences, verb-semantics was also available. All heritage speakers were exposed to Dutch before the age of 4 (M=22 months).

Fixations to the agent versus patient pictures during the time window between NP1 and NP2 were analyzed using mixed effect logistic regression. The results showed a significant interaction between Time (in the predictive window), Condition (accusative vs. nominative), and Group (monolingual vs. heritage) in verb-final ( $\beta=-0.18$ ,  $SE=0.03$ ,  $z=-6.50$ ,  $p<.001$ ) and verb-medial sentences ( $\beta=-0.23$ ,  $SE=0.02$ ,  $z=-9.54$ ,  $p<.001$ ). When the prediction effect was examined separately in each group, a significant interaction between Time and Condition was found for both groups in the verb-final (monolingual:  $\beta=0.45$ ,  $SE=0.02$ ,  $z=28.20$ ,  $p<.001$ ; heritage:  $\beta=0.27$ ,  $SE=0.02$ ,  $z=11.97$ ,  $p<.001$ ) and in the verb-medial sentences (monolingual:  $\beta=0.41$ ,  $SE=0.14$ ,  $z=28.30$ ,  $p<.001$ ; heritage:  $\beta=0.18$ ,  $SE=0.02$ ,  $z=9.21$ ,  $p<.001$ ) (see Figure 1).

These results suggest that child heritage speakers of Turkish are able to use case-marking information, which is transparent and acquired early, in predictive processing in their heritage language under the influence of a non-case-marking language and with reduced experience in their heritage language. These findings provide evidence for the use of morphosyntactic cues in predictive processing of heritage speakers whose languages do not use the same type of cues.

**Aleksandra Tomic** (University of Tromsø), **Yulia Rodina** (University of Tromsø), **Fatih Bayram** (UiT The Arctic University of Norway) and **Cecile Decat** (University of Leeds)

*Individual variation in heritage language morphosyntactic processing: Causal modeling of sensitivity to clitic placement in Bosnian and Serbian in Norway*

Heritage language (HL) bilinguals often exhibit more variable morphosyntactic comprehension and production patterns than monolinguals (Scontras & Polinsky, 2019), likely due to exposure to more variable input, more restricted language experience, and processing pressures. To contribute to a more comprehensive picture of individual variation in HL representation and processing, we examine the effects of individual language experience on the processing of pronominal clitic order in Bosnian and Serbian heritage speakers (HSs) in Norway. Bosnian/Serbian pronominal clitics cluster after the first word/phrase in a clause in the so-called Wackernagel clitic-second position, with a potential for a long distance from verbs to which they serve as arguments in terms of phrase/word number. This movement might represent a processing challenge and/or could be under the influence of societal language (SL) with post-verbal object pronoun placement. Bilinguals and potential attriters of HLs with the same or related clitic placement in English-speaking environments produce or accept examples of post-verbal clitics in the marked third position (Serbian, Dimitrijević-Savić, 2008; Bulgarian; Ivanova-Sullivan et al., 2022).

In an ongoing online self-paced listening task, Bosnian- and Serbian-Norwegian HSs and potential attriters (n = 69) listened to sentences with fragments containing clitics in unmarked and marked positions. They also judged each sentence after its presentation on its well-formedness. In the unmarked target-like condition, the clitic was the second position in the unit, whereas in the marked non-target-like condition it was in the third position, with either a verb or adverb occupying the clitic position (Example 1). Sensitivity to clitic placement was confirmed by a pilot study with speakers in Bosnia: marked clitic order slowed listening times (in the target fragment only) and decreased acceptability judgments.

Participants in Norway also completed executive functioning and language proficiency tasks (Sentence Repetition, Verbal Fluency, LexTALE) and a newly developed comprehensive Heritage Language Questionnaire (HeLEx). Sensitivity to clitic placement was individually modulated by most of the variables of interest: age of immigration (cont.), HS status (categorical, HS if exposed to SL by age 13), SES, extent of multilingualism, self-rated proficiency in oracy and literacy, dominance, media experience in HL, community of HL and SL interlocutors, current amount of HL experience, cumulative HL and SL experience, quantity of code-switching, subjective ethnicity, formal education and literacy in HL. More (positive) HL experience leads to target fragments with the clitic in the marked third position being processed significantly slower and judged as sounding worse than the sentences with clitics in the unmarked position. The following step is a variable reduction and model selection procedure (predictive analysis) to find the model which best fits the data, and a causal inference analysis guided by the graph depicting all theorized causal relationships between the language experience variables and HL outcomes (Figure 2). The wealth of individual language background data and language data collected will enable us to provide an unprecedentedly detailed picture of how language experience variables shape the variability of HL representation and processing.

