



Generative Approaches to Second Language Acquisition 17

Computational and Psycholinguistic Approaches to Second Language Acquisition

May 2-4, 2024

Levis Faculty Center
University of Illinois, Urbana-Champaign

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INVITED SPEAKER ABSTRACTS

Thursday, May 2 | 5.15 – 6.15pm

“Applying Auditory Perceptual Simulation (APS) to increase L2 syntactic knowledge”

Kiel Christianson, University of Illinois at Urbana-Champaign

Auditory Perceptual Simulation (APS) refers to the explicit mental simulation of a specific voice by a reader who is reading text silently. Recent research suggests that this phenomenon, which may occur either spontaneously or via explicit prompts, helps readers to connect a detailed prosodic representation with the syntactic representation of the text. This connection appears to improve reading fluency and comprehension, as well as memory for the text. In this talk, I will review the current research on APS, preview some new data on APS in L2 readers, and speculate on future directions for theoretical and applied research.

Friday, May 3 | 5.00 – 6.00pm

“Big learner corpora: any good for theoretical SLA research?”

Dora Alexopoulou, University of Cambridge

The rapid expansion of online learning and assessment around the world and across the lifespan, has created new opportunities for the collection of learner data from teaching and examination institutions. Daily interactions of millions of learners around the world with online learning platforms create unprecedented amounts of learner language samples (writings, oral productions and interactions) as well as related analytics (scores on reading and listening activities, exam scores, information on engagement etc.). Often referred to as *big data*, such ‘real life’ data are known for their four Vs: their *volume*, as they come in large quantities, their *variety*, as they are generated in many different contexts and for varying purposes, their *velocity*, as new updates are constant and, last but not least, their unknown *veracity*, as the quality of the data is unknown. The volume, variety and velocity of big data are very attractive to SLA researchers. However, the fact that the data is not generated in the context of well thought research design (unknown veracity) questions their suitability for SLA research. In this talk I will argue that big data can be an important empirical resource for SLA research and, moreover, act as an empirical bridge between lab-based developmental research and applied questions related to proficiency and curriculum design.

In the first part of the talk, I will review the various methodological challenges relating to the use of big data for SLA research focusing on the corpus and natural language processing tools that are necessary to fruitfully exploit large size corpora and reviewing the current state-of-the-art. I will then present empirical studies exploring linguistic complexity across proficiency and the nature of typological influence of the L1 on L2 vocabulary, complex syntax and the acquisition of the English articles. I will illustrate the main points with research using the EF-Cambridge Open Language Database (EFCAMDAT), an open access corpus developed at Cambridge. EFCAMDAT consists of L2 writings submitted to the online school of EF Education First. It contains 128 distinct tasks across the proficiency spectrum drawing from learners across 170 nationalities. It is the largest open access corpus of its kind, with 1.2 million scripts summing 71.8 million words. The emerging picture regarding L1-on-L2 influence is mixed, suggesting minimal effects of L1 on vocabulary and syntactic complexity but strong typological effects on morphosyntax.

Saturday, May 4 | 9.00 – 10.00am

“Development and Ultimate Attainment in Societal Bilingualism”

Silvia Perpiñán, Universitat Pompeu Fabra, Barcelona, Spain

The role of language transfer and/or pressure from the dominant language in a societal bilingual context such as the Catalan one has been long debated. Still, there are very few studies that systematically investigate the morphosyntactic properties of Catalan-Spanish bilinguals. In this talk, I will present Catalan data from varying types of child and adult Catalan-Spanish bilinguals whose onset of acquisition to Catalan has been by age 3. I will focus on the acquisition of three morphosyntactic properties that present microvariation between Catalan and Spanish: 1- DOM; 2- copular verbs; and 3- the system of clitics. The results from these linguistic phenomena are not identical: whereas non-personal clitics show protracted development and fossilization, DOM and *Ser/Estar* present crosslinguistic influence and functional convergence. These bilingualism processes are modulated by language dominance and suggest the creation of a bilingual variety. I will argue that Catalan is undergoing language change motivated by internal and external factors, and that Spanish-dominant bilinguals and to some extent also Balanced Bilinguals are leading this change.

Saturday, May 4 | 4.30 – 5.30pm

“A view from beyond the pigeonhole: Insights and challenges from a cross-population perspective on language acquisition and processing”

Theres Grüter, University of Hawai’i, Manoa

The traditional (generative) approach to second language acquisition has been to compare L2 learners with L1 speakers. More recently, comparisons with and among other types of language users, such as heritage speakers, L3/Ln learners, and (so called) attriters, have enriched our understanding of language acquisition, and led to the establishment of specialized subfields focusing on specific learner groups. While this expansion of the field is clearly a step forward, the fragmentation into different subfields also comes with the risk of losing sight of the forest for the trees. In this talk, I will try to foreground the forest that is ultimately of interest to us all: the human capacity for language. I will do so by critically examining the theoretical and empirical foundations of the categories of learner types that we have become comfortable with, including the notion of the native speaker, and by sharing insights and challenges from an on-going project on predictive sentence processing in Japanese, in which we attempt to take a broader view of the forest by including speakers across learning backgrounds and experiences, including but not limited to those traditionally falling into the categories of L2 learners, heritage speakers, and attriters.

CONFERENCE SCHEDULE

Thursday, May 2 Levis Faculty Center, room 300	
8:30 – 9:00	Breakfast, Registration and Opening
9:00 – 9:30	Constraining contexts that exploit real-world knowledge lead to L2 acceptance of, but not L2 acquisition of, English inverse scope <i>Baorui Xu, Theres Grüter and Bonnie D. Schwartz, University of Hawai‘i at Mānoa</i>
9:30 – 10:00	Acquiring scope of logical connectives and negation in Japanese as a second language <i>Tokiko Okuma, Ritsumeikan University</i>
10:00 – 10:30	On factors affecting L2 development of Mandarin aspect vis à vis the Incompleteness Effect <i>Yu-Tzu Chang and Shin Fukuda, University of Hawai‘i at Mānoa</i>
10:30 – 11:00	Coffee break
11:00 – 11:30	The interpretation of English bare numeral constructions by Chinese-speaking learners <i>Yunchuan Chen, Duke University</i>
11:30 – 12:00	The L2 acquisition of Dutch quantitative "er": A test for the Interface Hypothesis <i>Tess Wensink, KU Leuven and Luisa Meroni, Utrecht University</i>
12:00 – 12:30	Heritage language acquisition of evidentiality under maximal input conditions: The case of Turkish-American returnees <i>Aylin Coşkun Kunduz and Silvina Montrul, University of Illinois at Urbana-Champaign</i>
12:30 – 1:30	Lunch on your own
1:30 – 3:00	Workshop: Eye-tracking methodology: nuts and bolts of mapping the time-course of human cognition <i>Anastasia Stoops, University of Illinois at Urbana-Champaign</i>
3:00 – 3:30	Coffee break
3:30 – 4:00	Pronoun interpretation in English: When native speaker performance is unexpected <i>Lydia White¹, Heather Goad¹, Guilherme Garcia², Natália Brambatti Guzzo² and Jiajia Su³</i> ¹ McGill University, ² Université Laval, ³ Beijing Foreign Studies University
4:00 – 4:30	The L2/L3 acquisition of Mayan ejectives: The redeployment of dimensions and learning of gestures <i>BrettC Nelson¹, Antonio A. González Poot², John Archibald³ and Darin Flynn⁴</i> ¹ Unaffiliated, ² Universidad Autónoma de Campeche, ³ University of Victoria, ⁴ University of Calgary
4:30 – 5:00	Examining the relationship between filler words and code-switching <i>Amelia Tighe, University of Illinois at Urbana-Champaign</i>
5:00 – 5:15	Break
5:15-6:15	PLENARY SPEAKER <i>Kiel Christianson, University of Illinois at Urbana-Champaign</i>
6:30 – 8:30	Reception, Levis Faculty Center

CONFERENCE SCHEDULE

Friday, May 3 Levis Faculty Center, room 300	
8:30 – 9:00	Breakfast
9:00 – 9:30	Unveiling DOM optionality in Catalan: asymmetries between acceptance and processing <i>Eloi Puig-Mayenco</i> , King's College London and <i>Tiffany Judy</i> , Wake Forest University
9:30 – 10:00	Towards a unified theory of heritage language acquisition: Evidence from Spanish differential object marking across childhood <i>Patrick Thane</i> , University of Massachusetts, Amherst
10:00 – 10:30	Lexical knowledge explains ease of access to semantic features in heritage Spanish speakers' use of differential object marking <i>M. Cole Callen</i> , University of Minnesota, Twin Cities
10:30 – 11:00	Coffee break
11:00 – 11:30	Arabic L2 learners' knowledge and processing of English articles in indefinite contexts <i>Kholoud A. Al-Thubaiti</i> , Umm Al-Qura University
11:30 – 12:00	Quality, quantity or both? A multidimensional analysis of textbook input on English articles <i>August Chun Yan Tung</i> and <i>Kook-Hee Gil</i> , University of Sheffield
12:00 – 12:30	Acquisition of genericity in L2 English: The effect of multilingualism <i>Marta Velnić¹</i> and <i>Roumyana Slabakova^{1, 2}</i> ¹ Norwegian University of Science and Technology, ² University of Southampton
12:30 – 2:30	Catered lunch and poster session, Levis Faculty Center, room 210
2:30 – 3:00	The importance of individual data in L3 acquisition: A reanalysis of Mitrofanova, Leivada, and Westergaard (2023) <i>Hunter Brakovec¹</i> , <i>Michael Iverson¹</i> , <i>Jeanne McGill¹</i> , <i>Bonnie D. Schwartz²</i> and <i>Rex A. Sprouse¹</i> ¹ Indiana University, ² University of Hawai'i at Mānoa
3:00 – 3:30	Genericity in the third language: Polish-English bilinguals learning Norwegian <i>Marta Velnić¹</i> , <i>Roumyana Slabakova^{1, 2}</i> and <i>Anne Dahl¹</i> , ¹ Norwegian University of Science and Technology, ² University of Southampton
3:30 – 4:00	The acquisition of object clitics pronouns in child L3 French <i>Mihaela Pirvulescu</i> , University of Toronto Mississauga and <i>Virginia Hill</i> , University of New Brunswick
4:00 – 4:30	Typological effects of the lexicon on L3 syntax <i>Jeanne McGill</i> , Indiana University
4:30 – 5:00	Coffee break
5:00 – 6:00	PLENARY SPEAKER <i>Dora Alexopoulou</i> , University of Cambridge
6:30 – 8:30	Conference dinner at Silvercreek Restaurant

CONFERENCE SCHEDULE

Saturday, May 4 Levis Faculty Center, room 300	
	Breakfast
9:00 – 10:00	PLENARY SPEAKER <i>Silvia Perpiñán</i> , Universitat Pompeu Fabra
10:00 – 10:30	Coffee break
10:30 – 11:00	L2 Acquisition of French prenominal possessives: contributions of syntax & morphology <i>Tania Leal</i> , University of Arizona and <i>Elena Shimanskaya</i> , University of Nevada, Reno
11:00 – 11:30	Gender and number agreement in Spanish heritage and L2 children in dual immersion <i>Julia Herschensohn</i> , <i>Ana Fernández-Dobao</i> and <i>Stefana Vukadinovich</i> , University of Washington
11:30 – 12:00	Marked gender cues modulate lexical retrieval for both L1- and L2-Swedish speakers <i>Rebecca Borg</i> and <i>José Alemán Bañón</i> , Stockholm University
12:00 – 12:30	Case resilience in Marathi heritage speakers <i>Anupama Reddy</i> and <i>Kamil Deen</i> , University of Hawai'i at Mānoa
12:30 – 1:30	Lunch on your own
1:30 – 2:00	Business meeting
2:00 – 2:30	Syntactic islands in heritage Spanish <i>Bradley Hoot</i> , DePaul University and <i>Shane Ebert</i> , University of Illinois Chicago
2:30 – 3:00	Does typological similarity facilitate ultimate attainment? A look at the morphology and syntax of restructuring in heritage and L2 grammars <i>Francesco Romano</i> ¹ , <i>Pedro Guijarro-Fuentes</i> ² , <i>Marta Rivera Zurita</i> ² and <i>Andrea Calpe Alvarez</i> ² ¹ University of Halmstad, ² University of the Balearic Islands
3:00 – 3:30	L2 comprehension of English relative clauses: Resumption mitigates processing strain <i>Fred Zenker</i> , University of Hawai'i at Mānoa
3:30 – 4:00	Revisiting the compounding parameter: Evidence from L1 Spanish - L2 English learners <i>Martine Gallardo</i> and <i>Silvina Montrul</i> , University of Illinois at Urbana-Champaign
4:00 – 4:30	Coffee break
4:30 – 5:30	PLENARY SPEAKER <i>Theres Grüter</i> , University of Hawai'i at Mānoa
5:30-5:45	Final remarks, end of conference

POSTER SESSION

Friday, May 3, 2024

12.30 – 2.30 PM

A study of code-switched compound verbs in Persian-Dutch Bilinguals <i>Mona Hashemi Nejad and Luisa Meroni, Utrecht University</i>
Acquisition of English objects and the effect of the computational burden by L1 Japanese learners <i>Chika Okada, University of Auckland</i>
Adding L2 options to L1 attrited grammars: Evidence from CLLD <i>Liz Smeets, York University</i>
Caminando era su hobby favorito: Gerund vs. infinitive use in Spanish/English bilingual children <i>Laura Solano-Escobar, Alejandro Cuza, Santiago Castillo, Francisco Clavijo and Edier Gomez-Alzate, Purdue University</i>
Clitic gender comprehension in bilingual children: Evidence from a dual language program <i>Jennifer Austin¹, Patrick Thane², Stephanie Rodriguez¹ and Michele Goldin³</i> ¹ Rutgers University – Newark, ² University of Massachusetts, Amherst, ³ Touro College
Considering linguistic transfer and heritage language (HL) experience in initial third language (L3) morphosyntactic processing using event-related potentials (ERPs) <i>Cesar Rosales and Eleonora Rossi, University of Florida</i>
Exploring scalar diversity in L2 learners <i>Chao Sun and Shuo Feng, Peking University</i>
How adults interpret disjunction under negation in native and nonnative Korean <i>Youngin Lee, University of Hawai‘i at Mānoa</i>
How structural similarity and language use interact in the L3 ‘Grappling Period’ <i>Hunter Brakovec, Indiana University</i>
Interpreting and processing negatively quantified sentences: A bidirectional study of learners of English and Chinese <i>Shaohua Fang, University of Illinois Urbana-Champaign and Alan Juffs, University of Pittsburgh</i>
L1 transfer or default local readings for reflexives? Evidence from Turkish and English <i>Burcu Boran and Liz Smeets, York University</i>
L2 acquisition of Russian motion verbs by L1-Korean and L1-English speakers <i>Hakyung Jung¹, Hyug Ahn², Jacee Cho³ and Kyongjoon Kwon²</i> ¹ Seoul National University, ² Sungkyunkwan University, ³ University of Wisconsin at Madison
L2 acquisition of word order and agreement patterns across verb types in Brazilian Portuguese <i>Becky Gonzalez, University of Iowa</i>
L2 and L3 acquisition of Quebec French (QF) vowels contrasts by L1 English learners and L1 Mandarin-L2 English learners <i>Junyu Wu, University of Victoria</i>
Noticing, reporting, but not understanding: The role of awareness in L2 learning <i>Mien-Jen Wu, National Chung Cheng University</i>
Perception of Spanish questions and statements by L1 English/ L2 Spanish speakers <i>Izaro Bedialauneta Txurruka, University of Illinois Urbana-Champaign</i>
QUD sensitivity and attentional control in L2 interpretation of scalar <i>some</i> <i>Glenn Starr, University of Wisconsin-Milwaukee</i>

<p>Spanish modal infinitival constructions in English-Spanish bilingual grammars: acquisition despite poverty of stimulus? <i>Vanesa Alonso González</i> and Juana Muñoz Licerias, University of Ottawa</p>
<p>Subjunctive mood selection in obligatory and variable contexts: Evidence from child heritage Spanish <i>Laura Solano-Escobar</i>, Purdue University</p>
<p>The acquisition of definite article use in L2 Italian and the nominal mapping parameter <i>Kenna Daniel</i>, Indiana University</p>
<p>The acquisition of English L2 by adult German L1 learners: The development of PRO in control and raising-to-object structures <i>Éva Fernández-Berkes</i>, University of Applied Sciences Burgenland and <i>Suzanne Flynn</i>, Massachusetts Institute of Technology</p>
<p>The acquisition of French object clitics by second language-learner children: Between the effect of age and the quantity of input <i>Alia Alatassi</i>, University of Toronto</p>
<p>The acquisition of V2 in L3 Norwegian <i>Michela Iacorossi¹</i>, <i>Guro Busterud¹</i>, <i>Anne Dahl²</i> and <i>Kjersti Falset Listhaug²</i> ¹University of Oslo, ²Norwegian University of Science and Technology</p>
<p>Cross-linguistic influence in the interpretational preferences of null/overt subject pronouns: A case of heritage Mandarin Chinese children <i>Shijia Yang</i> and <i>Kook-Hee Gil</i>, University of Sheffield</p>
<p>The distribution of VP-oriented adverbs in child and adult heritage speakers of Spanish <i>Edier Gómez Alzate</i>, Purdue University</p>
<p>The perception and production of Spanish lexical stress by Spanish heritage speakers <i>John A. Escalante Martínez</i> and <i>Jennifer Cabrelli</i>, University of Illinois Chicago</p>
<p>The role of animacy in subject-verb agreement in L2 Turkish: Examining Feature Reassembly <i>Munir Ozturhan</i>, <i>Alison Gabriele</i> and <i>Robert Fiorentino</i>, University of Kansas</p>
<p>The role of L1 transfer in L2 morphological errors with causative verbs: A case of L1 Korean-L2 English learners <i>A Young Chung</i> and <i>Kitaek Kim</i>, Seoul National University</p>
<p>The ROSE Model and L2 epistemology: Evidence from γ-band processes in French <i>Laurent Dekydtspotter¹</i>, <i>Kate Miller²</i>, <i>Mike Iverson¹</i>, <i>Jih-ho Cha¹</i>, <i>Jae Hyun Ahn¹</i>, <i>Jane Gilbert¹</i>, <i>Decker Pope¹</i> and <i>Kent Meinert¹</i> ¹Indiana University Bloomington and ²Indiana University Indianapolis</p>
<p>Transfer of the L1 functional structure by Japanese learners of English: A case of the that-trace effect involving adverbial intervention <i>Kasumi Takahashi</i> and <i>Yuichi Ono</i>, University of Tsukuba</p>
<p>What causes Native Grammatical Attrition? Evidence from native speakers of German, Spanish and Southern British English in bidialectal/bilingual contexts <i>Laura Dominguez¹</i>, <i>Glyn Hicks¹</i>, <i>E Jamieson²</i> and <i>Monika Schmid²</i> ¹University of Southampton and ²University of York</p>

ABSTRACT BUNDLE

Kholoud A. Al-Thubaiti, Umm Al-Qura University (KSA)

Arabic L2 learners' knowledge and processing of English articles in indefinite contexts

The Morphological Congruency Hypothesis (MCH) proposes that second language (L2) learners cannot acquire new morphemes that do not have a corresponding morphological form in their first language (L1) (Jiang, Novokshanova, Masuda, & Wang, 2011). However, recent evidence from L2 acquisition of English articles with learners from articleless L1s has challenged this hypothesis. In online Self-Paced Reading (SPR), Mandarin Chinese and Korean L2 learners show sensitivity to grammatical violations involving English articles, even though their L1s do not have articles (Cho, 2022; Ionin, Choi, & Liu, 2021).

This study extends this line of research by examining Arabic speakers whose L1 article system differs from English. Unlike previous research, this study considered the L1 effect of the presence of one article form on L2 English articles. Arabic has one article form, which is the definite article *al-* 'the,' as in (1). Arabic is morphologically incongruent with English in terms of marking indefiniteness. In Arabic, bare nouns are used to indicate indefiniteness (Bardeas, 2009), as in (2). In spoken varieties, the numeral *wahid* 'one' is often used to express indefinite referential nouns (Brustad, 2000), as in (3).

Building on Ionin *et al.*'s (2021) research on the English indefinite context, two experiments were conducted with 64 Arabic EFL learners to assess their sensitivity to two types of article violation (omission and misuse) before singular-count nouns. Each experiment involved 32 L2 participants. Their average cloze test scores in the article omission experiment were 81.25% (65-97.5%), and in the article misuse were 80.63% (65-92.5%).

The two experiments were conducted using online SPR and untimed Grammaticality Judgment (GJ) tasks that employed similar materials and testing procedures. Thirty-two sets of target items, designed by Ionin *et al.* (2021), were adopted for these tasks. These items tested four conditions that crossed referentiality and grammaticality (see Sample Item 4). The target items were distributed into four lists, each containing one version of the 32 target items and 64 fillers. The lists were balanced in terms of grammaticality. Each item (target and filler) was followed by a comprehension question to ensure the participants' engagement during the task. The tasks were created and hosted using the Gorilla Experiment Builder platform.

Acceptance ratings and residual reading times (RTs) were analyzed using mixed-effects models. The results from the SPR and GJ tasks showed that Arabic EFL learners were sensitive to article omission before singular-count nouns but not to article misuse in the same position. This study found that Arabic learners were not sensitive to article misuse under referential conditions. Unlike in the non-referential condition, the residual RTs on the noun and spillover regions were almost identical for correct and infelicitous article use under the referential condition. These results suggest that they associated referential meaning with definite articles, resulting in the tolerance of *#the* in an indefinite referential context. Results from the GJ task showed a proficiency effect; EFL learners with increased proficiency recognized the unacceptability of article omission but continued to overaccept article misuse in the same position. These results suggest that Arabic learners of intermediate English proficiency have developed L2 grammar in which singular-count nouns cannot be used without a determiner. However, they have not yet mastered the proper use of definite and indefinite English articles. The findings of this study partially challenge the MCH.

Examples (Hejazi Arabic)

1. Nizar ga:bəl al-waləd fi as-sug. (Definite noun)
Nizar met the-boy in the-market.
'Nizar met *the boy* in the market.'
2. Nizar ga:bəl waləd fi as-sug. (Indefinite noun)
Nizar met boy in the-market.
'Nizar met *a boy* in the market.'
3. Nizar ga:bəl wahid waləd fi as-sug. (Indefinite, referential noun)
Nizar met one boy in the-market.
'Nizar met *a boy* in the market.'

Sample of target item:

4. a. Mary felt lonely last week. So she finally got a cat from a shelter.
(Referential , grammatical)
- b. Mary felt lonely last week. So she finally got *ø/#the cat from a shelter.
(Referential , ungrammatical)
- c. Mary feels lonely this week. So she may get a cat from a shelter.
(Non-referential , grammatical)
- d. Mary feels lonely this week. So she may get *ø/#the cat from a shelter.
(Non-referential , ungrammatical)

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- Bardeas, Suzanne. (2009). *The syntax of Aarbic DP*. (Unpublished doctoral dissertation), University of York, UK.
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- Jiang, Nan, Novokshanova, Eugenia, Masuda, Kyoko, & Wang, Xin. (2011). Morphological congruency and the acquisition of L2 morphemes. *Language Learning*, 61(3), 940-967.

The acquisition of French object clitics by second language-learner children: Between the effect of age and the quantity of input

Recent experimental studies on the effect of age of on language acquisition revealed that effect of age of onset could not be generalized across all language domains or languages. Age could have a positive effect on acquisition of vocabulary, while it could have a negative effect on the acquisition of morphosyntax (Chondrogianni & Marinis, 2011; Veríssimo, Heyer, Jacob & Clahsen, 2018). While existing studies account for the effects of age of onset, they underestimate the effect of the environment (quantity and quality of input) on second language acquisition. Moreover, there is a need to understand second language acquisition for late learners of French – those who start learning French at age 6 - as most studies focused on children who start learning French between the age of 3 and 5 (Prévost, 2006; Strik, Pirvulescu & Roberge, 2015). Our study wishes to fill these gaps by comparing non-francophone children according to their age of acquisition of L2 French and quantity of input received in school in terms of their acquisition of French object clitic. Specifically, our study wishes to determine whether patterns of acquisition of French morphosyntax for second language learners differ when children start their acquisition at age three (early learners) versus age 6 (late learners).

We tested 45 children (Table 1) who are enrolled in French immersion and French schools in the Grand Toronto Area, Canada. Participants were divided into 4 groups according to their age of exposure and quantity of input. Using the methodology in Veríssimo, Heyer, Jacob & Clahsen, 2018, we defined early learners as those who are enrolled in French school between the ages of 3-4, while late learners as those enrolled in French (immersion) schools at age 6. French schools represent 100% exposure, while immersion represents 50% exposure. Participants were tested on the production of French object clitics through a picture production task using the form “What is X doing with Y?” (Strik, Pirvulescu & Roberge, 2015). The task included eight transitive verbs. The quantity of input was measured using the Q-Bex online questionnaire (De Cat, Kaščélan, Prévost, Serratrice, Tuller, & Unsworth, 2022).

Preliminary results indicate that (the maximum amount of clitic production is 8), (with an average of 7 over 8), followed by early learners (average 4.4 over 8) and late learners (average 2 over 8) (Figure 1). The Poisson model¹ (with negative binominal regression²) suggests that there is a negative and significant correlation between age of acquisition and the production of object clitic in French. On the other hand, there is a positive and significant correlation between current exposure at school and the production of object clitic.

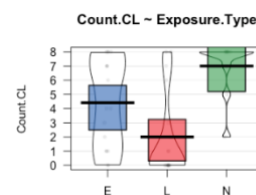


Figure 1 Production of Object Clitic by Group (Early, Late, Native)

¹ We decided to use the Poisson regression model because the clitic production task, which represents our dependent variable measures a count between 0 and 8 where the response variable was not continuous. In addition, the mean (4) of the responses on this task and SD were very close (3.4).

² This model is used for over-dispersed data.

Group	Description	N	Average age when tested	Average age of Exposure to French	Length of exposure (months)
1	Early L2 learners 100 % exposure to French	18	9	3	7 (84)
2	Late L2 learners 100% exposure to French	5	10	5	6(72)
3	Late L2 learners 50% exposure to French	13	10	5	5(60)
4	Native Speakers	9	10	1	10(120)

Table 1 Participants

Selected References

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- De Cat, C., Kaščelan, D., Prévost, P., Serratrice, L., Tuller, L., Unsworth, S., & The Q-BEx Consortium. (2022) How to quantify bilingual experience? Findings from a Delphi consensus survey. *Bilingualism: Language and Cognition*, 1-13.
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Spanish modal infinitival constructions in English-Spanish bilingual grammars: acquisition despite poverty of stimulus?

In this paper we investigate two superficially similar constructions in Spanish: modal periphrases (MP) as in *podemos salir* (*we can leave*) and nominal infinitival clauses (NIC), as in *deseamos salir* (*we wish to leave*). These two constructions share a superficial structural similarity (i.e., inflected verb plus infinitive) and the fact that their inflected verbal forms can convey root modal meanings (i.e., *desear/wish* transmit a *bouletic* meaning; *poder/can* transmit a *deontic* meaning). Yet, they fundamentally differ in their internal structure (Hadlich, 1971; Gómez Torrego, 1999; RAE-ASALE, 2011; Vivanco, 2019), given that a periphrasis is the union of two or more verbs that constitute only one predicate head while a nominal infinitival clause is a sequence of two predicates with more than one predicate head (Gómez Torrego, 1999; Topor, 2005). This apparent absence of a superficial structural contrast between the two constructions together with the semantic complexity conveyed by modality could interfere with their acquisition. In fact, the variety of grammatical constraints and the absence of visible distinguishable features that accounts for the lack of saliency of these two constructions (Heil & Lopez, 2020) can provide evidence for a Poverty of Stimulus argument. Thus, to address these issues, we investigate whether adult English-Spanish bilinguals are able to distinguish the various constraints that differentiate MPs and NICs.

To achieve this goal, we have designed a written Grammaticality Judgment Task (GJT) where participants are asked to judge grammatical and ungrammatical sentences containing three syntactic processes that differentiate MPs from NICs: pronominalization of the infinitive into an interrogative (*qué*), pronominalization of the infinitive into a demonstrative (*eso*), and *that* complementation, as all three are only grammatical with NICs (Table 1). This GJT was administered to a total of 96 participants representing six different types of adult English-Spanish bilinguals: (i) Spanish heritage speakers, (ii) English heritage speakers, (iii) L1 Spanish immigrant speakers/L2 English, (iv) L1 English immigrant speakers/L2 Spanish, (v) Spanish L2 learners/L1 English, and (vi) English L2 learners/L1 Spanish. A Control group of native Spanish speakers born, raised and residing in Spain was also recruited. Considering the differences between the groups (i.e., Language Dominance (LD), late vs early acquisition, quantity and quality of input), we hypothesized different outcomes between the groups with different Language Dominance if quality and quantity of input could determine the degree of differentiation between MPs and NICs, thus shadowing the Poverty of Stimulus argument.

Descriptive data showed a positive overall performance (84% of accurate answers). A mixed-effects logistic regression and ANOVA showed no significant differences between the groups and no impact of Language Dominance, even though grammaticality and syntactic process played a significant role in determining accuracy (Table 2). Thus, in line with previous literature (Godfroid et al., 2015; Rinke & Flores, 2014), our participants' performance was significantly better with grammatical than with ungrammatical items. As for the three syntactic processes, *that* sentences yielded a significantly higher level of accurate answers, followed by *what* sentences, while *demonstrative* sentences elicited the lowest level of accurate answers. This lack of significant differences between the groups with respect to their capability to differentiate between MPs and NICs despite their lack of salience, their

semantic complexity, and the different grammatical constraints, could pose an argument in favor of Poverty of Stimulus.

Table 1 – Experimental items

Syntactic processes	Grammatical - NICs	Ungrammatical - MPs
Pronominalization of the infinitive with an <i>interrogative</i>	¿Qué prefiere el arquitecto?	*¿Qué puede tu primo?
Pronominalization of the infinitive with a <i>demonstrative</i>	Cambiar de casa, eso desea mi hija.	*Centrar la atención, eso debe el empresario.
<i>That</i> complementation	Mi compañera prefiere que su amiga vea la película.	*Su padre puede que mi amigo lea el libro.

Table 2 – Analysis of Variance

Cases	Number of parameters	Sum of Squares	Mean Square	F
Grammaticality	1	71.579	71.579	71.5785
Syntactic process	2	134.713	67.357	67.3567
Group	6	2.396	0.399	0.3994
Syntactic process * Group	12	63.647	5.304	5.3039
Grammaticality * Group	6	47.962	7.994	7.9937
Syntactic process * Grammaticality	2	31.804	15.902	15.9018

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Clitic gender comprehension in bilingual children: Evidence from a dual language program

Previous research evaluating the development of gender agreement across the early school years in both heritage speakers (HSs) and second language learners (L2Ls) of Spanish has shown that children's command of this structure improves with age (Montrul & Potowski, 2007). For both children and adults, HSs are more accurate with this structure than L2Ls (e.g., Alarcón, 2021; Montrul et al., 2008, 2014; Montrul & Potowski, 2007), and both groups appear to produce masculine gender with greater accuracy than feminine (e.g., Alarcón, 2021; Montrul et al., 2008; Montrul & Potowski, 2007). Despite these consistencies across studies, there is not yet data comparing HS and L2L children's underlying receptive knowledge of gender agreement.

The present study reports data from a forced choice task evaluating direct object clitic gender, an area of variability for HS children (e.g., Martinez-Nieto & Restrepo, 2022; Shin et al., 2019). 78 bilingual children enrolled in a dual-language immersion program who received between 50% and 90% of their academic instruction in Spanish participated in this experiment. Each participant was placed into two groups that were addressed separately in the statistical modeling: age group (2nd grade, ages 7-8; 4th/5th grade, ages 9-11; 7th/8th grade, ages 12-14) and speaker group (HS versus L2L). In total, there were 24 simultaneous HSs (6 in 2nd grade, 10 in 4th/5th grade, and 8 in 7th/8th grade) and 53 L2Ls (16 in 2nd grade, 20 in 4th/5th grade, 18 in 7th/8th grade). Children were asked to choose between one sentence containing a masculine clitic and another with a feminine clitic following brief prompts. All clitics were preverbal and occurred in "core" syntactic contexts (i.e., not in left or right dislocations), minimizing the influence of pragmatic factors.

The descriptive data reported in Figure 1, as well as a binomial logistic regression, revealed no effect for speaker type ($\beta = 0.196$, $p = .578$), age ($\beta = .104$, $p = .783$), or their interaction ($\beta = .002$, $p = .997$), yet participants were more accurate in selecting masculine than feminine clitics ($\beta = -0.874$, $p = .001$). These findings differ from previous research in two ways. Firstly, there was no discernible difference between the L2Ls and the HSs in this study, both of whom had received exposure to Spanish in school. This could be due to findings in previous research that report greater difficulty acquiring clitic gender than gender in lexical determiner phrases (Goebel-Mahrle & Shin, 2021). Furthermore, many previous generative approaches have argued that errors in production reflect missing surface inflection without affecting underlying representational deficits (Prévost & White, 2000), but the data from this study show that even after nine years of bilingual education, HSs and L2Ls still show high degrees of variability in their receptive command of clitic gender. This aligns with McCarthy's (2008) proposal based upon adult L2Ls that differences in gender agreement morphology may have a representational, rather than morphological, source, and differs from current accounts of bilingual acquisition that locate the locus of variability in morphology rather than syntax (e.g., Prévost & White, 2000; Putnam & Sánchez, 2013).

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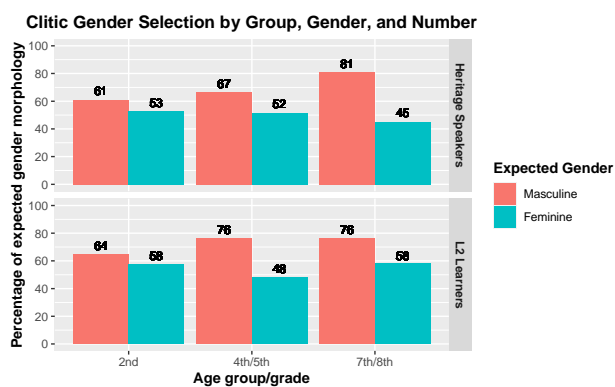


Figure 1. Accuracy rates of gender clitic selection by speaker group, age group, and gender.

Perception of Spanish questions and statements by L1 English/ L2 Spanish speakers

Spanish declarative questions and statements often contrast only in their prosody, ¿*Bebe agua?* “does he/she drink water” and *bebe agua* “he/she drinks water” are lexically and syntactically the same, but they differ in the intonation. These contours, however, vary depending on the Spanish-speaking country and region. For example, in Castilian Spanish (CS), neutral questions usually end with a rise (H%) (Figure 1), whereas in Buenos Aires Spanish (BAS) they most commonly end with a circumflex contour (HL%) (Figure 2). Declaratives in both varieties end with a fall (L%) (Sosa 1999, Gabriel et al. 2010, Estebas-Vilaplana et al., 2010). Dominican Spanish (DRS) shows cross-linguistically fewer common patterns. In DRS there is a H% boundary tone in statements and a L% boundary tone in questions (Willis, 2010; Hualde et al., 2015) (Figure 3). CS and BAS follow the universal tendencies of interrogation, unlike DRS. Up to date there has not been a study that has explored the perception of primary and secondary cues by L2 speakers when hearing different Spanish intonation contours. The interpretation of stimuli cross varieties by native Spanish speakers are going to be presented in a separately.

We report on an experiment where participants were auditorily presented with statements and questions produced by speakers of the three Spanish varieties just described. A total of 108 stimuli were presented. 36 consisted of sentences containing two accentual phrases. In addition, the experimental stimuli included sound files containing either the first or the second accentual phrase of the complete sentences (36 examples of each). Listeners were asked to click ‘yes’ or ‘no’ to answer to the question ‘is this a question?’ after hearing each stimulus in Qualtrics. The study involved 24 native speakers, with 10 from Buenos Aires, 7 from the Dominican Republic, and 9 from Spain as control group for each variety condition. Additionally, 51 L2 Spanish/ L1 of American English speakers participated in the study.

Previous studies on the perception of Spanish intonation by L1 American English speakers have shown that perception of declarative question contours was specially challenging (Brandl et al. 2020; Trimble, 2013), but some contours are more problematic than others. H% has been found to be the easiest boundary tone to interpret as question, followed by HL%, with L% ending the hardest (Casillas et al., 2022). However, these studies did not explore the influence of the height of the first accentual phrase. We hypothesized that participants would be guided by their L1 and in cases where a contour is absent in their L1, they would rely on universal tendencies. DRS statements and questions were thus predicted to be particularly difficult to identify. Regarding incomplete sentences, our hypothesis was that the final contour would be easier to identify than the first half, but that a relatively high beginning might also be sufficient for interrogativity to be conveyed (Face 2007). Lastly, a positive relationship is expected between proficiency and accuracy level based on the L2 Intonation Learning Theory (Mennen, 2015).

A Generalized linear mixed-effects model (binomial logistic regression) showed group differences between the L2 and the CS and BAS control groups, however L2 speakers did not significantly differ from the DRS. Overall, L2 participants perceived stimuli more accurately when the stimulus was a whole sentence rather than the partial sentences that had only the first or second accentual phrases. Interestingly, while the final part of intonational contours generally was perceived as the primary cue to interrogation the study identified a dynamic cue preference, since the height of the first peak showed to be a stronger cue for DRS question intonation. Lastly, the results showed a moderate positive correlation between proficiency in the L2 and accuracy.

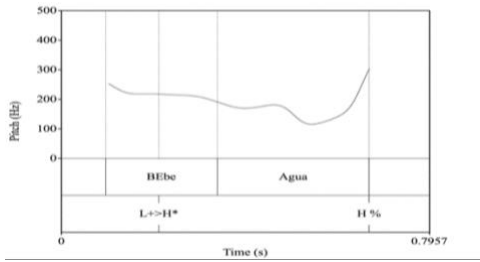


Figure 1. CS question contour

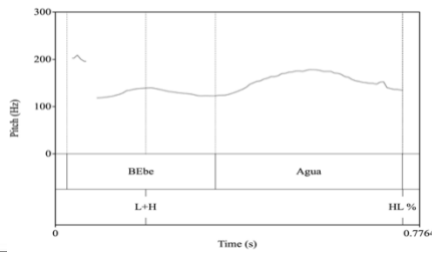


Figure 2. BAS question contour

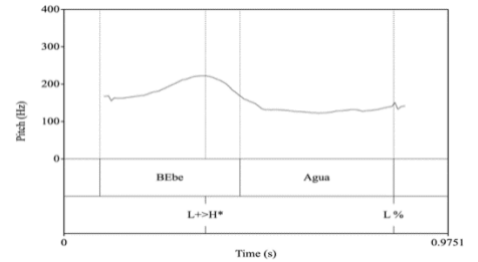
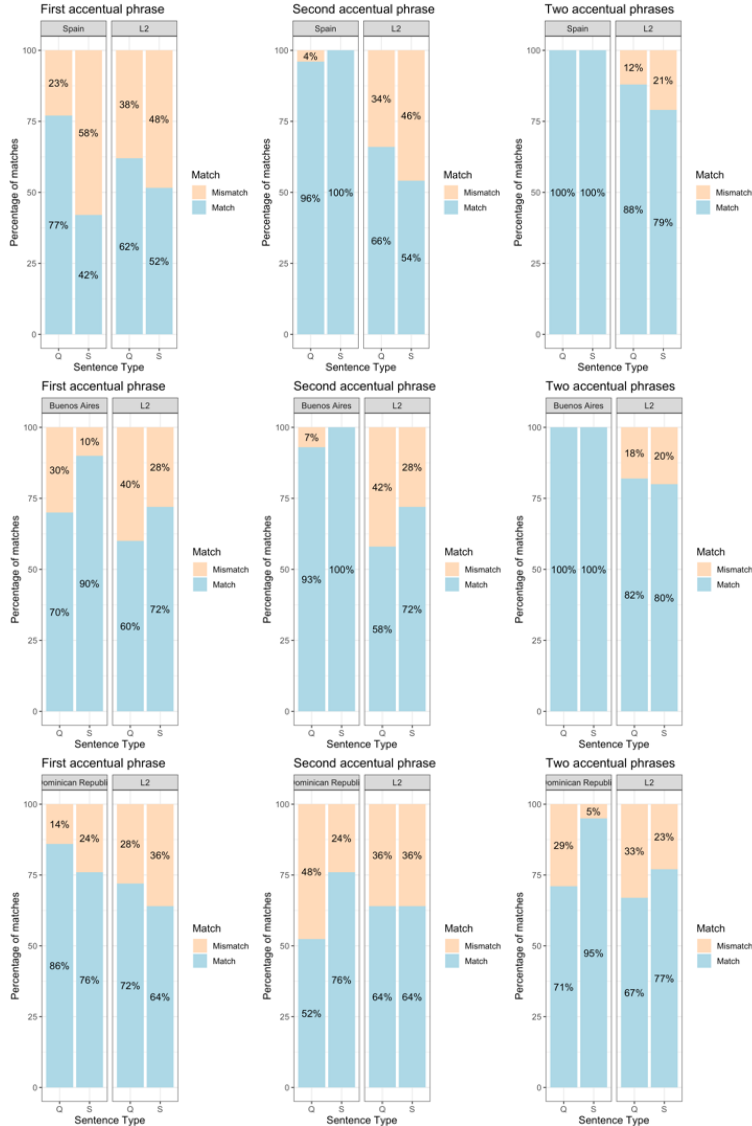


Figure 3. DRS question contour



Results of CS stimuli

Results of BAS stimuli

Results of DRS stimuli

References:

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L1 transfer or default local readings for reflexives? Evidence from Turkish and English

The interpretation of reflexives has received considerable attention in L2 acquisition research. Earlier studies find evidence for both L1 transfer and for a universal preference of local antecedents. L1 transfer was found in Yuan (1998) where Japanese learners of Mandarin (whose L1 allows long distance (LD) antecedents of *zibun*) correctly allowed LD antecedents for the Chinese reflexive *ziji*, while English learners of Mandarin did not (see also Kim, Montrul and Yoon 2009 for L2 Korean). Against L1 transfer, neither Korean nor English learners of Mandarin in Chen and Ionin (2022) allowed the LD reading for *ziji*, despite Korean reflexives *caki* and *casin* allowing LD antecedents. On studies where the L2 allows a subset of the interpretations available in the L2, Hirakawa (1990) found that Japanese learners of English incorrectly transferred LD interpretations onto English. Similarly, Turkish intermediate learners of English (Turkish *kendisi* and *kendi* allow both local and LD interpretations (Özbek and Kahraman, 2016)) failed to reject non-local antecedents for English reflexives when this was the pragmatically preferred reading, suggesting L1 transfer (Demirci, 2000). However, no advanced learners were included, making it unclear whether unlearning transferred LD interpretations for *himself/herself* is possible.

The current study focuses on L2 Turkish and L2 English. We elaborate on Chen and Ionin (2022) who propose that the low acceptability of LD readings for *ziji* by L2 learners can either be due to a universal preference for local readings of reflexives or due to input properties specific to *ziji* (*ziji* being used infrequently in the input and according to some studies barely acceptable with LD readings by native Mandarin speakers (Chen, 1995)). Like Mandarin, Turkish reflexives allow a superset of the binding interpretations available in English (Compare 1a and 1b). Unlike Mandarin, which also has the locally bound reflexive *taziji*, all Turkish reflexives allow LD interpretations. This, as well as the widely accepted use of *kendi(si)* with LD readings (Özbek and Kahraman, 2016), may facilitate acquisition. Note that no previous study looked at production, making it unclear how often *kendi* or *kendisi* is used instead of pronouns for LD interpretations.

We administered a Picture Description Task (PD) and a picture-based Truth Value Judgment task (TVJ) (see Figure 1). Participants included 8 English and 17 Turkish native speakers, intermediate and advanced L2 Turkish speakers (n=20) and intermediate and advanced L2 English speakers (n=12). Results show that while intermediate L2 English learners occasionally use *himself/herself* in sentences with LD readings, advanced participants are fully target-like. L2 Turkish participants have difficulty accepting and using *kendi* and *kendisi* with LD antecedents, even at advanced levels of proficiency.

The findings provide evidence in favour of a universal preference for local antecedents in the acquisition of reflexives, as L2 English speakers performed target-like despite the fact that subset grammars are arguably more difficult to acquire. Similarly, despite the available evidence in the input for *kendi* and *kendisi* with LD interpretations, L2 Turkish speakers failed to accept reflexives with LD readings. Our L2 Turkish results are furthermore interesting for comparison with earlier studies on Turkish heritage speakers who did show target-like interpretations of Turkish reflexives (e.g., Gračanin-Yuksek et al. 2020). Future work will examine whether L2 Turkish learners can overcome the default local reading after increased exposure to reflexives with LD readings (e.g. using contexts where *kendi/kendisi* favours a LD interpretation, overriding a default local interpretation).