## Session C: Baselines and Variations

**Divyanshi Shaktawat** (Norwegian University of Science and Technology)

*The effect of Age of Entry, Length of Residence and Contact on the Backward Transfer of Glaswegian English (L2) on Hindi and Indian English (L1)*

In previous research, among other approaches, changes in the phonology of the L1 due to the influence of another linguistic variety have been examined from two perspectives. First, phonetic backward transfer or L1 phonetic attrition/drift which examines the influence of L2 on L1 (Chang, 2013; Kartushina et al., 2016; Schmid & Köpke, 2019). Second, L1 phonetic accommodation or convergence, which examines the influence of another dialect (D2) on the first (D1) (Pardo et al., 2022). However, a situation of language contact that has not been examined before is when a speaker is native in two languages (simultaneous bilingualism) and is exposed to a new linguistic variety that simultaneously acts not only as a new language, but also as a new dialect with respect to the bilinguals' previously and simultaneously acquired native languages.

Such is the nature of the experimental group in this study which consists of the ethnolinguistic minority of first-generation bilingual immigrant Indians in Glasgow (UK) 'Glaswasians' (Alam, 2006). Glaswasians present a situation of contact between their native language Hindi, native dialect Indian English, and the dominant host language and dialect Glaswegian English. Thus, the present study examines whether and how a host dominant variety (Glaswegian English), which is both a new dialect (with respect to Indian English) and a new language (with respect to Hindi) influences the sounds of these native varieties. This is depicted in Figure 1.

This was investigated in relation to Flege's Speech Learning Model (1995; also SLM-r, 2021), which posits that bilinguals' languages interact and influence each other in a shared phonetic space. Over time, sound categories in this shared space may undergo assimilation, dissimilation, or they may remain independent of each other. Assimilation relates to the L1 sound becoming more like the similar L2 sound or being completely replaced by it. Dissimilation relates to the creation of a separate L2 sound category when the two similar L1 and L2 sound categories drift away from each.

Age of Entry (AoE) and Length of Residence (LoR) in Glasgow, along with the amount of Indian Contact were also examined. Two control groups (Indians and Glaswegians) and the experimental group (Glaswasians) were recorded reading in English and Hindi words containing two phones (/t/ - VOT, /l/- F2-F1 difference). In both languages, Glaswasian VOT became more Glaswegian-like (assimilation), whereas F2-F1 difference diverged to an even greater degree than the Indians (dissimilation). Increasing AoE and Indian Contact decreased assimilation of /t/ or increased dissimilation of /l/. Increasing LoR increased assimilation of /t/ and decreased dissimilation of /l/.

This paper demonstrates cross-linguistic backward transfer in a simultaneously bilingual and bidialectal situation. In comparing transfer effects between languages and dialects, it adds to our understanding of contact between multiple linguistic varieties that are, comparatively, linguistically proximate as well as distant.

**Irati Hurtado** (University of Illinois, Urbana-Champaign)

***New Insights into the Relationship between Heritage Speakers' Linguistic Innovations and Diachronic Language Change***

Recent research on heritage languages has found that the linguistic innovations exhibited by heritage speakers often mirror processes of diachronic language change, although in these speakers, changes would take place at a faster pace (Kupisch & Polinsky, 2022). The present study examines this hypothesis from a psycholinguistic perspective, while jointly accounting for potential differences between processes of language comprehension and language production. This latter was done to control for task effects, which have been attested in previous psycholinguistic studies investigating language change at the individual level (Arechabaleta & Montrul, 2021; Lundquist et al., 2016).

Specifically, the study tested a group of heritage speakers of Spanish in the U.S. (N = 40) and a group of monolingually-raised Spanish speakers (N = 35), who completed four tasks: an AJT, an oral production task with priming, an oral elicited production task, and a narrative task. These tasks were designed to examine comprehension and production of a linguistic innovation in Spanish: accusative clitic doubling with postverbal DPs (Juan la vio a la niña, 'Juan saw her the girl'). This structure was chosen because 1) it represents an established use in some varieties (e.g., Rioplatense Spanish), 2) it does not have a parallel in English (the heritage speakers' majority language), disallowing any cross-linguistic influence, 3) the speakers tested had not had extensive exposure to it, due to them speaking mostly Mexican or Peninsular Spanish. Additionally, participants also completed a Spanish fluency task and a Spanish language use questionnaire to control for individual variation.