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Example items sampling Turkish and English reflexives

- (1) a. Brad_i [Henry'nin_k kendi-ni_{i/k/*m}/kendi-si-ni_{i/k/m} o-nu_{i/*k/m} yak-tig-i]-ni söyle-di.
 Brad Henry-GEN self-ACC self-3SG-ACC s/he-ACC burn-NOM-3SG-ACC say-PAST
 'Brad_i said that Henry_k burnt herself-himself_{i/k/*m} / herself-himself_{i/k/m} / her-him_{i/*k/m}'
 b. Brad_i said that Henry_k burnt himself_{i/k/*m} / him_{i/*k/m} (Adapted from Chen and Ionin, 2022)

Example item from Picture Description Task (left) and Truth Value Judgment Task (right)

Lütfen yanda verilen fotoğrafı aşağıdaki sıralamaya göre tanımlayınız.
 "Please define the given photo starting with the following order:"

Picture A (LD readings) Picture B (Local readings)

Brad Henry'nin onu yakıldığını söyledi. "Brad said that Henry burnt him."	TRUE	FALSE
Brad Henry'nin kendini yakıldığını söyledi. "Brad said that Henry burnt self"	FALSE	TRUE
Brad Henry'nin kendisini yakıldığını söyledi. "Brad said that Henry burnt himself"	TRUE	TRUE
	(With some variability)	(With some variability)

Figure 1. Trials adapted from Chen & Ionin (2022). Showing predicted responses for Turkish native speakers

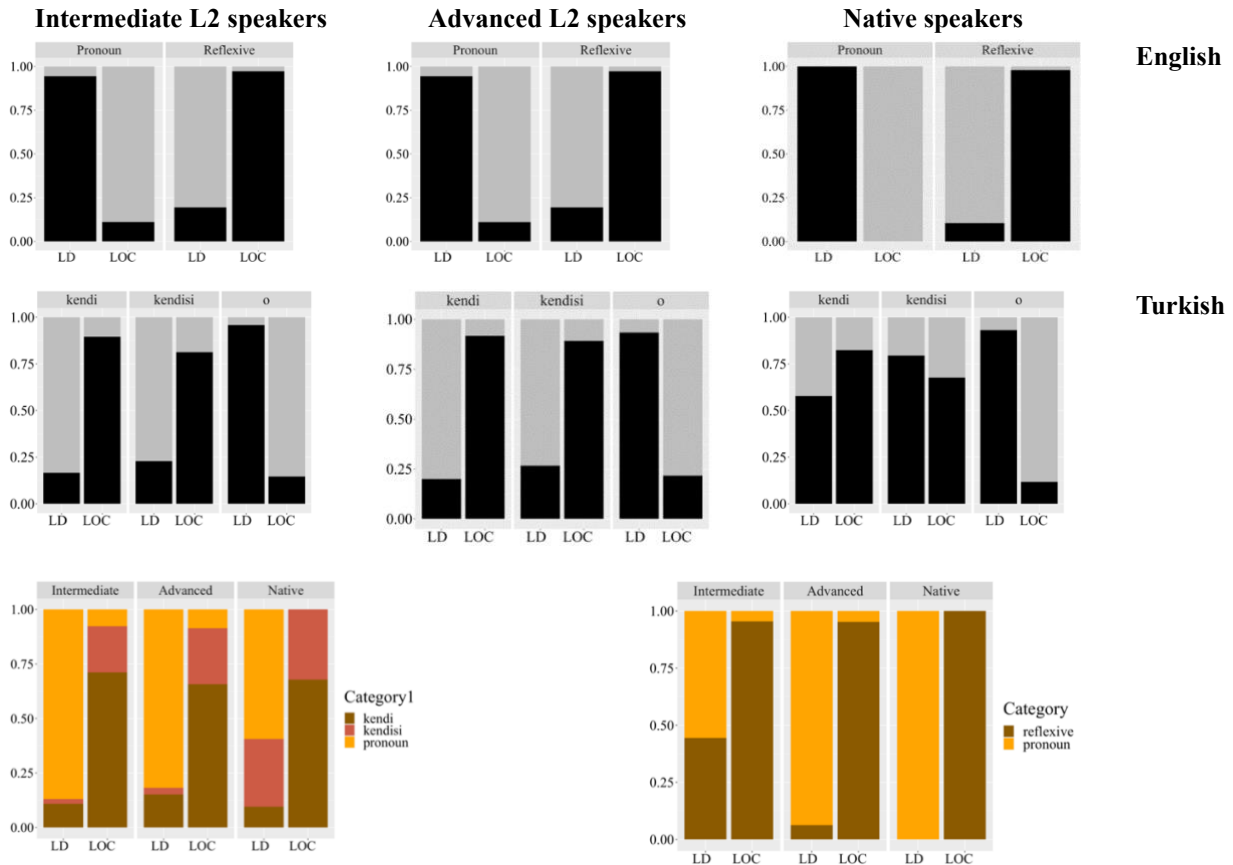


Figure 2. Results from the Truth Value Judgment task (top) showing acceptance rate in black and Picture Description task (bottom) showing proportion of use of reflexives vs. pronouns with LD and local interpretation

Marked gender cues modulate lexical retrieval for both L1- and L2-Swedish speakers

This study examines the extent to which grammatical gender cues facilitate lexical retrieval in both L1 speakers of Swedish and L2 learners of Swedish whose L1, Finnish, is [-gender]. Different generative models of L2 acquisition make different claims regarding the acquisition of gender by L2ers whose L1 is [-gender]. Lexical accounts suggest that L2ers can form native-like representations of gender regardless of their L1, but may experience issues retrieving lexical gender online [1-3]. In contrast, the Representational Deficit Hypothesis (RDH) [4] holds that, if the L1 lacks gender, learners form faulty representations for gender. For example, L2ers adopt the more frequent gender as a default and memorize exceptions. Swedish classifies nouns as *common* or *neuter*. Neuter is the marked gender, making up only 25% of the lexicon [5]. Moreover, only neuter adjectives are overtly inflected for gender (*fin_t/fin* “fine-NEUT/COM”). Crucially, it is argued that cues for marked features are more likely to impact online agreement resolution in L1 speakers, via feature activation [6]. Our study examines whether markedness also impacts the online use of gender agreement cues in the L2 [7].

48 L1-Swedish and 46 L1-Finnish L2-Swedish speakers completed a Picture Naming Task. They read sentences presented word by word and named the final picture as fast as possible. The sentences were manipulated for Informativeness and Gender. Conditions (1a,1c) provide two gender cues: on the article and the adjective. Conditions (2a,2c) involve gender-invariable adjectives, thus providing only one gender cue on the article. The uninformative conditions (1b,1d; 2b,2d) involve the possessive *hans* “his”, which does not mark grammatical gender and requires the adjective to be inflected for definiteness, but not gender. Knowledge of lexical gender was tested via two gender assignment tasks (GAT). L1 speakers were predicted to name pictures faster after informative frames, an effect that might be larger for neuters (the marked gender) [6]. For L2ers, lexical models predict that facilitation from gender cues (faster naming times) should be explained by the L2ers’ knowledge of lexical gender (as measured by the GAT). L2ers might also benefit more from neuter cues if they have a native-like representation of gender, which includes the markedness asymmetry. Under the RDH, gender should not facilitate lexical access. However, if L2ers memorize neuters as exceptions, neuter cues might reactivate the memorized nouns, leading to facilitation [3]. If so, facilitation should be explained by the co-occurrence frequencies of the article-adjective-noun sequences tested.

The analyses were run according to the description in Table 1. Only trials for which participants assigned the target gender in the two GATs were included. Both models returned significant main effects of Group ($p < .001$) and Gender ($p < .01$). L1 speakers had overall shorter naming times, and both groups named common nouns faster. In the two-cue conditions, analyses revealed a significant main effect of Informativeness ($p < .001$), which interacted with Gender ($p = .024$). Follow-ups showed that both groups named neuters faster in informative vs. uninformative sentences. In the L2ers, this effect was not explained by their overall knowledge of gender, as measured by the GAT. The size of the facilitation effect did also not correlate with the co-occurrence frequencies of the article-adjective-noun sequences tested, in either group.

Our results suggest that gender cues facilitate lexical retrieval in both L1 and L2 speakers and that markedness impacts this process similarly in both groups [7]. Although we interpret this facilitation as more in line with the lexical accounts, neither proposal is fully supported. That facilitation was not explained by the L2ers’ overall mastery of lexical gender is at odds with lexical accounts [3]. However, the fact that the co-occurrence frequencies did not correlate with the facilitation effect is harder to entertain under the RDH [4], as we do not have evidence of the L2ers tracking the statistical input [3]. Interestingly, facilitation was limited to contexts with gender-marked adjectives, which could be a result of the additional morphological scaffolding from the adjective [8], its adjacency to the noun, or its word class, especially given that adjectives are inflected for other features (e.g., number) in the learners’ L1 Finnish.

Example 1. Sample stimulus, nouns provided for expository purposes.





1a. Jag läste en konstigt... I read a-COM strange-COM		2a. Jag läste en fascinerande... I read a-COM fascinating	
1b. Jag läste hans konstiga... I read his strange-DEF	bok "book.COM"	2b. Jag läste hans fascinerande... I read his fascinating	bok "book.COM"
1c. Jag läste ett konstigt... I read a-NEU strange-NEU		2c. Jag läste ett fascinerande... I read a-NEU fascinating	
1d. Jag läste hans konstiga... I read his strange-DEF	brev "letter.NEU"	2d. Jag läste hans fascinerande... I read his fascinating	brev "letter.NEU"

Table 1. Factor contrasts and effects structure for statistical analysis, two- and one cue conditions analyzed separately.

Contrasts	Maximal effects structure for both two- and one-cue conditions
Informativeness (Baseline -0.5/ Informative 0.5)	log(Onset naming time in ms) ~ Informativeness * Gender * Group + (Group Item) + (Gender Subject)
Gender (Common -0.5/Neuter 0.5)	
Group (L1 -0.5/L2 0.5)	

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How structural similarity and language use interact in the L3 ‘Grappling Period’

Recent years have seen a sharp increase in the attention given to third language (L3) transfer, with a primary focus on the wholesale vs. property-by-property transfer debate (for overview, see Rothman et al., 2019). However, given the proliferation of models, it is impossible to address all models on both sides of the debate simultaneously. As such, in this ongoing study, I address the predictions of three of the wholesale models: the Typological Primacy Model (TPM; Rothman et al., 2019), the Contact Language of Communication model (CLC; Fallah et al., 2016), and the Abbreviated Grappling Period Model (AGPM; Sprouse & Schwartz, 2023). The TPM states that the structurally more similar previously acquired grammar (PAG) transfers in the early stages of acquisition, where similarity is determined by a cue hierarchy: Lexicon > Phonology > Morphology > Syntax. (Morpho-)syntactic similarity determines transfer only if neither of the other cues is sufficient. The CLC argues that the primary language of use (PLU), or dominant language, is the transferred PAG, and other factors, like structural similarity, play no role. Finally, the AGPM takes an intermediary position: L3 acquirers use lexical and phonological cues to determine transfer, but if those cues are not sufficient, they resort to transferring the PLU, or the dominant language. However, the AGPM does allow for the use of morphosyntactic cues when those cues are particularly salient in the input.

In this study, participants were assigned to one of two Korean-based input conditions, both more similar to German: in a ‘syntactic similarity’ input condition, participants received sentences with a modal or auxiliary (1), and in a ‘morphological similarity’ input condition, participants received yes-no questions (2). Participants in both conditions also received intransitive sentences as filler (3). Lexical and phonological overlap were controlled so that the participants’ English and German PAGs would be equally (dis)similar to the Korean input. Thus far, three groups (L1 English/L2 German, PLU: English (n=21); L1 German/L2 English, PLU: German (n=11); and L1 German/L2 English, PLU: English (n=8)) have received the ‘syntactic similarity’ input, and one group (L1 English/L2 German, PLU: English (n=9)) has received the ‘morphological similarity’ input. After passing a post-input-exposure criterion test, participants completed a sentence unscramble task and an AJT in Korean. To test for generalization of transfer, test items in both tasks evaluated structures not in the input: adverb placement (4), negation (5), and transitive sentences (6). Participants were also tested on their knowledge of all structures in their respective L2s.

In the sentence unscramble task, the preferred PAG for transfer was German in all four groups (Figure 1). In each group at least 70% of participants produced primarily German-based word order with regard to the structures not in the input. Additionally, while there were individuals in all groups that did not show a clear preference for German or English transfer yet, only the L1 English (English PLU) groups, in both input conditions, had individuals that displayed primarily English-based word order. Regarding acceptance, similar results were found in the AJT (Figure 2). Additionally, there does not appear to be a difference according to input condition for the two L1 English groups.

The results, thus far, most clearly support the AGPM. While (morpho-)syntactic similarity played the central role in determining transfer source preference, this effect was modulated by PLU and L1 (always the dominant language). That is, very low use of German may have affected the saliency of the (morpho-)syntactic similarity for those individuals who displayed an English transfer preference.

- (1) Modal/Auxiliary
 - a. Melinin nol suitda. (Korean, SVAux)
 - b. Maria kann spielen. (German, SAuxV)
 - c. Jan hofft, dass *Maria spielen kann*. (German, (SV,Comp)SVAux)
 - d. Mary can play. (English, SAuxV)
- (2) Yes-No Question, Intransitive
 - a. Melinin megesse? (Korean, SV)
 - b. Aß Maria? (German, VS)
 - c. Did Mary eat? (English, doSV)
- (3) Intransitive
 - a. Melinin megesse. (Korean, SV)
 - b. Maria aß. (German, SV)
 - c. Mary ate. (English, SV)
- (4) Adverb
 - a. Gelegentlich singt Maria. (German, AdvVS)
 - b. Occasionally Mary sings. (English, AdvSV)
- (5) Negation
 - a. Maria singt nicht. (German, SVNeg)
 - b. Mary does not sing. (English, SdoNegV)
- (6) Transitive
 - a. Maria isst Fisch. (German, SVO)
 - b. Mary eats fish. (English, SVO)

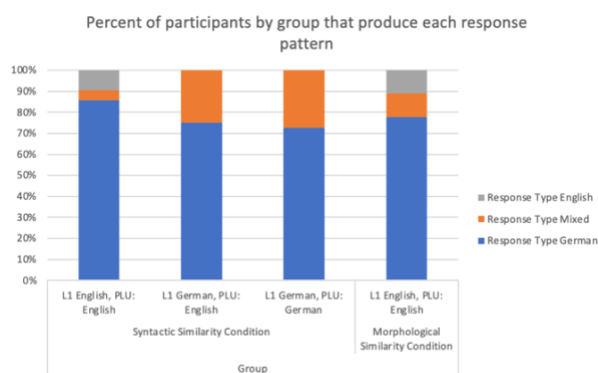


Figure 1. Unscramble task results.

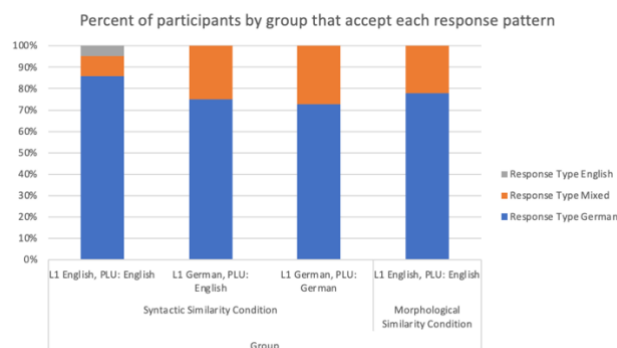


Figure 2. AJT results.

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The importance of individual data in L3 acquisition: A reanalysis of Mitrofanova, Leivada, and Westergaard (2023)

Recent L3 acquisition research has centered on the wholesale vs. property-by-property transfer debate (e.g., Rothman et al., 2019). In a new study employing an artificial mini-grammar, Mitrofanova, Leivada, and Westergaard (2023) argue in favor of the Linguistic Proximity Model (LPM; e.g., Westergaard, 2021), which claims property-by-property transfer. Input that was lexically like Norwegian but morphologically like Russian, i.e., nonce case endings on nouns (unlike Greek which has case on articles), was given to three groups—monolingual Norwegian (NorMon), Greek-Norwegian bilinguals (GreNor), and Russian-Norwegian bilinguals (RusNor); input to a fourth monolingual Russian (RusMon) group was identical except it was lexically like Russian. Training consisted exclusively of exposure to appropriately case-marked SVO and OVS sentences ($k = 5$ each) paired with corresponding pictures. The testing phase consisted of an auditory sentence-picture verification task in which participants heard a sentence and indicated whether or not it described the picture. There were four conditions ($k = 15$ each), crossing WORD ORDER (SVO vs. OVS) and CASE GRAMMATICALITY (grammatical (gr) vs. ungrammatical (ug)) for a given picture (viz., SVOgr, SVOug, OVSgr, OVSug).

Results in Mitrofanova et al. show that the NorMon and GreNor groups were (mostly) accurate in only the SVOgr and OVSug conditions. The RusMon group was (overwhelmingly) accurate in all conditions. Finally, the RusNor group was accurate in the SVOgr condition but performed ‘between’ the two monolingual groups in the SVOug and OVSgr conditions. Mitrofanova et al. interpret these ‘between’ results as transfer from both Russian and Norwegian, in support of the LPM. But what of individual learners? Miller and Iverson (2021) have argued that data of individual learners must be examined to find actual evidence of property-by-property transfer, since group means may not reflect the typical performance of any member of the group. Indeed, the RusNor group averages here may have resulted from bimodal distributions (see Figure 1).

We reanalyzed these publicly available data at the individual level by classifying each participant as one of four types, based on consistency of responses: (1) accept SVO, reject OVS; (2) accept grammatical, reject ungrammatical; (3) mixed, where the participant did not robustly accept or reject at least one condition; (4) other (see distribution in Figure 2). Our reanalysis examines individual-level data according to the predictions of two versions of the LPM (see Table 1).

Version 1 of the LPM claims L3ers are simultaneously influenced by both previously acquired grammars (e.g., Kolb et al., 2021; Mitrofanova et al., 2023; Westergaard, 2021), predicting mixed (in this case, ‘between’) performance by the RusNor group in conditions where the two monolingual groups diverge: SVOug and OVSgr. However, such a response pattern was not the primary response type of RusNor participants, and indeed those who produced mixed responses did not do so in the predicted pattern.

Version 2 of the LPM claims that a micro-cue in either of the previously acquired grammars may be transferred if it can be used to parse the input (Westergaard, 2021; Westergaard et al., 2017). That is, any condition that either the NorMon group or the RusMon group accepts should also be accepted by the RusNor group. No RusNor participant evinced this pattern; in fact, one behaved opposite to the predicted direction, i.e., accepting SVOgr but rejecting the other conditions.

In sum, neither version of the LPM accounts for the data at the individual level, *contra* Mitrofanova et al. Discussion will include implications of this reanalysis for wholesale transfer models (e.g., the Typological Primacy Model—Rothman, 2011; the Abbreviated Grappling Period Model—Sprouse & Schwartz, 2023) and whether Mitrofanova et al.’s unorthodox implementation of the artificial grammar paradigm may have led some Norwegian-speaking participants to analyze the ‘case’ suffixes as Norwegian-style enclitic definite articles.

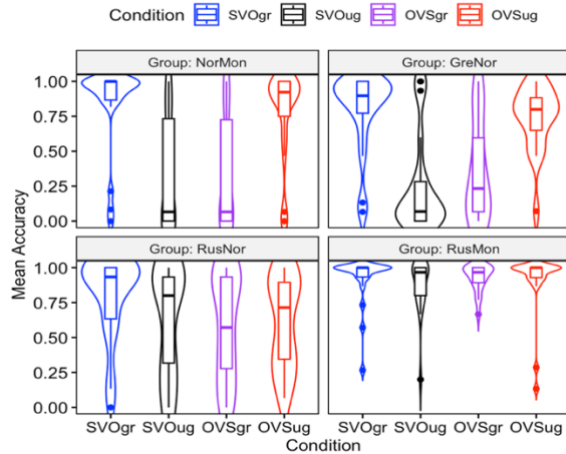


Figure 1. Accuracy by group and condition. (based on data from Mitrofanova et al., 2023)

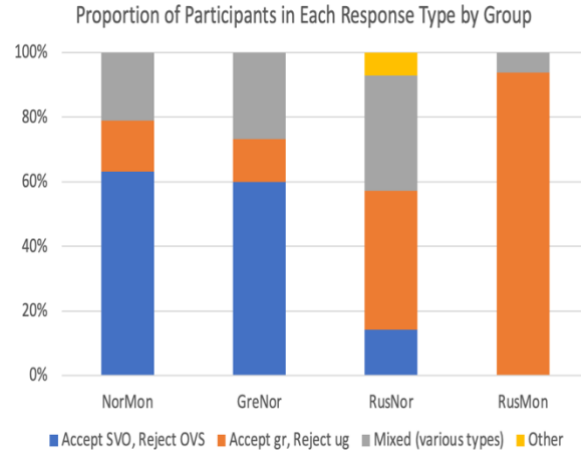


Figure 2. Distribution of participants who produced each response type by group.

	LPM, Version 1			LPM, Version 2		
	NorMon	RusNor	RusMon	NorMon	RusNor	RusMon
SVOgr	Accept	Accept	Accept	Accept	Accept	Accept
SVOug	Accept	Mixed	Reject	Accept	Accept	Reject
OVSgr	Reject	Mixed	Accept	Reject	Accept	Accept
OVSug	Reject	Reject	Reject	Reject	Reject	Reject

Table 1. Predictions of two versions of the LPM.

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Lexical knowledge explains ease of access to semantic features in heritage Spanish speakers' use of differential object marking

Background. Many studies of heritage language (HL) development have found great inter- and intra-speaker variability in the knowledge and production of grammatical forms. Previous studies of HL speakers have shown that lexical frequency can play a role in the ease of access to HL grammatical features and structures (e.g., Sánchez, 2019). The present study aims to explain how this variability emerges by considering individual differences in lexical knowledge. We chose to study Spanish differential object marking (DOM) because heritage speakers (HSs) show great individual variability in their use of this structure (see Montrul, 2022), but the sources underlying this variability remain mostly unexplored (cf. Hur, 2020). Spanish DOM is the marking of direct objects (DOs) with the morpheme *a* and is most often used with [+human, +specific] referents.

RQ. To explore variability in developmental outcomes of heritage Spanish grammars, the present study aims to answer the question of *how HSs' lexical knowledge affects their access to the semantic features relevant for DOM production.*

Method. Thirty-eight adult Spanish-English bilinguals raised in the U.S.A. by Spanish-speaking families participated in this study. All participants completed an oral picture description task (PDT) designed to elicit Spanish sentences with [+human, +specific] DOs. The PDT included 40 target and 40 filler trials. Participants also completed a lexical frequency rating task (LFRT) in which they rated the 20 verbs and 20 DO nouns used in the PDT according to how often they heard or used the words using a 9-point scale (see Figure 1; adapted from Hur et al., 2020). Lexical items were chosen based on their frequency ranking in the Corpus del Español (Davies, 2016–) to ensure a wide range of LFRT scores. Other tasks included were a category fluency (CF) task conducted in both languages and the Bilingual Language Profile (Birdsong et al., 2012).

Results. PDT data were modeled using mixed-effects logistic regression. The dependent variable was presence of DOM. Fixed effects included DO FREQUENCY RATING, VERB FREQUENCY RATING, WEEKLY SPANISH USE, and CF SCORE with random intercepts for PARTICIPANT. Neither CF SCORE nor SPANISH USE improved the model fit. A model with DO RATING and VERB RATING—and their interaction—as fixed effects showed a significant main effect of DO RATING and a significant interaction between DO RATING and VERB RATING. Participants were overall more likely to use DOM with DOs rated higher in frequency ($\beta = 0.44641$, $p < 0.001$; Figure 2). The significant interaction ($\beta = -0.25938$, $p < 0.001$) reveals that higher verb ratings predict a greater likelihood of DOM when DOs are rated low, but the effect is reversed for DOs rated high (Figure 3).

Conclusions. Findings suggest that HSs produce DOM more often when producing nouns and verbs they use more frequently. When the DO noun is more familiar, it seems that HSs are able to more easily activate the DOM-relevant semantic feature of animacy. However, when both the noun and verb are easily accessible, HSs may rely on verbal features (e.g., affectedness; see Romero Heredero & García García, 2023) rather than nominal features. No effects of HL use or lexical production abilities were found. We interpret this finding as evidence that individual differences may only affect grammatical production when specific to the grammatical form under investigation. These findings carry implications for operationalizing variability and frequency-related factors in studies of HL development (following Perez-Cortes & Giancaspro, 2022).

Figure 1. Scale used for Lexical Frequency Rating Task (modified from Hur et al., 2020)

1	2	3	4	5	6	7	8	9
Never	Almost never	A few times a year	Once a month	A few times a month	Once a week	Several times a week	Once a day	Several times a day

Figure 2. Effect of DO Frequency Ratings on 'a'-marking

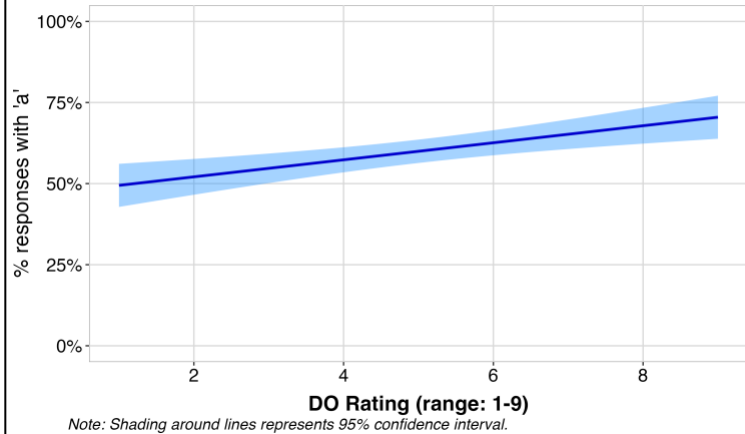
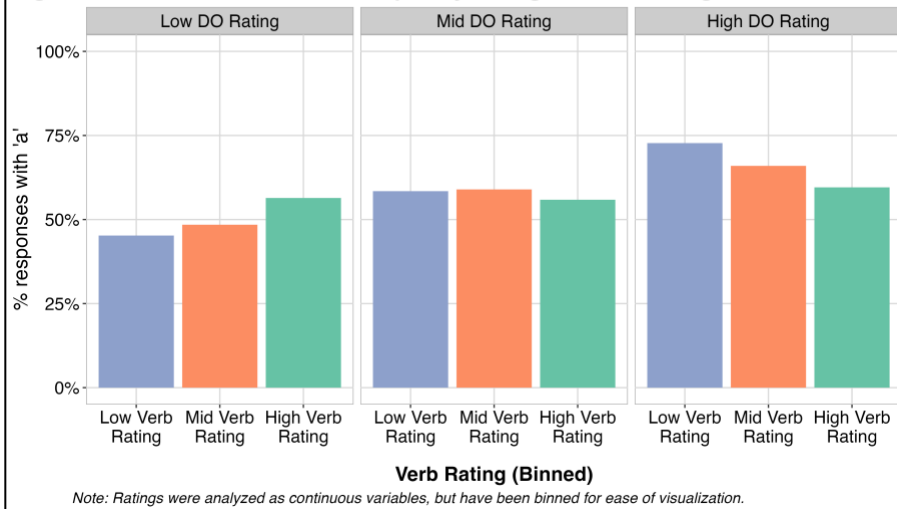


Figure 3. Effect of Verb and DO Frequency Ratings on 'a'-marking



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On factors affecting L2 development of Mandarin aspect vis-à-vis the Incompleteness Effect

Background: L2 acquisition of Mandarin aspect is especially arduous for L2ers whose L1, such as English, does not make the same aspectual distinctions: The insufficiency of L1 transfer on its own will necessitate the reassembling, unlearning, and/or addition of features (e.g., Gabriele, 2009; Lardiere, 2009). This study aims to identify what factors in what contexts influence the (lack of) L2 development of certain facets of Mandarin aspect.

For native Mandarin speakers, (1a) with progressive aspect *zai* in isolation is a perfectly acceptable sentence, whereas (1b) with the durative *-zhe_{DUR}* is an incomplete sentence. The latter illustrates the **Incompleteness Effect (IE)** in Mandarin, i.e., the tendency for simple sentences to be considered incomplete with some aspect markers (Lu, 1986). There are two major approaches to explaining IE. The *syntactic approach* proposes three syntactic positions for aspect markers: Asp1, Asp2, Asp3 (Tsai, 2008); those in Asp1 (structurally highest) raise to Tense and generate temporally “complete” sentences, but Asp2/Asp3 markers cannot, thereby yielding “incomplete” sentences. For the *interaction approach* (Tang, 2022), IE is the result not just of syntax but also of interactions with meaning, e.g., (im)perfectivity and verb types. While both approaches predict that Asp1 markers on their own make a sentence complete (e.g., perfective *-guo* and progressive *zai*), anecdotal evidence suggests, in line with the interaction approach, that the completeness of a sentence containing lower aspect markers depends on their inherent meanings and their compatibility with verbs. For instance, for lower aspect markers (a) the perfective vs. imperfective distinction may matter (perfective aspect is inherently more complete than imperfective aspect; Smith, 1991) and (b) verb type (e.g., activity verbs vs. mixed telic-stative (MTS; Li, 1990) verbs) combined with particular aspect markers may also matter.

To date, the only experimental research on IE is Guo (2022). She tested L1-English L2ers of Mandarin (and L1-Mandarin controls) on *zai* and *-zhe_{DUR}* with only activity verbs; she argues (on the basis of group results) that L2ers are insensitive to IE with *-zhe_{DUR}*. Guo also suggests that L2 difficulty with acquiring Mandarin aspectual properties depends on multiple factors.

Study: The study employs a judgment task to examine IE by manipulating three factors: SYNTACTIC POSITION (Asp1, Asp2, Asp3), ASPECT TYPE (perfective vs. imperfective), and VERB TYPE (activity vs. MTS). Asp1 markers (perfective *-guo* vs. imperfective *zai*) were presented with both activity and MTS verbs, Asp2 markers (perfective *-le* vs. imperfective *-zhe_{DUR}*) with only activity verbs, and Asp3 markers (perfective *wan* vs. imperfective *-zheres*) with only MTS verbs ($k = 6$ per 8 conditions)—see Table 1. The 48 critical items were distributed into two lists with 45 fillers. Participants judged the completeness of simple sentences (e.g., (1a) and (1b)) on a 6-point scale (plus an *I don't know* option). The purpose is to see (a) which factors give rise to IE for L1 controls and (b) whether L1-English L2ers can (come to) show similar sensitivity.

There are two expected difficulties for these L2ers (Table 2). (1) SYNTACTIC POSITION: While English has two aspect positions (Garey, 1957), Mandarin has three; (2) VERB TYPE: English uses different verbs (e.g., *put on* vs. *wear*) with the same aspect markers to convey progressive vs. resultative, whereas Mandarin employs the same MTS verbs but with distinct aspect markers.

Results & Conclusion (Figure 1): Participants comprise 42 L1-English L2ers of Mandarin, split by L2 proficiency—Lower = 23; Upper = 19—and 80 L1-Mandarin controls. L1 results reveal that IE is influenced by SYNTACTIC POSITION, ASPECT TYPE, VERB TYPE, and their interactions. By contrast, L2ers exhibit sensitivity to IE influenced by ASPECT TYPE and VERB TYPE, but not, especially in the Lower group, by SYNTACTIC POSITION; the Upper group tends to overrate Asp2 perfective *-le*, possibly due to its perfective nature. Our L2 findings counter Guo's conclusion about *-zhe_{DUR}*, and they offer evidence of crosslinguistic form-meaning mappings between verbs and aspect markers for a given semantic contrast (e.g., progressive vs. result-state). However, they also highlight the challenges of IE that Mandarin Asp2/Asp3 markers pose to L1-English L2ers in requiring morpho-syntactic means unlike those in English to license temporal meaning.

- (1) a. Akiu **zai** ku
 Akiu PRG cry
 ‘Akiu is crying.’
- b. % Akiu ku-**zhe**
 Akiu cry-DUR
 ‘Akiu is crying.’

(Note. “%” indicates “incompleteness.”)

Table 1. Critical conditions ($k = 6$ each)

POSITION	Perfective	Imperfective	VERB TYPE
Asp1	- <i>guo</i>	<i>zai</i>	Activity
	- <i>guo</i>	<i>zai</i>	MTS
Asp2	- <i>le</i>	- <i>zhe</i> _{DUR}	Activity
Asp3	<i>wan</i>	- <i>zhe</i> _{RES}	MTS

Table 2. L2 predictions

	English	Mandarin	Prediction
ASPECT TYPE	Perfective vs. Imperfective		Easy
SYNTACTIC POSITION	2 positions (Garey, 1957)	3 positions (Tsai, 2008)	Difficult
VERB TYPE	Progressive	<i>put on + -ing</i>	Difficult
	Result-state	<i>wear + -ing</i>	
		<i>zai + chuan</i>	
		<i>chuan + -zhe</i> _{RES}	

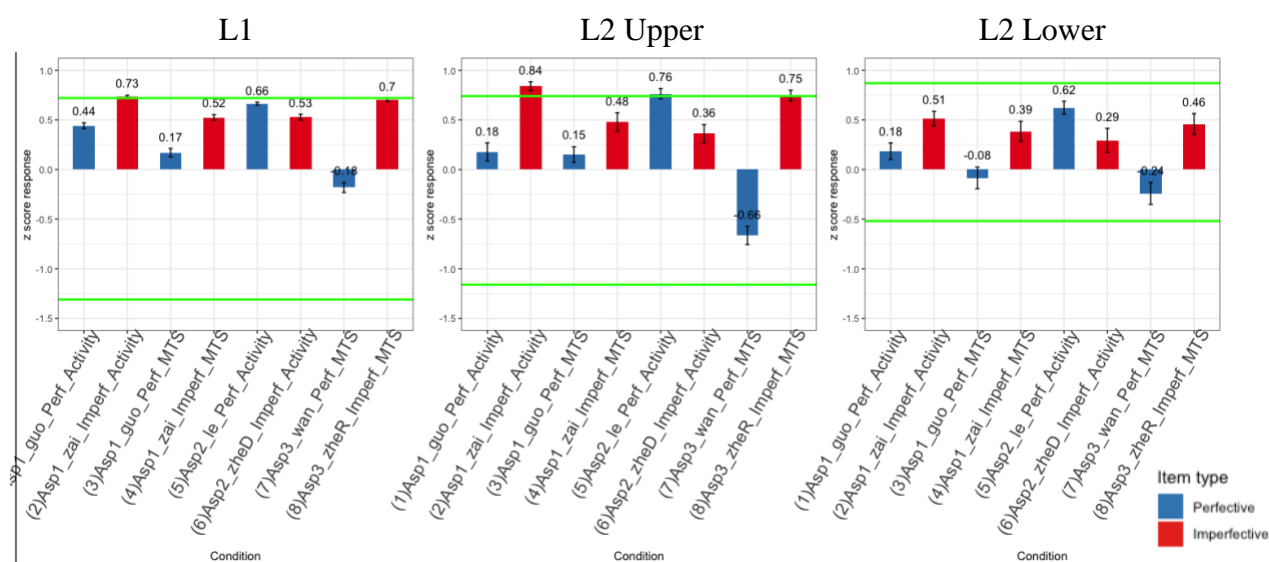


Figure 1. Mean z-score ratings from the sentence completeness judgment task

Note. Upper green line = ratings for grammatical fillers; lower green line = ratings for ungrammatical fillers

The statistically significant effects with respect to the Incompleteness Effect:

- (a) Sensitivity in SYNTACTIC POSITION: Asp1 imperfective *zai* > Asp2 imperfective *-zhe*_{DUR} (L1 & L2 Upper); Asp1 imperfective *zai* > Asp2 perfective *-le* (L1); Asp3 *-zhe*_{RES} > Asp1 *zai* (L1 & L2 Upper)
- (b) Sensitivity in ASPECT TYPE: Asp2 perfective *-le* > Asp2 imperfective *-zhe*_{DUR} (all groups)
- (c) Sensitivity in VERB TYPE: MTS Asp3 imperfective *-zhe*_{RES} > MTS Asp3 perfective *-wan* (all groups)

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The interpretation of English bare numeral constructions by Chinese-speaking learners

Bare numeral constructions (NCs) are argued to lack anaphoric use in languages such as English (Jiang, 2012). As shown in (1), the bare NC *two apples* in the second clause cannot refer to the same entity in the first clause unless a definite/demonstrative article is used. In contrast, bare NCs in Chinese can be anaphoric. In (2), *liangge pingguo* ‘two apples’ in the second clause can refer to the previously mentioned counterpart in the first clause without the aid of a definite/demonstrative article. This difference between English and Chinese serves as an ideal testing ground to investigate whether L1 Chinese L2 English learners can acquire the knowledge of the constraint that bare NCs lack anaphoric use in English. If yes, does the English proficiency matter? A sentence-picture matching truth value judgement task (Crain & Thornton, 1998) was created in both English and Chinese. In either language version, there were 16 critical items, each of which had two conditions: anaphoric (AN) and non-anaphoric (NA) (See (3)). For each item, participants viewed the given picture and read the target sentence. If the picture and sentence match in meaning, they should say ‘Yes.’ Otherwise, they say ‘No.’ Two lists were created, each of which had only one condition of each critical item so that participants saw 8 items per condition in a single list. Also, each list had 32 fillers. LexTale (Lemhöfer & Broersma, 2012), an online lexical decision task in English, was used to measure L2 English participants’ English proficiency. A total of 31 L1 Chinese L2 English learners (age range: 19-25), who were college students in China, were recruited. Ten L1 English speakers participated as native controls. The English task was presented before the Chinese task for the L2ers. The group results of the truth value judgment experiment are summarized in Figure 1. Since there were 8 items per condition, based on the binomial distribution, if a participant accepted or rejected 7 items or more out of 8, he/she would be considered to have consistently accepted/rejected the items in that condition. The individual data revealed that 30 (96.77%) L1 Chinese L2 English participants consistently accepted AN in Chinese and all L1 English participants consistently rejected AN in English, which confirmed the difference between Chinese and English. Out of the 30 L2 English participants, 10 (33.3%) consistently rejected AN in English, which suggests that they were able to acquire the target constraint in English. In contrast, the remaining 20 participants consistently accepted AN in English. The 30 L2 participants’ English data underwent a linear mixed-effects analysis, revealing significant main effects for English proficiency, as shown in Table 1. A point-biserial correlation analysis was further conducted to examine the relationship between their English proficiency scores and categorical judgments on AN in English. The result indicated a statistically significant, medium positive correlation: $r_{pb}(28)=0.39, p=0.03$. This suggests that as the English proficiency of L2 learners increases, they are more likely to acquire the target constraint. Note that Chinese bare NPs have been argued to involve a null D (e.g., Huang, Li & Li, 2009), which may carry an anaphoric property. The experimental findings suggest that L1 Chinese L2 English learners initially transfer the null D into their English interlanguage grammar when dealing with bare NCs. To understand how they can unlearn the null D, a post-experimental interview was conducted with successful learners. They all pointed out the necessity of using *the* or *these/those* before *two apples* in the second clause of (1). This indicates their knowledge that an overt determiner or demonstrative should always co-occur with numeral phrases if the latter are intended to be anaphoric. This knowledge can potentially be acquired through both positive and negative evidence in the input. Only when they come to understand that a null D is strongly prohibited in English do they restructure their interlanguage grammar of bare NCs to converge on that of L1 English speakers.

Examples

(1) There are two apples and one cake on the table, but Monkey will only eat *two apples*.

(2) zhuozi shang you liang-ge pingguo he yi-ge dangao, er Sunwukong
table on have two-CL apple and one-CL cake but Monkey
zhi hui chi liang-ge pingguo. (Chinese)
only will eat two-CL apple
'There are two apples and one cake on the table and Monkey will only eat two apples.'

(3) The experiment starts with some background information: Monkey (i), Pig (ii), Monk (iii) and Sandy (iv) love to put pictures of their faces on the items they will eat/use. There is also a dog (v) who can speak languages.



A sample anaphoric (AN) item: a. introduction: There are two Monkey's apples and one Pig's cake on the table. There is also one Monkey's apple under the table. b. the picture and sentence are shown below.

A sample non-anaphoric (NA) item: a. introduction: There are one Monkey's apple, one Monk's apple and one Pig's cake on the table. There is also one Monkey's apple under the table. b. the picture and sentence are shown below.

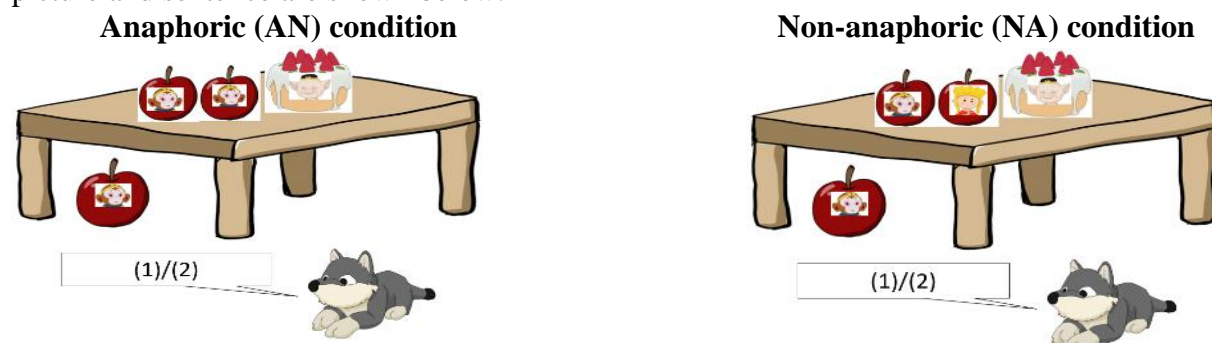


Figure 1. Mean proportion of 'yes' judgments in the two conditions of English and Chinese tasks

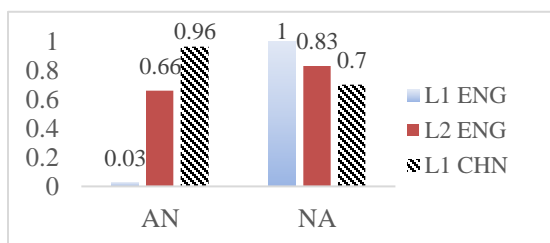


Table 1. Output of the binomial generalized linear mixed model fit by maximum likelihood

	Estimate	Standard Error	z-value	p-value
Intercept	2.21	0.68	3.27	0.001**
Anaphoricity (AN vs. NA)	1.04	0.32	3.29	< 0.001***
English Proficiency	-1.92	0.62	-3.1	0.002**
Anaphoricity * English Proficiency	1.73	0.38	4.59	<0.001***

Model: Score ~ Anaphoricity+ Proficiency + Anaphoricity*Proficiency + (1|Participant) + (1|Item).

Quality, quantity or both? A multidimensional analysis of textbook input on English articles

Background: It has been suggested that functional morphology is particularly resistant to acquisition (Slabakova, 2008). This is indeed the case in the use of articles in four different contexts of different semantic features by L2 learners of article-less L1s (+/-definiteness and +/-specificity) (e.g., Ionin et al., 2004, 2008). In this regard, the overuse of the definite articles in [-def/+spec] contexts is shown to be the most prominent error type (1). Very few textbook analyses have systematically examined how and whether or not textbook instruction is designed to target learners' difficulties reported in GenSLA studies such as (1). Following ongoing calls to explore pedagogical implications in GenSLA studies (e.g., Whong et al., 2013; White, 2023), we investigate the nature of textbook input and importantly, how it *has been* and *can continue to be* informed by insights in GenSLA studies.

Aims: Given the significance of explicit instruction (Spada & Tomita, 2010) and GenSLA studies to pedagogy, we (a) investigate to what extent current textbook instruction is informed by GenSLA findings. Furthermore, we (b) present a novel framework – not found in previous GenSLA textbook analyses (e.g., Gil et al., 2019; Marsden et al., 2018) – for analysing textbook input qualitatively and quantitatively.

Methodology: We selected three student and teacher textbooks used in primary or secondary schools in Hong Kong from the same publisher. The textbooks target three different proficiency levels (beginners, beginners to pre-intermediate and pre-intermediate). We first analysed relevant definitions, examples, exercises, suggested answers and teaching guidelines qualitatively (i) to examine the compatibility between them. We then examined how their coverage is comparable with reported acquisition difficulties in existing SLA studies. Secondly, a quantitative analysis (ii) examined the frequency of article use across different semantic contexts within relevant sections in the student textbooks.

Main findings: (i) shows that similar to previous findings (Ionin et al., 2004; Pica, 1983), textbook instruction does not always accurately present the concept of definiteness and specificity: the key concepts underpinning the use of articles. We further show that illustrative examples are sometimes incompatible with what textbook rules dictate, which impedes understanding of given rules (compare (2) with Figure 1). (ii) reveals that examples containing articles do not sufficiently demonstrate the article use across all semantic contexts: the [+def/+spec] context occurs most frequently (62.5%), followed by the [-def/+spec] contexts (34.3%), while there are no instances of article use in [+def/-spec] contexts (Figure 2). Given these semantic features are key in teasing apart the different use of articles, the input does not provide full evidence for helping the learners map different articles to different contexts.

Implications: The findings reveal a clear gap between the textbook instructions and research findings in GenSLA studies. We propose that textbooks could benefit from modifications informed by GenSLA research findings, especially in the area of well attested learner difficulties. The findings also add to the growing body of evidence which demonstrates the pedagogical importance of findings in GenSLA studies. Equally importantly, a more comprehensive analytical framework is offered to allow practitioners, materials writers and GenSLA researchers to form a more nuanced understanding of the nature of textbook input.

Examples

(1) When I was living in Ulan-Ude yet unmarried my friends presented me the small Siamese kitten. (the overuse of *the* instead of *a*) (Ionin et al., 2004)

(2) The indefinite articles are used when an object is mentioned for the first time while the definite article is used when an object is mentioned for the second time.

(Instruction from the 2 textbooks for beginners and pre-intermediate learners)

Figures

Figure 1. An example of a suggested answer provided for beginners learners.

Student 1: What can you see?

Student 2: I can see a cake.

Student 1: What colour is the cake?

Student 2: It is white.

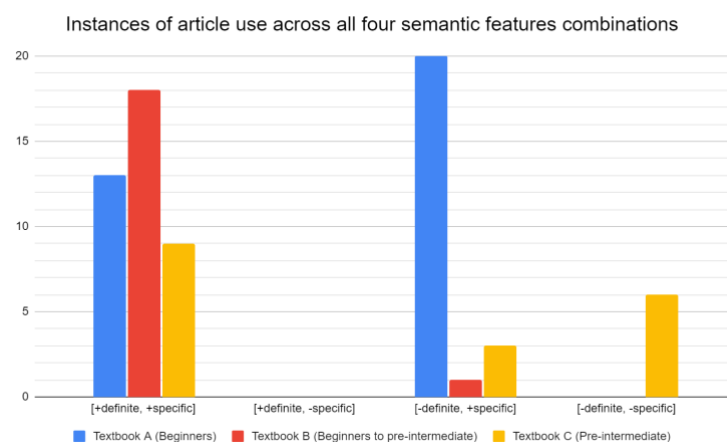
Student 1: Where is the cake?

Student 2: It is on top of the table.



*The underlined section represents the original blank shown in the exercise presented in the student's textbook.

Figure 2. Frequency distribution of the four semantic contexts in the student textbooks.



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The role of L1 transfer in L2 morphological errors with causative verbs: A case of L1 Korean-L2 English learners

Choi and Ionin (2021) present a compelling analysis of the role of L1 transfer in L2 acquisition at the morphosyntax-semantics interface, revealing that L1 transfer is invoked when a specific form-meaning mapping is obligatory in the L1, but is less likely when the mapping is optional. Building on this insight, the current study explores whether this significant finding can be directly applied to a different language phenomenon: the form-meaning mappings in the argument structure alternation (i.e., causative ↔ inchoative) of two classes of causative verbs, namely, change of state verbs (e.g., *break*, *open*) and psych verbs (e.g., *frighten*, *bore*).