Drawing from previous findings, it was predicted that heritage speakers would be more open towards accepting and producing the linguistic innovation than monolingually-raised speakers. Likewise, it was predicted that there would be differences between the four tasks, with the linguistic innovation being more widely adopted in tasks that involved comprehension than production. Lastly, it was predicted that participants with higher fluency and use of Spanish would be more reluctant to adopt the linguistic innovation.

Data was coded and analyzed using generalized mixed models (logistic and linear models, depending on the question). Results showed that when looking at the data overall, the predictions were confirmed: heritage speakers were more eager to adopt the linguistic innovation than monolingually-raised speakers, and they did so more often in the AJT and in the oral production task with priming (the only tasks that involved exposure to the linguistic innovation). Likewise, frequency of Spanish use could explain some of the results. However, individual data analyses revealed that there was not a clear pattern that could explain heritage speakers' performance, since participants who accepted the innovative construction in the AJT were not the same as the ones who produced it during the oral production tasks, and vice versa. I argue that this variability could be related to the cognitive processes which were at play in each type of task. In turn, this underscores the importance of controlling for cognitive differences when studying language variation in heritage speakers, as some scholars have already proposed (Paradis, 2023).

**Gemma Repiso-Puigdelliuira** (McMaster University) and **Katrina Blong** (Universitat Pompeu Fabra)

***Exploring the role of input in the production of VOT in English as a heritage language***

A prominent debate in heritage language acquisition studies is whether the patterns observed in mature heritage language grammars (e.g., cross-linguistic transfer, output variation, absence of certain structural properties) are a result of dual language input or grammar interaction resulting in divergent attainment (Scontras et al., 2015) or whether they reflect the patterns that heritage speakers encounter in their input (Pires & Rothman, 2009; Rothman, 2007). Recent studies in the morphosyntactic domain provide competing evidence for both views (Coskun Kunduz & Montrul, 2022; Daskalaki et al., 2020). To our knowledge, no studies have directly compared child heritage speakers to their caregivers in the phonetics and phonology domain.

In this study, our aim is to examine the impact of parental input, along with measures of input and output quantity, as well as lexical proficiency, on the speech production of English-speaking children who are raised by one or two English-speaking caregivers and learn Spanish and Catalan as the majority language. We will compare their speech production to that of their main English language input providers. Specifically, we analyze the production of Voice Onset Time (i.e., VOT) in voiceless plosives. Spanish and Catalan voiceless stops are unaspirated and produced with short-lag VOT (i.e., shorter than 30 ms), while English word-initial voiceless stops are aspirated and have long-lag VOTs (i.e., 30 ms or longer) (Flege & Eefting, 1986; Read et al., 1992). We expect VOT, thus, to increase with the amount of input and output to English, as well as with lexical proficiency.

Approximately 20 child English HSs (age range = 4;0 - 8;0) raised in a Spanish-Catalan-speaking community (i.e., Barcelona) and exposed to English by either L1 English speakers or L2 English speakers completed a series of tasks individually and with their English-speaking caregiver. To elicit semi-spontaneous speech, we designed a version of the 'Who is who' game containing 8 stressed /pɛ/, /pʌ/ and /pɪ/ in the initial syllable (e.g., pumpkin ['pʰʌmpkɪn], pencil ['pʰɛnsəl], pillow ['pʰɪləʊ]). The child HSs were recorded using the app ShurePlusMotiv®. VOTs were obtained from the waveform displayed in Praat (Boersma & Weenink, 2020) and manually segmented. A background was administered to the children's caregivers and children completed the Peabody Picture Vocabulary Test (Dunn, 1959).

Data from 7 children (i.e., 6 families) has been preliminarily analyzed with a linear mixed effects model with the fixed factors of age, quantity of input, lexical proficiency, and quality of input (i.e., mean VOT of the principal source of English input). The intercepts for participant and word were allowed to vary. The model shows a significant effect of quantity of input ( $\beta = 0.81$ , SE = 0.29,  $t = 2.69$ ,  $p = 0.008$ ) and quality of input ( $\beta = 0.89$ , SE = 0.39,  $t = 2.27$ ,  $p = 0.02$ ), indicating that the higher the amount of input and the longer mean of the caregiver's VOT, the longer the child's VOT. Our findings suggest that both the amount of exposure to the HL and the type of input influence the production of phonetic detail.

**Liliana Correia** (University of Minho), **Cristina Flores** (University of Minho), **Carina Eira** (University of Minho) and **Maria Lobo** (Universidade NOVA de Lisboa)

#### *How do cumulative input and input richness modulate heritage language development? A study with child heritage speakers of European Portuguese*

It is by now a well-established fact in heritage language (HL) research that HL development is characterized by high degrees of individual variation, which lead to differential outcomes in linguistic competences (Paradis, 2023). One important dimension that contributes to this variability is related with heterogeneous language experiences of bilingual children, particularly affecting the HL. The present study investigates the effects of different input variables on child heritage speakers' (HS) grammatical competence by analysing the results of a Sentence Repetition Task (SRT) in European Portuguese (EP), applied to two groups of child HSs: a group living in Germany, with German as societal language; and a group living in France, with French as societal language.

SRTs have proven to be useful tools in the evaluation of the grammatical knowledge of monolingual and bilingual children (Authors, submitted; Marinis & Armon-Lotem 2015). In previous research, we have shown that a SRT developed for EP captures outcome differences between 43 monolingual children living in Portugal and 25 heritage children living in Germany (aged 6 to 10 years), which are modulated by age, different levels of complexity of the tested structures and, in the bilingual group, by the input variable 'richness of HL input'. The input variables were coded by means of a detailed background questionnaire filled out by the caregivers.

This study extends this research to a second group of EP HSs of the same age: 31 Portuguese-descendant children living in France, who have quantitatively less (and less rich) input than their EP-German peers. We ask whether: (1) the three child groups perform differently in the SRT task; (2) potential differences between EP-German and EP-French bilinguals may be modulated by either the type of majority language (French vs. German) or by language experience independently of the majority language. The extra-linguistic variables included in the analyses were 'current age', 'cumulative amount of input' (measured through the number of family members speaking EP with the child + the frequency of EP use by each member + measurement over the child's lifetime) and 'input richness' (measured through the number of different activities performed in the HL, including HL instruction). We predicted that input richness may have only an effect on bilingual children who have already accumulated enough input (EP-German group), while 'cumulative input' would be the main variable explaining outcome differences in the EP-French group (who have less input).



The results of two GLMMs show that (1) indeed, the EP-German bilinguals outperform the EP-French bilinguals (and both are outperformed by the monolinguals); (2) 'age' and 'cumulative HL input' predict the results of the bilinguals; the more HL input the bilingual children accumulate over time the higher their performance (see Fig1). This effect is independent of the majority language (i.e. no interactions with Group), but it is further modulated by age (children are still developing grammatical knowledge). Predicted probabilities indicate that richer input predicts higher results, but only in the EP-German group (Fig2), suggesting that enough input has to be accumulated to allow for richness to further modulate HL knowledge.

**Stefanie Schröter** (TU Dortmund)

***Subject expression in Turkish heritage language narratives: Exploring inter- and intragenerational variation***

This talk investigates subject expression in Turkish heritage language (HL) narratives. The study aims to explore inter- and intragenerational variation in the choice of referring expressions (NPs vs. null/overt pronouns) to maintain subject referents in narratives of second- and third-generation Turkish heritage speakers (HSs) with majority German.

Turkish is a pro-drop language, in which subject referents are usually maintained by null pronouns, while the use of overt pronouns is considered as pragmatically marked (Enç 1986). In contrast, German is a non-pro-drop language that allows null subjects only under certain conditions (e.g., topic-drop) (Fries 1988).

Previous HL research on pro-drop have reported mixed findings. A vast number of studies have found that HSs show an increase in the use of overt pronouns and/or use them in a broader range of contexts compared to baseline speakers (Montrul 2004; Albirini et al. 2011; Koban Koç 2016). Other studies found no major differences regarding the use of overt pronouns between heritage and baseline speakers (Azar et al. 2020; Flores & Rinke 2020; Nagy & Gadanidis 2021). The divergence in findings have been mainly related to variability between HS groups (high vs. low proficiency speakers) or baseline speaker groups (homeland vs. first generation speakers), but have not focused on variation within speaker groups.

This paper examines linguistic variability in subject expression between and within two generations of Turkish HSs in Germany. The data for the analysis was elicited by using the wordless picture book 'Frog, where are you?' (Mayer 1969). The preliminary findings reveal no significant differences regarding the frequencies and pragmatic constraints of overt and null pronouns in the two HS generations, but a high amount of individual variability between speakers of the same generation. The talk discusses the weight of different sociolinguistic and extra-linguistic variables for the understanding of individual outcomes and underlines the importance of individual variation in HL research.