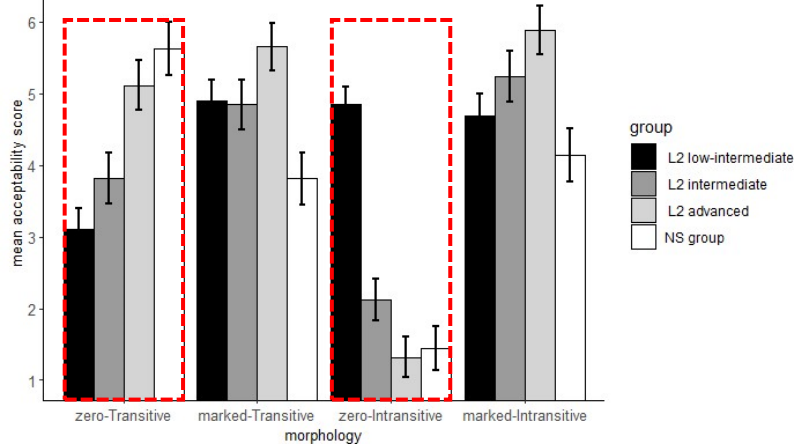
Regarding change of state verbs in Korean, the mapping relations are complex. A null morpheme attached to the verb can indicate either an inchoative meaning in intransitive configurations, as seen in example (1b), or a causative meaning in transitive configurations, as seen in example (2a). Similarly, a set of overt morphemes (*-i-*, *-hi-*, *-li-*, *-ki-*) attached to the verb can denote either a causative meaning in transitive configurations, as in example (1a), or an inchoative meaning in intransitive configurations, as in example (2b). Given that both the null and the overt morphemes can map onto the exact opposite meanings, this study posits that the form-meaning mappings in Korean change of state verbs are not one-to-one, or obligatory, but optional. In contrast, for psych verbs in Korean, the mapping relations are more straightforward. An overt morpheme (*-key ha-*) attached to the verb consistently conveys a causative meaning in transitive configurations, as in example (3a), while a null morpheme signifies an inchoative meaning in intransitive configurations, as in example (3b). This clear distinction leads the study to assume that the form-meaning mapping in Korean psych verbs is one-to-one, or obligatory.

The study involved 44 adult L1 Korean-L2 English learners, who were subsequently divided into three groups based on their L2 proficiency levels (i.e., low-intermediate, intermediate, advanced). A picture-based acceptability judgment task was conducted, replicating Montrul (2001), to investigate the issue of L1 transfer in this language phenomenon. We used eight change of state verbs, comprising four that need a causative morpheme in L1 Korean translation equivalents (as shown in (1)) and another four that need an anticausative morpheme (as shown in (2)), as well as six psych verbs for the test items. For each picture depicting a transitive or intransitive event, pairs of sentences with morphosyntactic manipulation of verbs (e.g., Transitive: *Ben opened the door/Ben made the door open*; Intransitive: *The door opened/The door got opened*) were presented to examine whether L2 learners show a preference for certain verb forms, potentially influenced by their L1 form-meaning mappings.

The findings for psych verbs suggest that L1 transfer occurs, especially among lower-level learners. Their rejection of target-like transitive forms (e.g., *The teacher bored Ben*) and acceptance of non-target-like intransitive forms (e.g., **Ben bored*) indicate the influence of L1 transfer, mirroring the L1 pattern where the overt morpheme (i.e., *-key ha-*) is used in transitives, but a null morpheme is used in intransitives. However, the results for change of state verbs indicate no L1 transfer, as there was no difference in how the English sentences were judged between the examples in (1) and those in (2). Instead, a notably low acceptance of target-like intransitive forms (e.g., *The door opened*) by the L2 intermediate group and a high acceptance of non-target-like intransitive forms (e.g., *The door got opened*) by all L2 proficiency groups suggest *overpassivization*, a typical L2 developmental pattern. These results support Choi and Ionin's (2021) conclusion that L1 transfer occurs when the form-meaning mapping in L1 is obligatory, whereas the transfer is not observed when the mapping in L1 is optional.

- (1) Change of state verbs (causative morpheme needed in Korean)
- a. Ben-i pethe-lul nok-*i*-ess-ta.
Ben-NOM butter-ACC melt-CAUS-PAST-DEC
“Ben melted the butter.”
- b. Pethe-ka nok-ass-ta.
butter-NOM melt-PAST-DEC
“The butter melted.”
- (2) Change of state verbs (anticausative morpheme needed in Korean)
- a. Ben-i mwun-ul yel-ess-ta.
Ben-NOM door-ACC open-PAST-DEC
“Ben opened the door.”
- b. Mwun-i yel-*li*-ess-ta.
door-NOM open-ANTICAUS-PAST-DEC
“The door opened.”
- (3) Psych verbs
- a. Sensayngnim-i Ben-ul cilwuha-*key* hay-ss-ta.
teacher-NOM Ben-ACC bore-CAUS-PAST-DEC
“The teacher bored Ben.”
- b. Ben-i cilwuhay-ss-ta.
Ben-NOM bore-PAST-DEC
“Ben got bored.”

Figure 1 Group Results of Psych Verbs

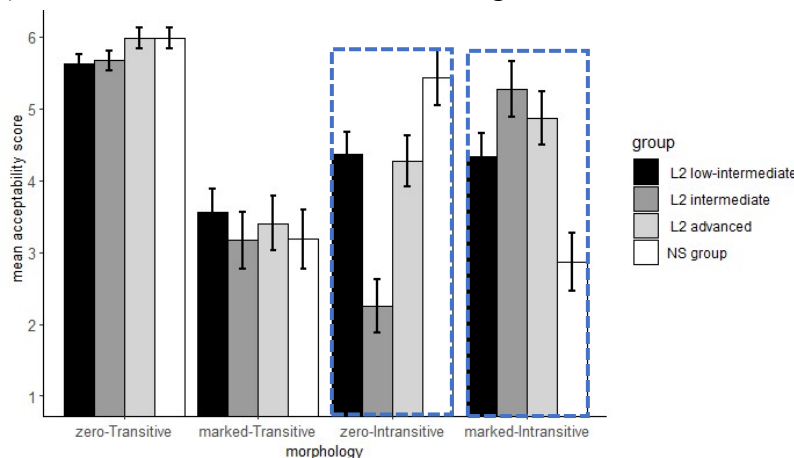


Note.

Example sentence for each morphological condition from left to right:

- The teacher bored Ben.*
- The teacher made Ben bored.*
- *Ben bored.*
- Ben got bored.*

Figure 2 Group Results of Change of State Verbs with Anticausative Pattern
(Similar results were observed in change of state verbs with causative pattern.)



Note.

Example sentence for each morphological condition from left to right:

- Ben opened the door.*
- Ben made the door open.*
- The door opened.*
- The door got opened.*

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Heritage language acquisition of evidentiality under maximal input conditions: The case of Turkish-American returnees

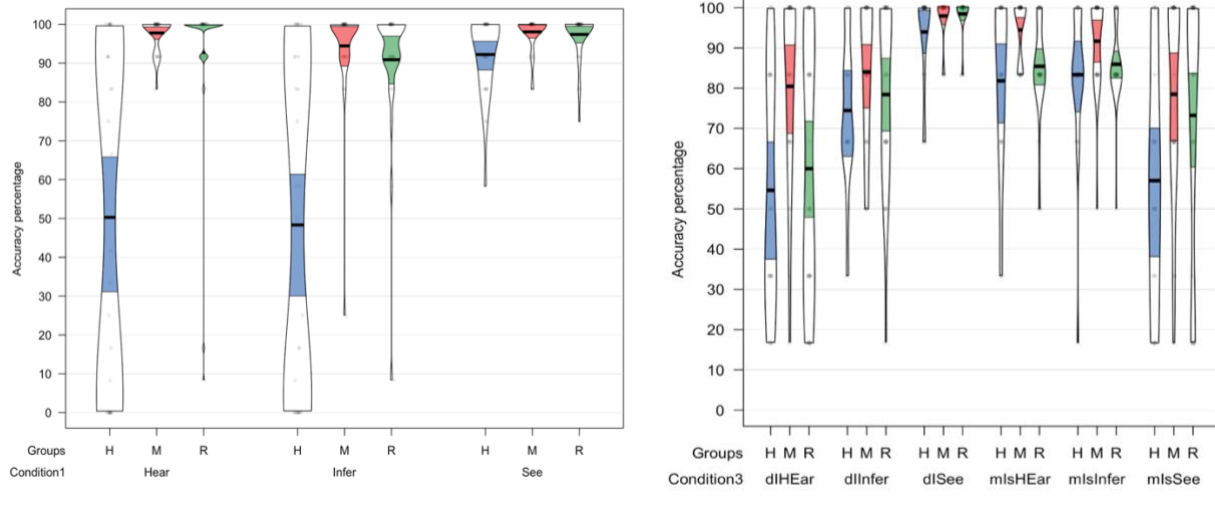
This study addresses a fundamental issue at the heart of our understanding of language acquisition: how malleable are grammars after puberty? Heritage speakers (HS) exhibit significant variability in the domain of aspectual morphology (Polinsky, 2018). Intervention studies with explicit grammatical instruction have shown that HS can recover aspects of a childhood language in adulthood (Muāgututi‘a, 2018), suggesting that linguistic knowledge acquired during the critical period, underused or underdeveloped throughout childhood, remains available when reactivated in adulthood (the Permanence Hypothesis, Bowers et al. 2009).

We take this line of research a step further and ask whether interrupted acquisition before puberty in an immigration context can result in full nativelike attainment if HS are tested in a naturalistic setting, when fully immersed in and using the HL in a majority language context (i.e., in the homeland). To this end, we test *returnees*: HS born in an immigration context who returned to their country of origin in later years (Flores, 2020). We ask: To what extent do Turkish HS returnees show target-like acquisition of Turkish evidentiality system upon full immersion in Turkish after their return?

Turkish has two past tense morphemes to encode evidentiality, namely the direct evidential –*DI* and the indirect evidential –*mİş*. As shown in (1), –*DI* indicates that the speaker has witnessed the event, whereas in (2), –*mİş* expresses that the speaker has indirect information (hearsay or inference) (Aksu-Koç, 1988). Research has shown that Turkish-speaking children do not fully acquire Turkish evidential paradigm until 7 (Özturk & Papafragou, 2016). Turkish adult HS also show variability in their processing and production of evidential markers in Turkish (Arslan et al., 2017).

- | | | | | | |
|-----|-----|-----------------|-----|-----|-----------------|
| (1) | Ali | ara-dı. | (2) | Ali | ara-mış. |
| | Ali | call-D.PAST-3SG | | Ali | call-M.PAST-3SG |
| | | ‘Ali called.’ | | | ‘Ali called.’ |

Thirty-two Turkish-American returnees with varying age of return (AoR) to Turkey (before and after puberty) were compared to 30 Turkish HS residing in the US and 30 Turkish monolinguals in Turkey (i.e., the baseline group) using a context-based Acceptability Judgement Task (AJT) and a picture description task (PDT). Analysis of the data (binomial logistic regression models) indicated that returnees patterned with monolinguals in the PDT, significantly outperforming HS ($p < .001$) (Figure 1). However, in the AJT, monolinguals showed significantly higher accuracy rates than returnees, who in turn outperformed HS ($p < .001$) (Figure 2). All groups performed similarly in showing i) extension of –*DI* in the contexts where –*mİş* was required in production, ii) the highest judgement rates with –*DI* in the direct evidence context (i.e., dISee), ii) better judgements in accepting target sentences in congruent contexts (–*DI* for See context, –*mİş* for Hear and Infer contexts) than rejecting them in incongruent contexts (–*DI* for Hear and Infer contexts, –*mİş* for See context) ($p < .001$) (Figure 2). Finally, correlations between accuracy percentages, AoR to Turkey and length of residence (LoR) in Turkey of returnees (Figure 3) were not significant, suggesting that reactivation of the evidential paradigm occurs, albeit not fully, after full reimmersion in the HL, as compared to the other properties already analyzed (passives, relatives, binding) that show complete reactivation. We take these findings to support the Permanence Hypothesis and suggest that aspectual morphology is still nimble and malleable post-puberty. These findings provide a unique angle on the roles of age of acquisition and input factors in the acquisition and maintenance of a native language acquired in a bilingual context.



Figures 1&2. Mean accuracy percentages in the PDT and AJT by group and condition
Note. H = Heritage; M = Monolingual; R= Returnee

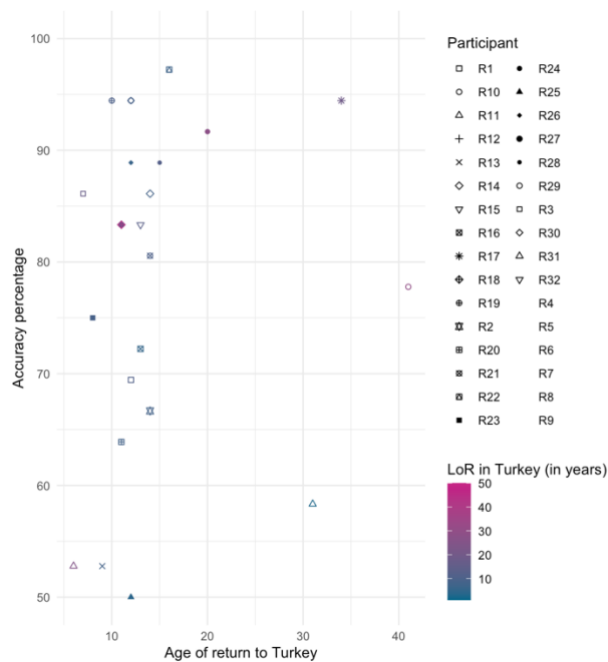


Figure 3. Correlation between mean accuracy percentages, LoR and AoR to Turkey in returnees in the AJT

References: Aksu-Koç 1988: Simultaneity in children’s narratives: The development of cohesion in discourse • Arslan, De Kok & Bastiaanse 2017: Processing grammatical evidentiality and time reference in Turkish heritage and monolingual speakers • Bowers, Mattys & Gage 2009: Preserved implicit knowledge of a forgotten childhood language • Flores 2020: Attrition and Reactivation of a Childhood Language: The Case of Returnee Heritage Speakers • Muāgututi’a 2018: Recovering Ergativity in Heritage Samoan • Öztürk Papafragou 2016: The acquisition of evidentiality and source monitoring • Polinsky 2018: Heritage Languages and Their Speakers

The acquisition of definite article use in L2 Italian and the nominal mapping parameter

This study investigated at what point in acquisition L1 English/L2 Italian learners reset the nominal mapping parameter as well as their acceptance of article omission in other contexts in L2 Italian by examining learners' acceptance of the omission/presence of the definite article in preverbal subject and postverbal object positions in [+/-specific] contexts, and how this changes across different stages of acquisition. Article use in L2 Italian poses a learnability issue for L1 English speakers because they have to learn new syntactic rules for article use by adding to their current grammar, and they have to reset the nominal mapping parameter because Italian and English use articles differently to express genericity.

The study examined seven native speakers and 79 L1 English/L2 Italian learners from a major Midwestern university at varying levels of proficiency (low-intermediate, intermediate, high-intermediate, and advanced). Participants completed a timed context-based acceptability judgment task followed by an untimed correction task in order to determine if they accept article omission in Italian and in what contexts. Including participants from a variety of proficiency levels is intended to help identify at what point learners stop or reduce their acceptance of article omission in Italian, particularly in contexts in which English omits articles. The tasks were designed to determine in what contexts learners accept the presence of articles, and if those are also contexts in which English omits an article.

The overall results from the judgment task show that learners generally accept articles when they are present in all the conditions, and this acceptance increases with proficiency level, especially in the [+specific] contexts. Learners also accept article omission at a high rate in contexts in which English would omit the article like the [+generic] preverbal subject condition. The results also show that the acceptance of article omission in this context does decrease with proficiency. There is also a fairly high acceptance of article omission in postverbal object position, and even the native speakers sometimes accepted article omission in this position.

The results from the correction task give further insight to learners' judgments, as well as their perception of article use. In each condition, most of the time when learners judged sentences as "odd", they did not correct them for article use. In +article conditions, the article is present and the target response is "fine". Here we see that when learners judged these sentences as "odd" they were not judging them as "odd" for the presence of the article, because none of the corrections targeted article use by omitting an article, rather they were targeting other parts of speech in the sentences or lexical items. This means that even when an article is present in a condition in which English would omit the article, learners are accepting the article and are not omitting it to match their L1 article use.

The conditions in which an article is missing and the target judgment is "odd", sheds more light on learners' perception and understanding of article use. The [+generic] preverbal subject - article condition patterns with English, and this is reflected in the learners' judgments and corrections. There is a steady increase from the lower levels to advanced learners that indicates that as proficiency increases, so does learners' awareness and ability to target the missing article in a sentence and correct it by inserting an article. The goal of this study was to identify the stage in acquisition when the nominal mapping parameter starts to reset, and give a clearer picture of the trajectory of the acquisition of article use in L2 Italian. The data show that as learners progress to an advanced level of proficiency, their judgments mostly line up with those of native speakers, while less proficient learners still tend to follow the parameters of their L1 English.

Context-based Acceptability Judgment Task Examples:

<p>+Generic Preverbal Subject Position +Article: <i>In Italia tutti mangiano bene a casa.</i> In Italy everyone eats well at home. <i><u>Le</u> nonne italiane cucinano molto bene.</i> (The) Italian grandmothers cook very well.</p>	<p>+Generic Preverbal Subject Position -Article: <i>In Cina ci sono tante grandi città.</i> In China there are many big cities. <i>*Strade sono sempre piene di gente.</i> Streets are always filled with people.</p>
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Results of AJT Examples:

Figure 1. Percent of responses by level in Generic Preverbal Subject +Article

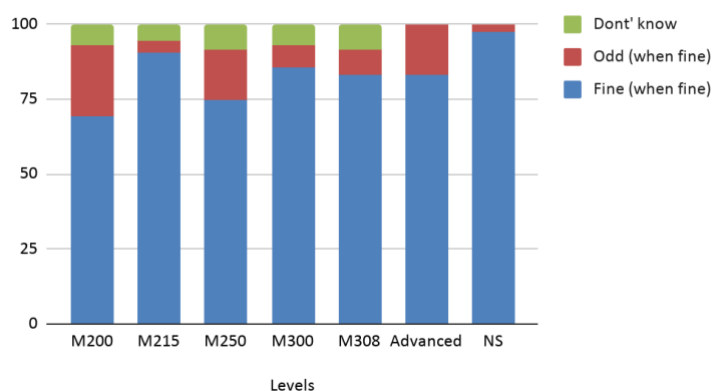
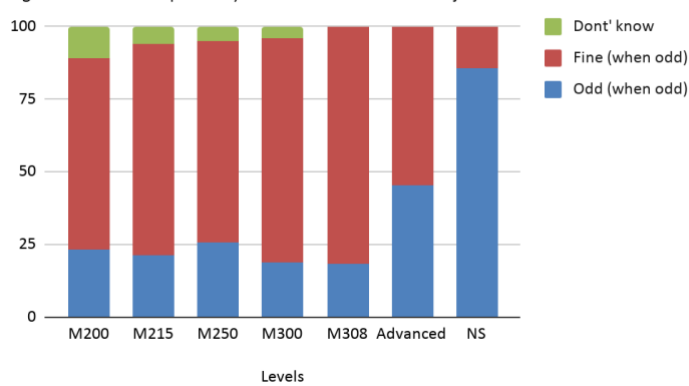


Figure 2. Percent of responses by level in Generic Preverbal Subject -Article



Correction Task Examples:

<p>+Generic Preverbal Subject Position +Article: <i>Però <u>i pinguini</u> vivono là.</i></p> <p>Ma i pinguini vivono lì. Pero i pinguini vivono a Antartide.</p>	<p>+Generic Preverbal Subject Position -Article: <i>*Per esempio, <u>gatti grandi</u> sono molto egoisti.</i></p> <p>Per esempio, i gatti grandi sono molto egoisti. Per esempio, gatti grandi sono molto pigro.</p>
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The ROSE Model and L2 epistemology: Evidence from γ -band processes in French

Acquisition in poverty-of-the-stimulus situations suggests that native and nonnative languages share the same epistemology (Schwartz, 1989; White, 2003), but its neurocognitive bases have not been discussed. Growing research on oscillatory cerebral dynamics supports a general ROSE model for I-language (Murphy, 2021, 2024) in which **R**epresentations and **O**perations in cortical processes create basic objects that are integrated into **S**tructures and **E**ncoded in working memory (WM) in cortical-subcortical connections. In the **ROSE** language architecture, these processes are the same whether the neurofunctional subsystems of microcircuits encoding a language (Paradis, 2009) were established in initial development or in later implicit language learning.

This study focuses on biclausal *wh*-filler-gap dependencies as in (1a-c) in French. In these dependencies, *wh*-fillers must be iteratively processed at each gap site. We focused on the cortical processing (in the gamma (γ) band (>30Hz) as the bridge verb selects a C[*wh*] category and as the subordinator selects a Tense (T) category requiring a subject and a verb phrase. This processing requires that a *wh*-filler stored in WM be iteratively reinstated to the cortex to be merged, first with C[*wh*] and then with T. This mechanism predicts specific power patterns in γ : Low- γ (30-50Hz) activity signals narrowband input (RQ1), while cross- γ (30-120Hz) activity signals broadband cortical output as basic objects are created (RQ2) across native (NSs) and nonnative speakers (NNSs), ensuring the same epistemology across L1 and L2.

RQ1: Will low- γ activity (30-50Hz) reflect *wh*-filler narrowband reinstatement in gap prediction?

RQ2: Will cross- γ activity (30-120Hz) reflect the broadband merging of *wh*-fillers with C and T?

We used electroencephalography with a 64-electrode EGI system (Figure 1) to capture brain activity associated with the processing of *dit que* ‘said that’ in (1a-c). (1a) includes a *wh*-filler qualified by a non-selected verbal NP-modifier (Mod). (1b-c) include selected prepositional noun-complements (Comps), with (1b) containing a gender-specified pronoun and (1c) an unspecified pronoun. Event-related power differences (ERPDs) for [(1a)-(1c) vs. (1b)-(1c)] examining the Mod vs. Comp modulation of the gender specified vs. unspecified distinction were analyzed across NSs ($n = 24$; C-test $\mu = 48.7/50$) and NNSs ($n = 24$; C-test $\mu = 45.5/50$) using a time-frequency analysis. We analyzed ERPDs in induced γ power at the clause edge *dit que* ‘said that’ with a prior 700ms baseline in two bins 30-120Hz (broadband- γ) and 30-50Hz (low γ), with cluster-based non-parametric permutation tests (Oostenveld et al., 2011). We adopted a 0-1130ms analysis window covering the presentation of *dit que* ‘said that’. Following Nieuwland & Martin (2017), we expected low- γ power ERPDs to reflect *wh*-filler retrieval from WM in reinstatement and broadband- γ power to reflect the integration of *wh*-filler copies as the verb *dit* and the subordinator *que* were processed. All ERPD effects showed greater power for Comps than Mods (with negative power differences in [(1a)-(1c)]) and for antecedent-gender specified than gender-unspecified Comps (with positive power differences in [(1b)-(1c)]; Table 1). As shown in Figure 2, across-group ERPDs in low γ (effect A) occurred in advance of verb access (verb: 0-209ms), with low- γ ERPDs (effect B) maintained for 800ms after verb access into the subordinator. Broadband- γ ERPDs were timed with verb access (effect C) and the subordinator (effect D).

In sum, the effects in A through D are consistent with narrowband γ subcortical-cortical connections signaled in low- γ power and cortical output signaled in broadband γ across L1 and L2. We discuss how cortical processing in broadband γ can implement Merge and interpretive operations to derive a single epistemology for L1 and L2.

- (1) a. *Quelle décision le concernant est-ce que Paul a dit que Lydie avait rejetée sans hésitation?*
 b. *Quelle décision à propos de lui est-ce que Paul a dit que Lydie avait rejetée sans hésitation?*
 c. *Quelle décision à son sujet est-ce que Paul/Lydie a dit que Lydie/Paul avait rejetée sans hésitation?*
 ‘Which decision regarding/about him did Paul say that Lydie had rejected without hesitation?’

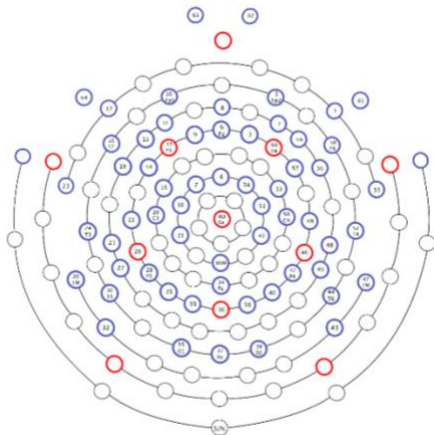


Figure 1 (left). The EGI 64-electrode system.

Figure 2 (below). Time-frequency plot from 20-130Hz across verb and subordinator

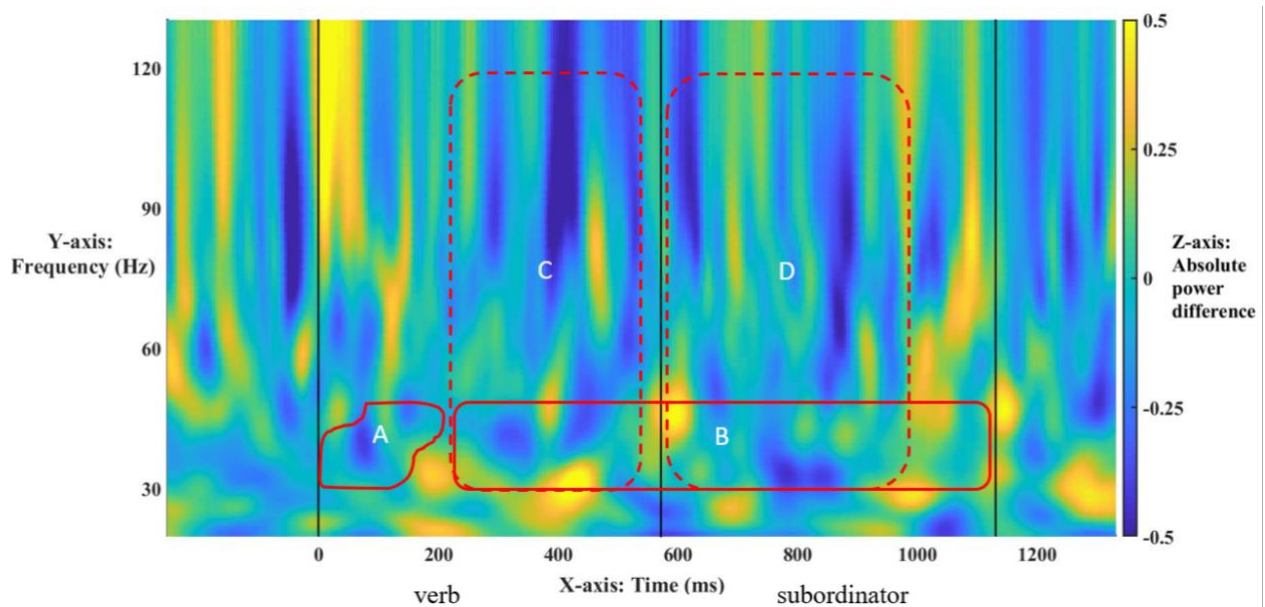


Table 1. Event-related power differences across verb and subordinator

Hz	Segment	<i>p</i>	Timing (duration)	Electrodes	Power differences
30-50	verb (see effect A in Figure 1)	0.02 4	0-209ms (209ms)	7 15 40 41 42 45 46 49 50 51 52 53	[1(a)-1(c)] = -0.8171 [1(b)-1(c)] = 0.2056
	verb (effect B)	0.00 4	254-1134 ms (880ms)	14 15 40 41 49 50 51 53	[1(a)-1(c)] = -0.8657 [1(b)-1(c)] = 0.1641
30-120	verb (effect C)	0.01 8	239-544 (305ms)	14 15 41 49 50 51 53	[1(a)-1(c)] = -1.0026 [1(b)-1(c)] = 0.0932
	subordinator (effect D)	0.01 4	7-407 ms (400ms)	13 14 15 41 50 51 53	[1(a)-1(c)] = -1.0192 [1(b)-1(c)] = 0.0641

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What causes Native Grammatical Attrition? Evidence from native speakers of German, Spanish and Southern British English in bidialectal/bilingual contexts

Native Grammatical Attrition (NGA) is a process by which an adult native grammar undergoes change typically after long-term migration. Since NGA has been found in some studies but not in others (Gürel 2017; Tsimpli 2004) identifying the contexts in which attrition is likely to occur remains a central challenge for the research field. In contrast, bilingual speakers often report problems recalling words and changes to their accents, even after short periods of living abroad (Schmid & Köpke 2017). We refer to this type of attrition as ‘superficial’ (Schmid 2013) as it does not affect speakers’ grammars (=deep unconscious knowledge). What is the link between superficial attrition and NGA? Both are consequences of changes in the input after migration, but it is unclear whether one necessarily entails the other. The study of NGA and its relationship to superficial attrition also needs to be framed within current theoretical debates on how native languages can change during a speaker’s lifespan.

In this study we test the predictions of the *Attrition via Acquisition* (AvA) model (Hicks & Domínguez 2020), which is grounded in Minimalist views of (second) language acquisition (specifically, Feature Reassembly (Lardiere 2009)). This model expects NGA to be facilitated when the L1 and L2 are closely related (as input is accessed easily), and for grammatical structures that exist in both languages but with different featural configurations.

Data from 30 bidialectal and 60 bilingual speakers was obtained via an Acceptability Judgement Task (AJT) and a Self-Paced Reading (SPRT) task. Details of the participants (30 L1 Southern British English (SBE)/L1b Belfast English, 30 L1 German/L2 Dutch and 30 L1 Spanish/L2 English speakers) appear in Table 1, and the target structures in Table 2. The participants also completed a sociolinguistic questionnaire. Bilingual participants completed two proficiency tests and a self-rating language ability test for both languages. A nativeness perception test targeting a subset of the participants in the L1 German and L1 Spanish groups was carried out as well.

The results from these tests show clear evidence of superficial attrition for the German and Spanish speakers. Speakers perceive that their native language has deteriorated after a long period abroad (Figure 1 for Spanish) and samples of their speech are rated as significantly less native than monolingual control samples by other native speakers (Figure 2 for Spanish). In contrast, the results of the experimental tasks show little overall NGA at group level. The SPRT suggests the possibility of attrition in L1 German verb clusters as the bilinguals, unlike the monolingual controls, are unfazed by the ‘incorrect’ (Dutch) word order at CRIT1 (Figure 3). Although it is not significant at group level, some individual attrition is also found in the AJT in the Belfast English embedded question inversion (Figure 4): almost 1/3 of bidialectal speakers categorically accept the inversion structure (unavailable in their native SBE dialect), unlike the SBE control group.

Overall, these results provide clear evidence that two types of attrition (superficial and NGA) which are often treated as the same in the literature need to be distinguished as distinct phenomena affecting different linguistic areas. A second finding is that there are likely to be multiple interacting factors (both grammar-internal and grammar-external) that might lead to a given grammatical property ultimately being resilient to attrition and that these need to be incorporated into models of NGA. Grammar-external factors may include the effect of frequency and saliency of a given property in the input, whereas grammar-internal factors may include whether the form is categorical in the L1 but optional in the L2 (i.e., adding optionality to the grammar).

	SBE/Belfast English	German/Dutch	Spanish/English
Participants	18 F; 12 M	23 F; 7 M	27 F; 3 M
Mean length of residence	24.7 years	25.6 years	21.3 years
Mean age of arrival	27 years	28 years	27 years

Table 1: Participant information

	Feature reassembly	No feature reassembly
SBE/Belfast English	Northern Subject Rule	Embedded inverted questions
German/Dutch	Grammatical gender	Verb clusters
Spanish/English	Aspectual marking	Grammatical gender

Table 2: Target structures in the three studies

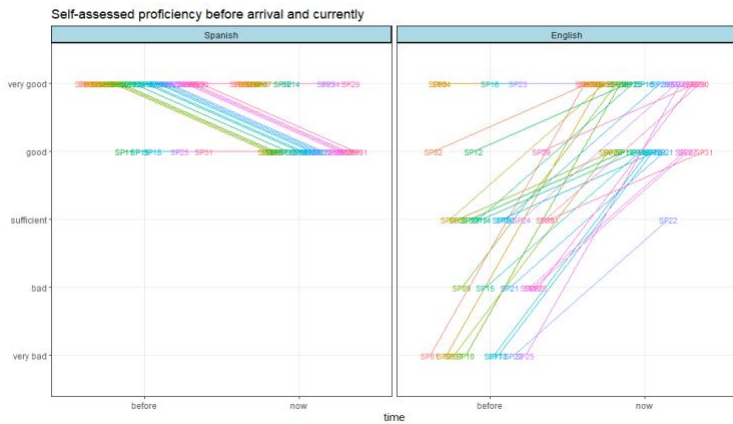


Figure 1: Self-assessed proficiency (Spanish)

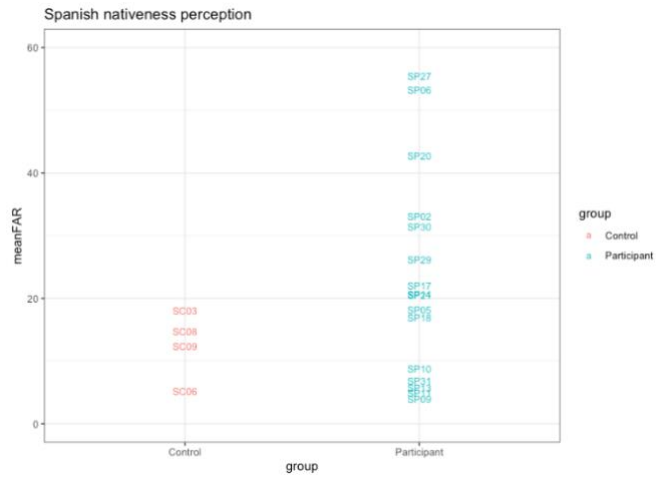


Figure 2: Perceptions of nativeness (Spanish)

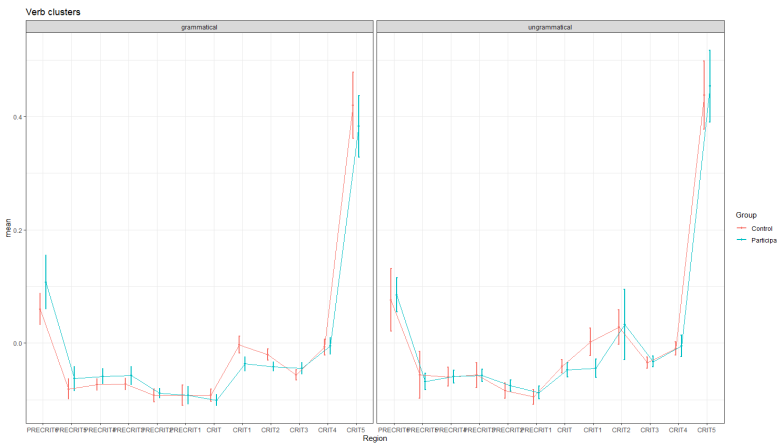


Figure 3: SPRT results – German verb clusters
CRIT = first verb in cluster, CRIT1 = second verb in cluster.

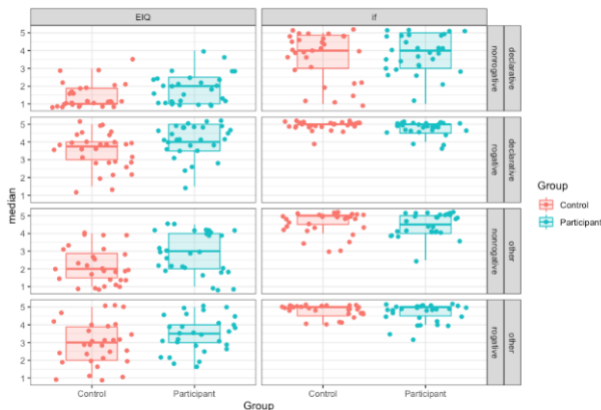


Figure 4: AJT results – SBE embedded inverted questions.
Many participants (= the bidialectal group) rate EIQ higher / more consistently than controls

The perception and production of Spanish lexical stress by Spanish heritage speakers

This study examines the perception and production of lexical stress by Spanish speakers (minoritized L1) in an English-dominant (majority L2) context. Despite recent growth in heritage phonology, several questions remain, particularly regarding suprasegmental factors. The present study informs (1) how first-generation (G1) and second-generation (G2) Spanish speakers in the US perceive lexical stress across positions (oxytone, paroxytone) and prosodic contexts (nuclear, prenuclear, unaccented), (2) the relationship between their perception and production of lexical stress, and (3) how perception and production are modulated by individual differences. We build on Kim (2020) [1], who reported an asymmetry wherein G2 perception patterned with monolingual Spanish while production did not. Here, we partially replicate Kim while (a) comparing G2 heritage data to a G1 baseline, (b) implementing a production task with aural (rather than written) stimuli, and (c) examining the role of Spanish and English proficiency, relative dominance, phonological short-term memory (PSTM), and auditory processing.

Spanish verbs are morphologically governed; stress allocation is predictable from TAM features in regular verb forms. For example, 1st person singular present (1p-sg-pres) forms are paroxytone (e.g., *tomo* ‘I take’) while 3rd person singular preterit (3p-sg-pret) forms are oxytone (e.g., *tomó*, ‘she/he/you took’). As seen in the *tomo* ~ *tomó* minimal pair, lexical stress is contrastive in Spanish as well as in English (e.g., ‘trusty’ ~ ‘trustee’). However, functional load differs crosslinguistically [2] and acoustic suprasegmental cues are weighted differently: Monolingual English speakers rely primarily on vowel quality, a segmental cue, [3] while monolingual Spanish speakers require a combination of duration and/or pitch and intensity that differs across contexts [4].

We examined perceptual acuity via forced-choice identification and production via syllable concatenation [5]. In the identification task, participants selected the subject of a phrase with a null subject and either a 1p-sg-pres or 3p-sg-pret verb form embedded in one of three prosodic contexts (Example 1). Data was coded for accuracy and reaction time. In the concatenation task, participants combined two syllables (e.g., ‘to’, ‘mo’) to produce the verb form that matched a context targeting a 1p-sg-pres or 3p-sg-pret form (Example 2). Vowels were analyzed for pitch, relative intensity, and duration, and F1/F2. We assessed dominance and proficiency via the BLP [6] and MINT-Sprint [7], PSTM via a serial nonword recognition task [8], and auditory processing was measured for pitch, duration, and formant discrimination [9].

Data collection and analysis is ongoing; here we present perceptual accuracy data from 26 G2 and 8 G1 participants. A logistic regression yielded main effects for generation, position, context, and auditory processing. While G1 accuracy was greater than G2 overall, this difference was not modulated by position (nuclear > prenuclear), or context (nuclear > prenuclear) (Figure 1). Of the individual differences observed, only auditory processing predicted accuracy, again independently of generation. Preliminary analysis of the production data suggests that, unlike perception, proficiency and dominance modulate participants’ production. We will discuss these asymmetric results as they relate to the role of individual differences in heritage perception versus production.

	Nuclear	Prenuclear	Unaccented
(1) 1st person present indicative	<i>tomo</i> , ‘I drink’	<i>Tomo la bebida</i> , ‘I drink the beverage’	<i>¿Cuándo tomo la medicina?</i> , ‘When do I take the medicine?’
3rd person preterit	<i>tomó</i> , ‘he/she/you (formal) drank’	<i>Tomó la bebida</i> , ‘he/she/you (formal) drank the beverage’	<i>¿Cuándo tomó la medicina?</i> , ‘When did he/she/you (formal) take the medicine?’

- (2) a. Yo jamás **tomo** los consejos. ‘I never take advice.’
 b. Ayer él **tomó** las medicinas. ‘Yesterday he took the medicine.’

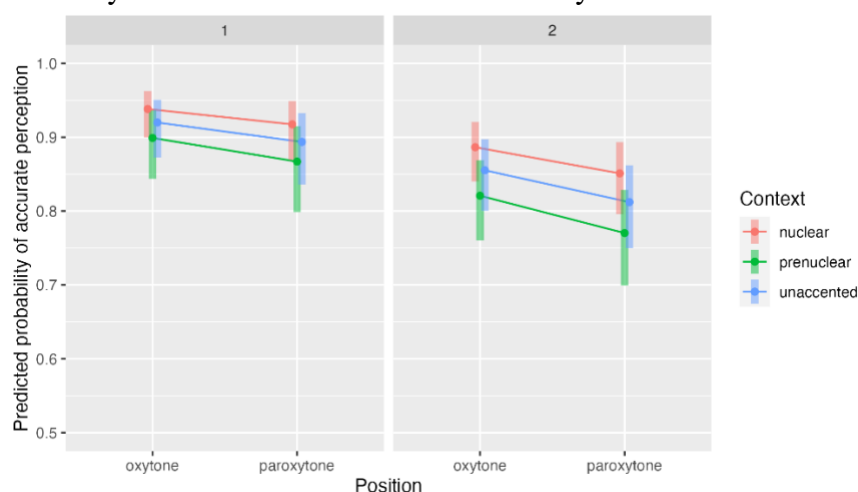


Figure 1. Predicted probabilities of accurate subject identification by generation, position, and context

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Interpreting and processing negatively quantified sentences: A bidirectional study of learners of English and Chinese

In English, a *universal quantifier* preceding **negation** (UN), such as in ‘*Every* horse didn’t jump over the fence’, two possible interpretations exist: the surface scope (SS) meaning ‘none of the horses jumped’, and the inverse scope (IS) meaning ‘only some horses jumped’. Unlike English, Mandarin does not allow scope ambiguity, only allowing the SS reading (none) (Aoun & Li, 1993; Huang, 1998). Similarly, in sentences where the universal quantifier follows negation (NU), like ‘The horse didn’t jump over *every* fence’, Chinese restricts the interpretation to the SS reading. Such cross-linguistic variation suggests that second language (L2) learners will encounter challenges with scope interpretation. Specifically, English learners of Chinese (ELC) face greater difficulty because they must acquire the absence of IS without (obvious) negative evidence. This project thus addressed the offline interpretation and online processing of two different types of negatively quantified sentences by CLE and ELC.

Experiments: Two on-line experiments were conducted with 64 CLE and 46 ELC. Comparison groups included 46 English speakers and 53 Chinese speakers. The first experiment used a written truth-value judgment task (TVJT) with a 7-point Likert Scale. The second experiment employed a visual-world eye-tracking task via ‘Gorilla’, recording participants’ eye movements while they listened and viewed pictures representing different interpretations (12 critical items and 31 fillers).

Results & Discussion: Judgment data and eye fixations to critical pictures were analyzed using R (mixed-effects models), treating subject/item as random effects. Important patterns emerging from the data were: **First**, for TVJT results with CLE, L2 learners rated Inverse Scope (IS) (2.84) significantly lower than L1 speakers (5.25) ($b = 0.36, p = .071$) for UN sentences. However, L1 speakers and L2 learners did not differ in their ratings of IS ($b = -0.26, p = .184$) for NU sentences. This result suggests that CLE acquired the presence of inverse scope, particularly in the case of Negation-Quantifier (NU) sentences. The eye-fixation data mirrored the judgment data: IS in UN sentences posed a greater challenge than SS for CLE, but no difference emerged for NU sentences. **Second**, ELC TVJT results, depicted in in Figure 1, show that IS on NU sentences was acceptable for both L1 Chinese speakers (contra theoretical predictions) and L2 learners (mean ratings higher than 5; $b=0.17, p=.51$). For Quantifier – Negation (UN) sentences, although both L1 and L2 speakers rated IS very low, ratings by L1 Chinese speakers were even lower than those by L2 learners (L1:1.72 vs. L2: 2.72; $b=-0.35, p=.024$). This result suggests that L2 learners can acquire the absence of IS on Chinese UN sentences without negative evidence in the L2 input, overcoming the learnability problem. Figure 2 shows an L2 Chinese proficiency effect for UN sentences such that L2 learners with higher proficiency became less tolerant of IS but more willing to accept SS ($b=0.06, p=.007$). The fixation data (Figures 3&4) indicated that IS on UN sentences (dispreferred) was acquirable for L2. IS on NU sentences can also be acquired by ELC in that they have the knowledge that IS is possible in Chinese NU. These data are important for two reasons: (1) they challenge some theoretical claims about Chinese quantifier scope; (2) the data show that English-speaking learners of Chinese can narrow their grammar of quantification without negative evidence, which suggests that very abstract principles remain available to adult language learners.

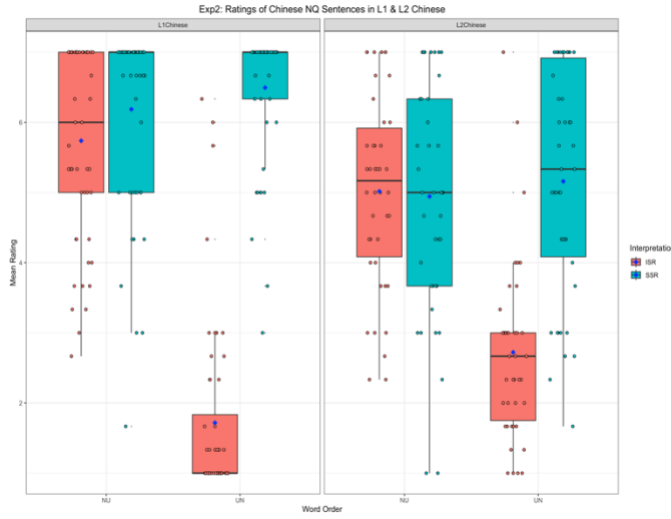


Figure 1. Mean ratings across conditions by L1 and L2 Chinese.