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**Serkan Uygun** (Bahçeşehir University)

*Optional subject-verb agreement in Turkish heritage speakers*

Heritage speakers (HS) have been reported to experience difficulty with inflectional morphology, including subject-verb agreement (SVA) marking (Benmamoun et al., 2013a, 2013b). SVA marking in Turkish differs from other languages in that 3rd person plural subjects normally appear with verbs that are unmarked for number, rendering these verb forms indistinguishable from the singular form. The plural morpheme *lar/ler* is preferentially omitted from the verb, especially in spoken discourse, so as to avoid repeating the same morpheme that also marks plurality on nouns. Plural suffix omission in Turkish is also affected by semantic factors including the degree of subject animacy (Bamyacı et al., 2014; Schroeder, 1999).

Earlier studies with Turkish HS tested the optional SVA marking with short two-word (Bamyacı, 2016; Lago et al., 2019) sentences. Recently, Uygun & Felser (2023) tested this phenomenon with 5-word sentences. The findings of the previous studies indicate that Turkish HS accept overt plural marking more readily than non-bilingual native Turkish speakers. The present study investigates to what extent HS are sensitive to grammatical, surface-level and semantic constraints on Turkish plural agreement marking in longer (8-word) sentences.

A scalar acceptability judgement task was carried out with 48 non-bilingual Turkish speakers resident in Istanbul, Turkey and 60 Turkish HS resident in Berlin and Potsdam, Germany. All HS were exposed to Turkish from birth and had an early AoA of German (mean: 3.06; SD: 1.82; Range: 0-6). The experimental stimuli were created by manipulating both subject animacy (animate vs. inanimate) and subject position (subject first [SF] vs. scrambled1 [SC1] vs. scrambled2 [SC2]), to test the effect of subject-verb distance on the acceptability of overt plural marking on the verb. In SF sentences, the subject is sentence-initial (e.g. Dağcılar dün akşam yüksek ve karlı dağdan düştü/düştüler “Mountaineers fell (SG/PL) from the high and snowy mountain last night”), in SC1 sentences it appears after a two-word time adverbial (e.g. Dün akşam dağcılar yüksek ve karlı dağdan düştü/düştüler) and in SC2 sentences it appears just before the verb (e.g. Dün akşam yüksek ve karlı dağdan dağcılar düştü/düştüler). The judgement task was implemented as a web-based questionnaire, with the HS tested under supervision and the non-bilingual controls tested remotely. Prior to the data analysis, the scalar rating data were z-transformed to eliminate possible bias such as scale compression or scale skew and statistical analyses were conducted with R.

Besides confirming the general preference for unmarked verb forms, participants' judgement patterns were affected both by animacy and by subject-verb distance. Significant differences were observed between HS and non-bilingual controls in their acceptance of plural-marked verbs, suggesting that the relatively subtle interplay between different types of constraint on optional SVA marking is not always fully acquired under heritage language conditions.

**Jason Rothman** (The Arctic University of Norway)

*Individual differences in Heritage Language bilingualism research are not random, but are rather illustrative*

While Heritage Language (HL) bilinguals acquire their HLs naturalistically in early childhood, studies over the past three decades not only typically show differences to L1-dominant homeland users, but those that examine/discuss individual level data almost inevitably document high degrees of variation at the individual level. In the present talk, I will present the landscape of HL studies that endeavours to contextualize, investigate and capitalize on the theoretical value of understanding such individual differences—presenting in such a course work that sidesteps the fallacy inherent to monolingual-to-bilingual comparisons for many—but not all—questions currently asked. In doing so, we will discuss “-lingualism” as a scale and, thus, the determinism of context (opportunities for outcomes for a particular type) and why it is (at least partially) explanatory for outcome variation at the individual level for all, but especially for HL bilinguals. Showcasing research from our group with several language pairings, across various age ranges, using a wide array of empirical methodologies and focusing on various domains of grammar—mainly studies from the large 4-year *HeLPiNG (Heritage Language Proficiency in their Native Grammars)* grant—, we will see that systematicity defines individual difference outcomes in HL acquisition and processing. Yet, as we might expect, there is no one-size-fits-all (set of) variable(s) that is explanatory for everything. Rather, as we should expect, the (weighting and/or interaction of) variables that regress to cover individual differences depend on what (the domain of language), who (the profiles of HL bilinguals) and where (e.g., important differences of location that delimit exposure/usage) we are investigating. This discussion sheds light on multiple levels of trending differences: between so-called monolinguals to HL bilinguals, between distinct populations of HL bilinguals, e.g., European to North American to Asian contexts, and intra-group differences across individual HL bilinguals traditionally studied as a single aggregate.