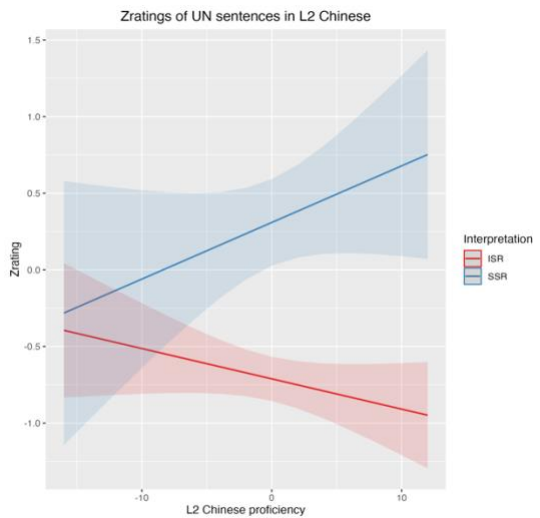


Figure 2. Role of proficiency in UN ratings

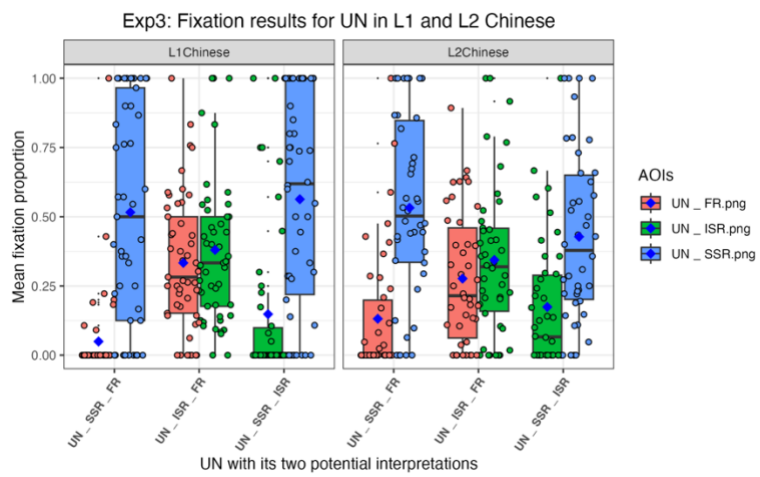


Figure 3. Mean proportions of eye fixations for UN sentences in L1 and L2 Chinese

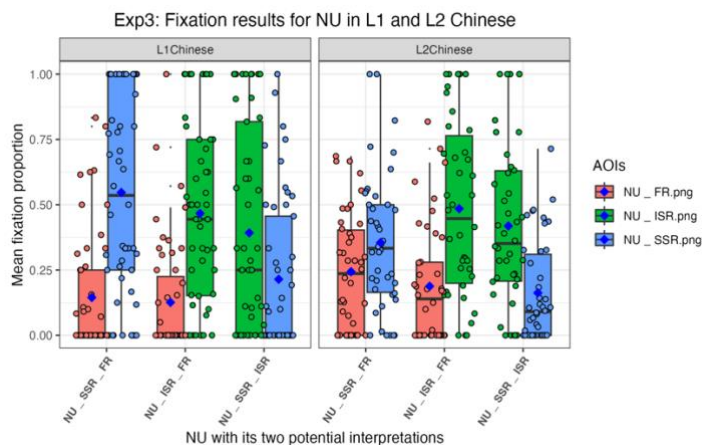


Figure 4. Mean proportions of eye fixations for NU sentences in L1 and L2 Chinese

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The acquisition of English L2 by adult German L1 learners: The development of PRO in control and raising-to-object structures

There is a long tradition of research on how children acquire English infinitival complements (see e.g., Chomsky 1969, Sherman & Lust 1986, Borer & Wexler 1987, Boeckx & Hornstein 2003, Landau & Thornton 2011) but, to our knowledge, only a few experimental studies have been carried out with learners of English L2 (e.g., d'Anglejan & Tucker 1975). For explanation, L1 researchers mainly relied on Rosenbaum's Minimum Distance Principle (1967) to explain the strategy children use, though unconsciously, which results in a better performance on object control structures.

The examples in (1) illustrate infinitival complementation structures which vary only in the matrix verb. The presence of such predicates in the main clause, albeit the apparent string identity (NP+V+NP+PRO+Infinitival clause), trigger different underlying structures. The sentences in (1) exemplify the so-called subject-control (1.a), object-control (1.b) and raising-to-object (RTO) (1.c) constructions. We hypothesized that perceived differences in acquisition patterns of structures presented in (1) must necessarily imply that learners are engaged in a process of constructing their developing grammar, a process that is triggered by the syntax-semantics properties of the involved matrix verbs. Accordingly, our goal in this paper was to determine whether the attested correlation between the syntactic structure of the complement and lexical control information of the main clause verbs by children (Sherman 1983; Sherman & Lust 1986, 1993) is justified in the case of adult English L2 learners, or whether the learners' L1 exerts any influence on development.

We examined the elicited production (Elicited Imitation) data from a group of GermanL1/EnglishL2 learners (N=37) at two levels of English proficiency on structures illustrated in (2). We included the finite counterparts of sentences exemplified in (1) because their comparison proved to be crucial to arguments that challenged the explanatory adequacy of performance-based accounts in control structures (e.g., Sherman & Lust 1993). Moreover, testing GermanL1/EnglishL2 learners on such structures was essential in our design, given the fact that German has a counterpart structure to the English infinitival clause employed when producing sentences that correspond to (1. a-b), but infinitival clauses in RTO structures (1.c/2.f) are ungrammatical in German (Wurmbrand & Christopoulos 2020).

Statistical results are shown in Figure 1. In contrast to child L1 acquisition, our participants did not differentiate control structures to any significant degree indicating L1 influence in which learners utilize structural knowledge available to them in their L1. However, there is a statistically significant difference in correct imitation of RTO structures (2.e-f), which cannot be explained by their L1 influence, but matches child L1 acquisition of English. Given that acquisition patterns differ precisely in the case where German does not match English seems to indicate that learners, rather than relying on purely performance-driven procedures, are accessing more general principles of language construction. In doing so they learn to integrate linguistic principles in their grammatical analysis related to structural configurations and the intrinsic properties of verbs. In other words, in cases where L2 does not match L1, they are mapping (innately) known language properties to target language structures in the sense of the Grammatical Mapping Hypothesis of Lust (2012; see also Fernández-Berkes & Flynn 2023). This finding is supported by results of the additional error analyses (e.g., large percent of conversion of finite to infinitival structures). This indicates learners' overall preference for the infinitivals over finite structures. We argue that GermanL1/EnglishL2 learners appear to follow a specific path of linguistic development in infinitival complementation, which is shaped by syntax-semantics clues available to them. These findings are compatible with and support the recent theoretical claim made by Satik (2018) that argues for the need to approach the study of control from a perspective in which both syntax and semantics play crucial roles.

Examples

- (1) a. Peter_i promised Paul_k PRO_{i/*k} to read.
 b. Peter_i told Paul_k PRO_{i/*k} to read.
 c. Peter_i wanted Paul_k PRO_{i/*k} to read.

(2) Examples of stimulus sentences

Subject control

- a. The worker promises the agent that he will close the door. (SubjC Fin)
 b. The father promises the boy to repair the camera. (SubjC INF)

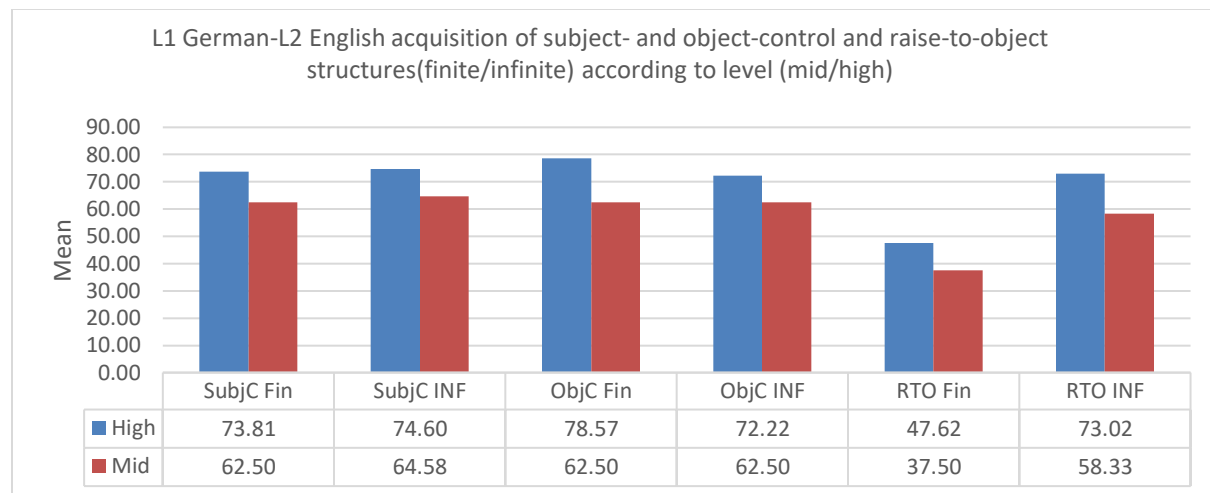
Object control

- c. The doctor reminds the artist that he will study the book. (ObjC Fin)
 d. The lawyer reminds the teacher to deliver the results. (ObjC INF)

Raising-to-object

- e. The hunter wants that the governor educate the pupil. (RTO Fin)
 f. The woman wants the engineer to illustrate the problem. (RTO INF)

Figure 2



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Revisiting the Compounding Parameter: Evidence from L1 Spanish - L2 English Learners

Early work in generative SLA focused on the role of parameters to model acquisitional outcomes (White, 1985, 1990). However, parameters, as articulated under the Principles & Parameters framework (Chomsky, 1986), as discrete points of crosslinguistic variation, faced empirical problems in SLA. Furthermore, modern syntactic theory has mostly abandoned parameters and shifted towards understanding crosslinguistic variation via featural differences of functional heads (Baker, 2008). The present study revisits the question of parameters in SLA via a conceptual replication of Slabakova (2002)'s study of the Compounding Parameter (CP) (Snyder, 1995, 2001; Wang et al., 2022).

The CP links syntactic availability of N-N compounds, double object constructions, verb particle constructions, and resultatives, as in (1)-(4).

- (1) Your socks are in the bathroom sink.
- (2) The famous architect built my parents a beautiful house.
- (3) The hikers used up their supplies on the first day.
- (4) Steven nailed all the top floor windows shut. (Slabakova, 2002)
- (5) *She shouted hoarse by yelling loudly at the children.

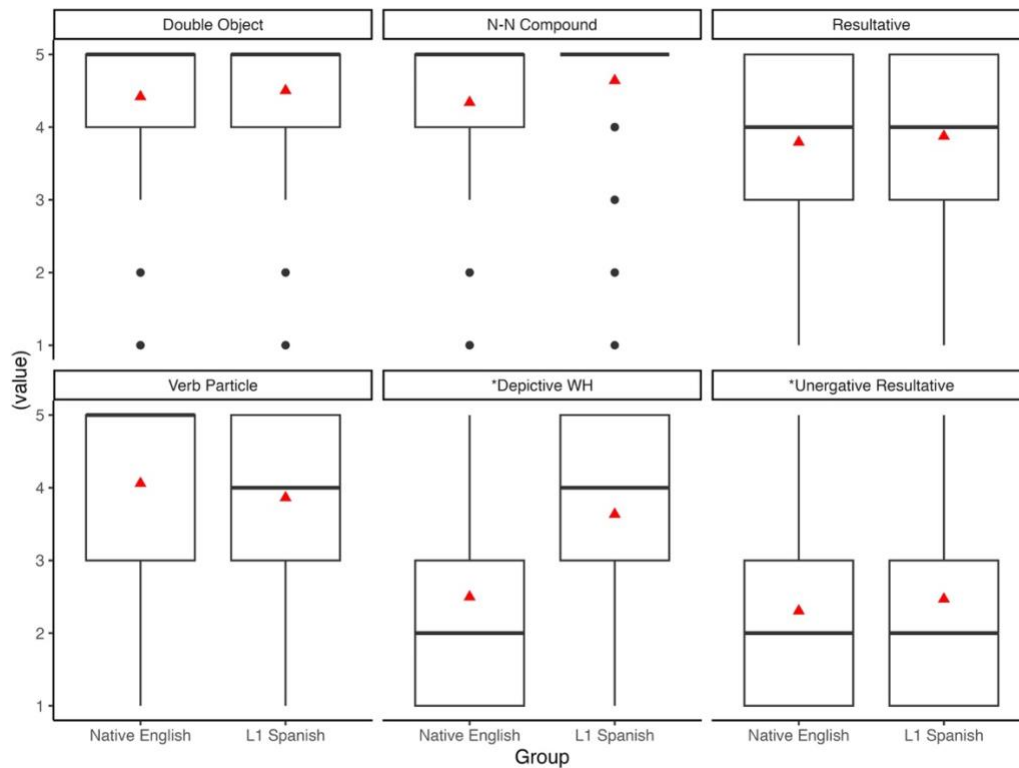
Under a parametric approach, learners' knowledge of these constructions should correlate. For example, if learners demonstrate robust knowledge of resultatives, they should perform similarly well with the other structures, because a single semantic mechanism underlies these structures (Wang et al., 2022). Under a non-parametric approach, in which acquisition is piecemeal, we might expect dissociations in learners' performance with these structures, even at high levels of proficiency, as nothing intrinsically links their acquisition.

25 L1 Spanish - L2 English learners and 29 native English speakers completed the study. The Spanish group completed the BLP (Birdsong et al., 2012), Spanish and English cloze tests, and Spanish (not reported) and English acceptability judgment tasks. The English group completed the English acceptability judgment task and the English cloze task. For the English task, conditions were N-N Compound, Double Object, and Verb Particle, Transitive Resultative and *Unergative Resultative, as in (1)-(5). The mean English cloze test scores (Max 40) were 33.7 (SD = 6.66) and 37.1 (SD = 2.95) for the Spanish and English groups respectively. A one-way between subjects ANOVA conducted on these scores revealed no significant differences between the groups ($p > 0.05$), indicating advanced English proficiency for the Spanish group.

Results of the English acceptability judgement task were analyzed using cumulative link mixed models (Christensen, 2018). Learners' performance was targetlike in all CP structure conditions (Figure 1), showing no significant differences from the English group ($p > 0.05$). These results contrast with those of Slabakova (2002) because the advanced L1 English learners of Spanish in her study exhibited non-targetlike allowance of resultatives in Spanish, but targetlike performance with other structures. Importantly, however, the learnability challenge was different in the present study as L1 Spanish learners went from a grammar with a negative setting of the CP, which disallows the parametric structures, to a grammar (L2 English) with a positive setting of the CP, which can arguably be done with only positive evidence, whereas negative evidence may be required for L1-English L2 learners of Spanish. Overall findings are consistent with a parametric effect because learners have mastered CP structures, but still experience L1 transfer with structures unrelated to the parameter, such as depictive wh-movement (**How angry did John go home?*) which is grammatical in Spanish but ungrammatical in English.

Figure 1

English Grammaticality Judgement Task Ratings



Note: Means appear as red triangles.

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The distribution of VP-oriented adverbs in child and adult heritage speakers of Spanish

Adverb placement has been a topic of interest for many authors (Camacho & Kirova, 2018; Camacho & Sánchez, 2017; Guijarro-Fuentes & Larrañaga, 2011) as adverbs possess a highly changeable nature (Bosque & Gutiérrez-Rexach, 2009) which can lead to linguistic variability in their positioning inside the sentence structure (Zagona, 2002). Recent research posits that the variability found is linked to the verb movement phenomenon (verb raising), which allows the verb to raise to T (Guijarro-Fuentes & Larrañaga, 2011) as in (2c) and other positions inside the sentence structure (2a, 2c). This contrasts with English, where such movement is not allowed, and instead a T-lowering effect takes place (Camacho & Sánchez, 2017) resulting in adverbial positions such as (1a) and (1b). This contrast between English and Spanish language may induce crosslinguistic influence effects in bilingual populations exposed to both grammars, the case of Spanish heritage speakers born in the US.

(1) English

- a. Tom regularly plays soccer [S-ADV-V-O]
- b. Tom plays soccer regularly [S-V-O-ADV]

(2) Spanish

- a. Tom regularmente juega fútbol [S-ADV-V-O]
- b. Tom juega fútbol regularmente [S-V-O-ADV]
- c. Tom juega regularmente fútbol [S-V-ADV-O]

This study adds to previous work by investigating the distribution of 10 VP-oriented adverbs ending in *-mente* “-ly” in negative and affirmative sentences, and the potential role of crosslinguistic influence, dominance and experience in the path and rate of development (Flores et al., 2017; Sánchez, 2019; Shin et al., 2023) of these adverbial constructions with heritage Spanish children. An elicited production task administered to 14 child heritage speakers of Spanish (7;9 to 10;7; $M=9;5$) born and raised in the U.S and 25 Spanish monolingual children from Mexico (7;2 to 11;8; $M=9;8$) shows that child heritage speakers of Spanish produced significantly less verb-raising structures compared to the monolingual children, leading to higher proportion of preverbal adverb use (2a) and adverb-final use (2b). A correlation was found between dominance and experience: adverbial positions in English are more likely to be produced when higher dominance and experience in English (Figure 1). Likewise, Spanish adverbial positions have more probabilities of production when heritage speakers show higher dominance and experience in Spanish. These findings are compared with results of an ongoing project that has collected production data from 10 adult heritage speakers of Spanish (19;0 to 25;0; $M=19;8$), showing that overall production of the verb-raising position increases and the pre-verbal position decreases in comparison to the child heritage speakers (Figure 2). Further analysis is made in the light of recent studies regarding the role of dominance and experience in child heritage language acquisition (Sánchez, 2019; Shin et al., 2023) and the differences in the path and rate of language development (Daskalaki et al., 2022; Flores et al., 2017) in child bilingual grammars.

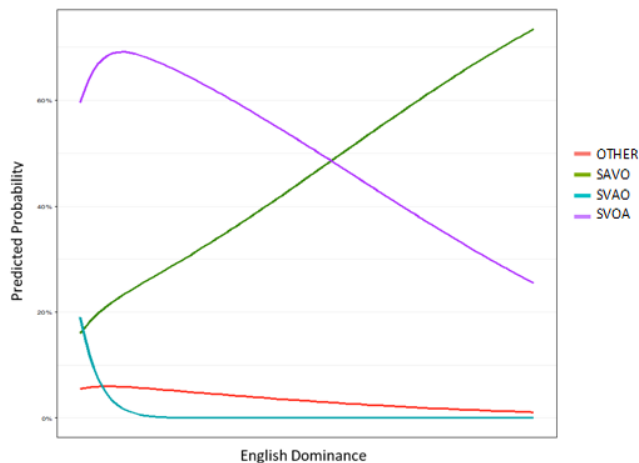


Figure 1: GLM: Response Probability of HS Based on Eng Dominance

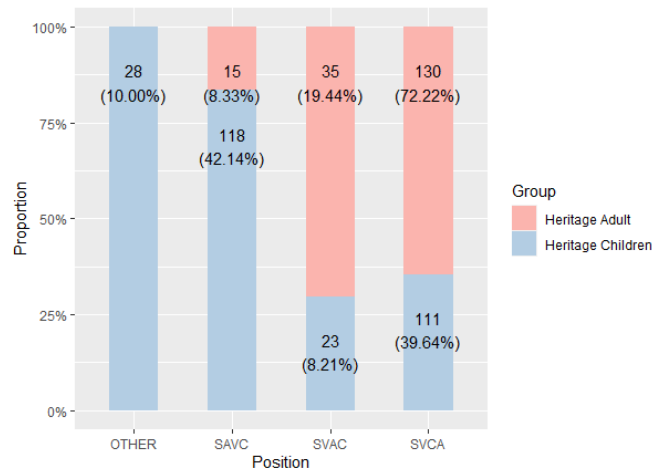


Figure 2: Overall distribution comparison between child and adult HS

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L2 acquisition of word order and agreement patterns across verb types in Brazilian Portuguese

This study examines the adult second language (L2) acquisition of word order and agreement patterns in Brazilian Portuguese (BP). BP has a relatively fixed SV word order with transitive verbs, but VS order is permitted with existentials, copula, and unaccusatives (Duarte & Silva, 2016; Kato, 2002; Rothman, 2010; Silva, 2001). Of particular interest here, BP presents a unique agreement asymmetry with unaccusatives, in which subject-verb agreement is obligatory in SV order, but not in VS order (Duarte & Silva, 2016). In contrast, agreement is always required with copula, regardless of word order, but never required with existentials (see Table 1). This presents a challenge for L2 learners, who must integrate information from multiple domains to acquire this distribution, with word order patterns stemming from the interaction of syntax and lexical semantics (Levin & Rappaport Hovav, 2005), and agreement patterns incorporating functional morphology (Costa & Silva, 2002).

Table 1. *Word order and agreement distribution by verb type*

	SV	VS
Existential³	<i>Em cima da geladeira têm/tem flores.</i> 'On top of the fridge there are-3.PL/SG flowers.'	<i>Têm/tem flores em cima da geladeira.</i> 'There are-3.PL/SG flowers on top of the fridge.'
Copula	<i>Os meninos são/*é inteligentes.</i> 'The children are-3.PL/*SG smart.'	<i>São/*é inteligentes os meninos.</i> 'Are-3.PL/*SG smart the children.'
Unaccusative	<i>Muitas cartas chegaram/*chegou ontem.</i> 'Many letters arrived-3.PL/*SG yesterday.'	<i>Chegaram/chegou muitas cartas ontem.</i> 'Arrived-3.PL/SG many letters yesterday.'
Periphrastic unaccusative	<i>Muitas cartas têm/*tem chegado.</i> 'Many letters have-3.PL/*SG arrived.'	<i>Têm/tem chegado muitas cartas.</i> 'Have-3.PL/*SG arrived many letters.'

Participants (21 L1 English/L2 BP speakers and 55 native speakers (NSs) of BP) completed a judgment task containing 64 stimuli sentences (+ distractors) representing the conditions in Table 1, rated on a 1-4 Likert scale. Stimuli were presented in both aural and written form. Participants also completed a standard proficiency measure (see Cabrelli Amaro et al., 2015) and the Bilingual Language Profile (Birdsong et al., 2012). L2 participants were designated as low or high proficiency based on their proficiency score.

Group mean ratings per condition are shown in Figures 1-4. All groups successfully accept existentials in all conditions (Figure 1). With both copula and unaccusatives (Figures 2-3), low proficiency L2 learner ratings are consistent with high proficiency L2 and NS participants in conditions examining word order. However, in conditions representing (dis)agreement patterns, although the low proficiency L2 learners make crucial distinctions between [+/-agree], these distinctions are not made to the same degree as those of the high proficiency L2 and NS participants, suggesting that the integration of inflectional morphology presents difficulties for these L2 learners. The discussion will consider these results in further detail, with particular attention paid to the periphrastic unaccusative condition (Figure 4), in which data from both L2 groups reveals a high degree of both inter- and intra-speaker variability, while the NS data reveals only inter-speaker variability. These results may reflect i) indeterminacy when facing a more complex structure and/or ii) the lack of saliency in the distinction between *têm/tem*.

³Following Freeze (1992) in assuming a locative argument in subject position with locative existentials, these stimuli were presented with inversion of the locative (rather than the subject) and verb.

Figure 1. Existentials

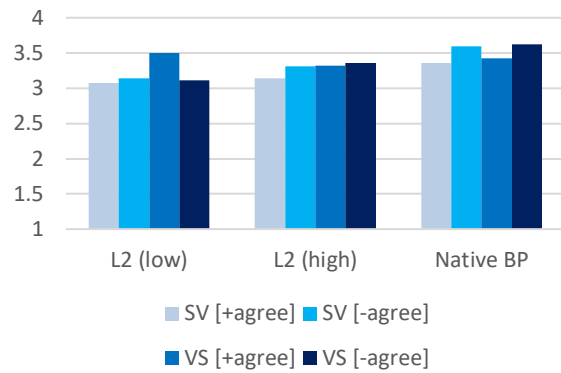


Figure 2. Copula

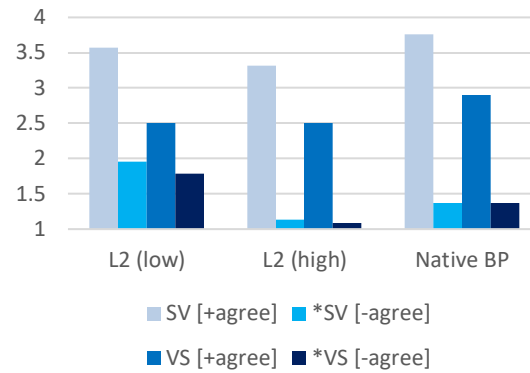


Figure 3. Unaccusatives

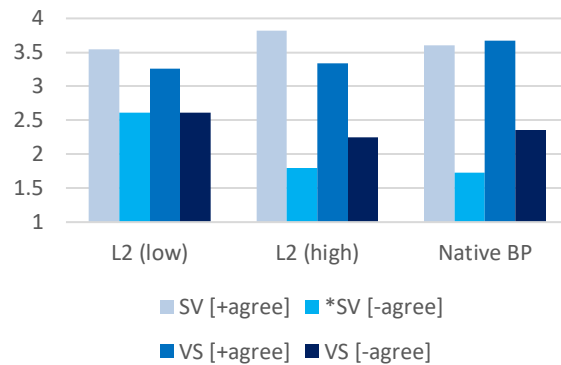
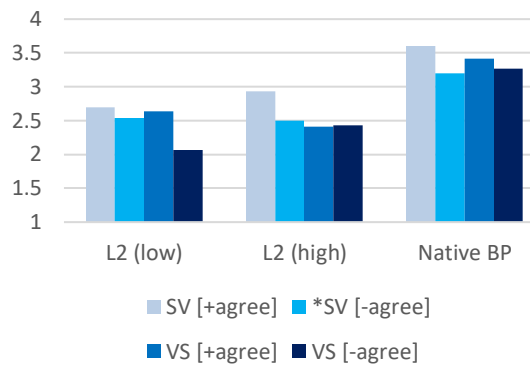


Figure 4. Periphrastic unaccusatives



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A study of code-switched compound verbs in Persian-Dutch bilinguals

This study investigates bilingual compound verbs (hereafter BCVs), verbs in which the components of a verbal compound come from the two languages of a bilingual speaker. In particular, we investigate to what extent grammatical category is relevant in the production of BCVs by Persian-Dutch bilinguals.

Compound verbs mainly consist of a nonverbal element (e.g., a noun, an adjective) and a verbal element. Previous studies on BCVs (a.o. Annamalai, 1989; Moravcsik, 1975; Tamis, 1986); and Purmohammad, 2015, 2022), reported that nominal constituents are often replaced by a verb from the other language. This can be illustrated with the Persian example (1) and (2), where the English verb *manage* has substituted the Persian nominal constituent *modiriyyat*.

- | | | | |
|-----|------------------|-----|------------------|
| (1) | modiriyyat kard | (2) | manage kard |
| | management-did | | manage-did |
| | 'he/she managed' | | 'he/she managed' |

Purmohammad, (2015, 2022), looked at the processing mechanisms underlying the production of BCVs in Persian-English bilinguals and concluded that the grammatical category does not constraint lexical access in the production of verbal compounds in bilinguals.

Our study investigates whether these observations also apply to BCVs in Persian-Dutch bilinguals. In particular, Dutch provides us with a way to gain more insights into the process of forming BCVs. In fact, while English is a language with weak inflectional features, and root infinitives can only be detected in third-person singular context, Dutch infinitives can be easily identified both syntactically (final position) and morphologically (suffix -(e)n). We hypothesize that Dutch verbs which replace the nominal component of a BCV are infinitives with nominal properties (see Booij, 1993).

Following Purmohammad (2015, 2022), the present study considers both naturalistic and experimental data. First, Naturalistic data were collected via conversations with 22 Persian-Dutch bilinguals (mean age: 33,5) with a high level of Dutch (Proficiency Questionnaire, LEPQ). The collected data show 149 instances of BCVs, of which (94%) are instances of BCV where a Dutch verb substitutes the nominal component as in (3a), to be contrasted with (3b). In all these cases, the non-finite form of the Dutch verb was used, as we predicted.

- | | | |
|-----|--------------------------------|------------|
| (3) | a. verbouwen kon-am | BCV |
| | to renovate do-I | |
| | b. bāzsāzi _N kon-am | Persian CV |
| | renovation do-I | |

The second part of the study was a picture-word interference naming experiment. The aim was to examine whether Dutch verbs would replace only the nominal component of the Persian BCVs or the entire compound verb. The Persian-Dutch bilinguals were presented with 20 pictures depicting an action accompanied by a Dutch verb (distractor) which was either semantically related or unrelated to the action depicted (see Figure 1). The subjects' task was to name the depicted action in Persian (L1), while ignoring the Dutch distractor verbs. In half of the trials subjects had to provide the whole CV whilst in the other half they only needed to provide the nominal component. The hypothesis was that if words from different grammatical categories compete for selection, there should be a delay effect in completing the nominal component of the CV in the presence of related distractor verbs. Our results show no interference in the production of Persian nominals. If anything, the presence of Dutch (semantically related) verbs had a facilitatory effect: the participants were faster in producing the nominal component of CVs in the presence of a related distractor (see Table 1). The results show that in the case of Persian-Dutch BCVs, grammatical class does provide constraints on lexical access during the production of BCVs: the nominal properties of the infinitives exert facilitatory effects.



Figure 1: example of related and unrelated conditions relative to the Persian CV *āšpazi_N kard* (cooking did). When only the nominal part was requested, the light verb (*kard*) was provided below the picture.

Distractor	Compound Verb	Nominal Component
Unrelated	3151 (2598, 3705)	3025 (2416, 3634)
Related	1987 (1596, 2361)	1431 (1534, 1328)

Table 1- Mean response latencies in ms. as a function of Linguistic component produced (compound verb vs. nominal component) and Dutch Distractor Relation (semantically unrelated vs. related).

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Gender and number agreement in Spanish heritage and L2 children in dual immersion

Unlike English, Spanish assigns masculine (M) / feminine (F) gender and singular (sg) / plural (pl) number to nouns (N). Determiners (Det) and adjectives (Adj) must agree with Ns in number and gender (1-2). In Spanish L1 acquisition, gender is mastered by age three, but assignment and agreement errors are frequent among heritage (HL) and second language (L2) speakers—adults (Alarcón, 2020) and children (Martínez-Nieto & Restrepo, 2021; Montrul & Potowski, 2007). By contrast, number agreement poses few difficulties (Polinsky, 2018). The *Lexical Learning Hypothesis* (Grüter et al., 2012; Hopp, 2018) explains both consistently mistaken gender and unstable variable gender, and sets out a distinction between child (phonology-based) and adult (literacy-based) lexical feature acquisition.

Although the acquisition of nominal concord by crib HL learners is early established, it is unclear whether HL children receive sufficient input to match majority Spanish peers (Shin et al., 2023). Our study examines nominal agreement by HL and L2 children (9-11 years) in a Spanish-English dual-language immersion (DLI) program offered by the public school system of a medium-sized US city. It aims to determine the impact of this rich input setting on the acquisition and maintenance of gender and number. Participants are 36 HL and 90 L2 children in their fifth and sixth year of DLI, and 55 majority Spanish L1 controls. All children completed a writing task, a pen-pal letter, designed to elicit M/F/sg/pl nouns.

Results show high *number* accuracy in N-Adj and Det-N for all three groups (Table 1). HL and L2 children performed at ceiling in both N-Adj (HL 97%, L2 97%) and Det-N (HL 98%, L2 97%). *Gender* was more vulnerable (Table 2). HL children performed at the level of L1 controls regarding N-Adj gender agreement (93%-98%) but were significantly less accurate in Det-N concord (90%-99%) ($t = -3.3739$, $df = 36.37$, $p = .002$). L2 learners were less accurate than L1 controls in both N-Adj agreement (L2 68%, L1 98%) ($t = 5.2194$, $df = 100.13$, $p < .001$) and Det-N concord (L2 74%, L1 99%) ($t = 10.018$, $df = 96.537$, $p < .001$). They were also less accurate than HL children in N-Adj gender agreement (L2 68%, HL 93%) ($t = 3.2765$, $df = 87.876$, $p = .002$), but differences in Det-N concord were only marginally significant (L2 74%, HL 90%) ($t = 2.0518$, $df = 57.847$, $p = .04$). Yet, L2 children were above chance level on all measures. Findings suggest that continuing academic training in the minority language has a beneficial effect on both HL and L2 children.

Results indicate that HL children retain their crib-learned nominal concord as demonstrated in ceiling scores for number and very high gender scores. However, they do not match the majority Spanish controls, a fact that is attributable to reduced input and English language environment. L2 children show mastery of concord for number, but significantly lower scores for gender, indicating an instability in assignment and hence in agreement. In sum, the results for both HL and L2 children indicate mastery of nominal concord as indicated by number agreement; prolonged development of gender assignment indicated by gender instability; and differential concord for Det vs. Adj. The gender assignment lacunae support the Lexical Learning Hypothesis.

Examples

(1)	el/los the-M-SG/PL	libr-o-s book-M-PL	blanc-o-s white-M-PL	‘the white book(s)’
(2)	la/las the-F-SG/PL	mes-a-s table-F-PL	blanc-a-s white-F-PL	‘the white table(s)’

TABLE 1. Number agreement

	L1 (n=55)		HL (n=36)		L2 (n=90)	
	N	%	N	%	N	%
Det-N number accuracy	630/634	99%	376/382	98%	803/826	97%
N-Adj number accuracy	170/170	100%	97/100	97%	230/236	97%

TABLE 2. Gender assignment and agreement

	L1 (n=55)		HL (n=36)		L2 (n=99)	
	N	%	N	%	N	%
Det-N gender assignment accuracy	364/368	99%	204/227	90%	343/463	74%
N-Adj gender agreement accuracy	109/111	98%	77/83	93%	133/195	68%

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Syntactic islands in heritage Spanish

Heritage language acquisition, in which speakers acquire a minority language naturalistically in childhood but become dominant in the majority language in adulthood, often results in heritage language grammars that differ from the baseline input (Montrul, 2016; Polinsky, 2018). Divergence from the baseline can stem from many sources, including attrition, dominant language transfer, and divergent acquisition unrelated to the dominant language. One goal of heritage language research is to understand which aspects of the heritage language are vulnerable to reduced input and which are resilient (Polinsky & Scontras, 2020). We contribute to this line of research with a study of syntactic island effects in heritage Spanish.

Although dependency length is in principle unbounded, as in (1), some long-distance dependencies in structures known as *islands* are not possible, as in (2). Some islands, like constraints on *whether* (3), vary cross-linguistically, and Spanish is claimed not to instantiate this restriction (Torrego, 1984). As Polinsky and Scontras (2020) point out, one area of special vulnerability in heritage grammars is long-distance dependencies, which may be related to their increased processing difficulty, especially given that heritage speakers may face online resource limitations in their less-dominant language. Island structures crucially involve calculating such dependencies, suggesting they may be vulnerable to divergence. However, evidence from Korean heritage speakers suggests that island restrictions can be acquired under reduced input (Kim & Goodall, 2016). We are not aware of any evidence for heritage Spanish.

We used an acceptability judgment task to examine two islands in Spanish: complex NP islands (2) and *whether*-islands (3). We tested each island with a 2x2 factorial design crossing ISLAND presence (Island/Non-island) and GAP position (Matrix/Embedded). The outcome of interest is the interaction, which indicates an island effect. We recruited a group of heritage Spanish speakers ($n = 183$) who acquired Spanish in childhood and grew up in the United States, and a control group ($n = 93$) of monolingual Mexican Spanish speakers (although we acknowledge this may not accurately represent the baseline for heritage language acquisition). Participants completed a written acceptability judgment task via PC Ixet (Zehr & Schwarz, 2018), judging two tokens per cell of the design, as well as fillers in a 2:1 ratio of fillers to target items.

A linear mixed-effects model for each island revealed significant interactions between ISLAND and GAP for both structures and both groups, with no three-way interactions to suggest differences between groups. An interaction plot (Fig. 1) reveals the characteristic island pattern in all cases and similar patterns across groups. Effect sizes (expressed as DD scores) are similar, too. Furthermore, we examined the distributions of ratings in each group (Fig. 2) and found similar patterns (clusters around the same modes) for the key violation conditions for both groups, albeit with greater variability (flatter distributions) for the heritage speaker group.

Overall, the heritage speakers pattern with the control group. Not only is the contrast between Complex NP and *whether* islands retained by these heritage speakers, but a similar distribution of ratings is reflected in their judgments. These findings suggest that constraints on syntactic islands may be resilient to divergence under reduced input, as previously found for Korean.

Examples

- | | |
|--|--------------------------|
| (1) ¿Qué tarea escuchaste que Mateo copió ___?
‘Which homework did you hear that Mateo copied ___?’ | Non-island |
| (2) *¿Qué tarea escuchaste el rumor de que Mateo copió ___?
‘Which homework did you hear the rumor that Mateo copied ___?’ | Complex NP Island |
| (3) ¿Qué tarea quieres saber si Mateo copió ___?
‘Which homework do you want to know whether Mateo copied ___?’ | Whether island |

Figures

Fig. 1: Interaction plots

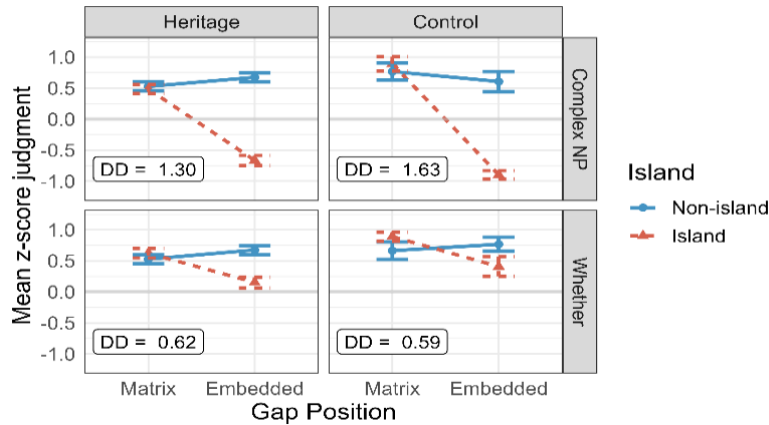
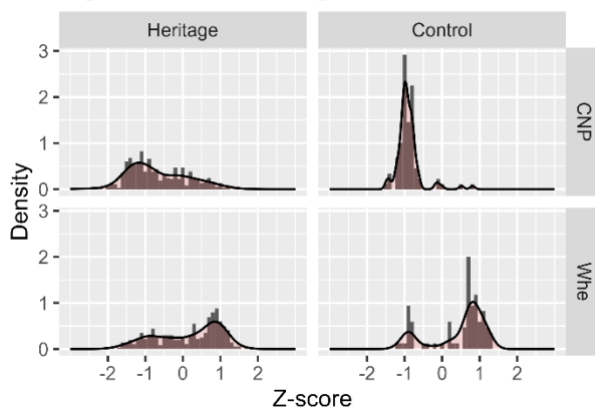


Fig. 2: Violation rating distributions



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The acquisition of V2 in L3 Norwegian

We present an ongoing study on the acquisition of verb second (V2) word order and the role of cross-linguistic influence (CLI) from previously acquired languages in Norwegian as a third language (L3) by L1 German-L2 English learners. We focus on two sentence types: 1) non-subject initials (Non-SU I); 2) subject initials with a mid-sentence adverbial (SU I) (see table 1). According to generative grammar, verb placement in (1) and (2) is a result of verb movement to C. The languages in the study varies with respect to verb movement: in Norwegian and German, finite verbs move from V to C (long movement), giving V2. In English, lexical verbs remain in situ (no movement), while auxiliaries move to I (short movement).

Previous studies on the transfer of V2 across different languages did not yield consistent results: Bohnacker (2006) and Håkansson et al. (2002), for example, found that V2 did not transfer from Scandinavian L1 to Dutch/German L3. This has been interpreted as potential non-facilitative transfer from L2 English. Stadt et al., (2016, 2018) found increased transfer of non-V2 with increased proficiency in L2 English. However, this has been partially contradicted by the findings of Listhaug et al. (2021) and Dahl et al., (2022), who observed that increased proficiency in L2 English correlated with more target-like placement in both L3 German and L3 French. A possible explanation of non-V2 transfer from L2 English is provided by the L2-status factor, which argues for a privileged role of the L2 as source of transfer due to higher neuro-cognitive similarity between the L2 and the L3 than between the L1 and the L3 (Bardel & Falk, 2007, 2012). An alternative account of the lack of V2 transfer is that CLI of verb movement is constrained by principles of economy (Busterud et al., 2023): considering verb movement is a costly operation, verbs may not move or not move enough in the learners' underlying syntactic representation.

Our sample consists of 44 beginner learners of L3 Norwegian with L1 German and L2 English. Testing was conducted online, via the browser-based platform eBabyLab (Lo et al., 2021). The participants completed experiments and proficiency tests in L3 and L2, and a questionnaire based on the LEAP-Q to obtain comprehensive description of participants' bilingual experience (Kaushanskaya et al., 2020). In the Acceptability Judgement Task (AJT) participants rated 80 sentences (40 targets and 40 fillers) on a 1-6 Likert scale. The 2 main conditions were V2 (n=20) and V3 (n=20), with sentence type (Non-SU-I / SU-I) and verb type (lexical / auxiliary) as sub-conditions. We also used a picture task for oral Elicited Production (EP) of the target sentences.

Despite triangulation of methods being infrequent in the L3 field (Puig-Mayenco et al., 2020), testing both comprehension and production will probably shed light on important questions of CLI, I.e. wholesale vs. property-by-property, (Rothman, 2011, Slabakova, 2017, Westergaard et al. 2017), language status (L1 vs. L2) (Bardel & Falk 2011) and also whether verb movement is constrained by principles of economy (Busterud et al 2023).

The statistical analysis of the results is currently ongoing. However, preliminary analysis of the AJT shows great variability in L2 and L3 proficiency and a possible correlation between proficiency in Norwegian and higher acceptability of non-target V3 sentences. The EP task also shows great variability, with some participants consistently producing V2, and others producing V2 only in certain contexts. Results will be discussed against existing theories of L3 acquisition and prior analysis of acquisition of verb placement in L2/L3 acquisition.

Table 1. Example of target sentences

Lang	Verb	Non-subject initial (Non-SU-I)	Verb	Subject initial (SU-I)
Nor	Lex	På mandag tar Anne bussen til skolen	Lex	Peter tar <i>alltid</i> bussen
Ger	Lex	Montags nimmt Anne den Bus zur Schule	Lex	Peter nimmt <i>immer</i> den Bus
Eng	Lex	On Mondays Anne takes the bus to school	Lex	Peter <i>always</i> takes the bus
Nor	Aux	Etter ferien har Anne lest to romaner	Aux	Peter har <i>alltid</i> lest romaner
Ger	Aux	Nach den Ferien hat Anne zwei Romane gelesen	Aux	Peter hat <i>immer</i> Romane gelesen
Eng	Aux	After the holiday Anne has read two novels	Aux	Peter has <i>always</i> read novels

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L2 acquisition of Russian motion verbs by L1-Korean and L1-English speakers

This experimental study investigates L1 transfer effects in L1-Korean and L1-English speakers' acquisition of the lexicalization patterns of semantic components of motion event in L2 Russian. We aim to examine whether L2 acquisition of motion encoding is constrained by Talmy's (1985) motion typology or by more fine-grained language-specific lexicalization patterns on an item-by-item basis (lexicalist approach, cf. Stringer 2007).

According to Talmy's (1985) typology, Korean and English/Russian are classified as verb-framed and satellite-framed languages, respectively, depending on whether Path is conflated with the verb or expressed as a satellite (prefixes, prepositions). Manner and Directionality are also expressed differently in these languages (Table 1). Unlike English and Korean, Russian overtly expresses Directionality. English and Russian are similar as they both express Manner by verbal roots. Korean and English feature deictic generic motion verbs unlike Russian. In Korean, a motion event is described by a compound verb form consisting of a generic motion verb and a manner or path verb (e.g., *go/come by running*). The Manner morpheme is optional, and the generic verb alone may express the motion event. These differences are expected to present difficulty in L1-Korean and L1-English speakers' learning of Russian motion verbs in distinct ways.

The experiment is created by manipulating lexicalization patterns of Manner (WALK, RUN, etc.) Directionality (UNI, MULTI) and Path (*v-*, *pere-*, etc). A picture description task (52 targets+52 fillers) is used to collect data from Russian, English, and Korean native speaker controls completing the task in their L1 and L1-Korean and L1-English-speaking learners of L2 Russian completing the task in L2 Russian. Data collection is ongoing and will be completed by the conference date.

Our pilot data (analyzed using generalized linear mixed models) from 66 L1-Korean L2-Russian learners indicates that the correct answer rates (CAR) for Manner, Directionality, and Path correlate with the proficiency level of the participants. As shown in (2a), Directionality in Russian, not expressed in Korean, is a challenging aspect for L1-Korean speakers, and the CAR for Directionality appears lower than for Manner. Manner, optionally expressed in Korean, is frequently omitted by employing the verbs *idti/xodit* 'walk' as pseudo-generic verbs roughly equivalent to *kada* 'go' and *oda* 'come' in Korean, as shown in (3). Path appears to be most difficult to learn among the three semantic elements (2b). This may be due to the typological difference between Korean and Russian regarding how Path is encoded or different degrees of cognitive salience of diverse Path types.

Based on the pilot data, we anticipate that L1-English speakers will experience no difficulty in learning Manner expressions while they will learn Directionality with as much difficulty as L1-Korean speakers experience. Although L1-English speakers could learn Path in Russian more easily than L1-Korean speakers, each lexical item may appear with different degree of difficulty. L1-English speakers might also use *idti/xodit* 'walk' as pseudo-generic verbs corresponding to *go* and *come*, but this tendency may be much weaker with L1-English speakers than with L1-Korean, as Manner is productively expressed by verbal roots in English.

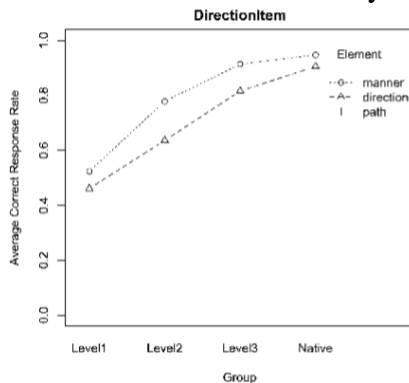
Potential implications from this experiment are first, to demonstrate that the Directionality hold comparable salience to Manner and Path, and second, the finding may potentially lend support to a lexicalist approach though highly constrained by typological traits.

(1)

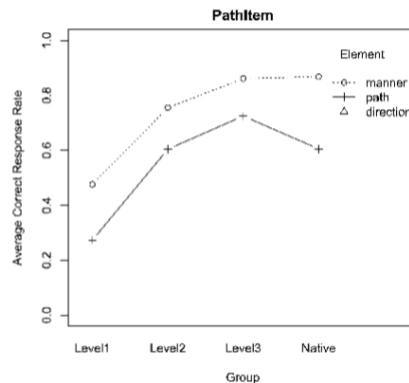
	Directionality	Manner	Path
Russian	verb or satellite	verb	satellite
Korean	not expressed	(optional)	verb
English	not expressed	verb	satellite

(2) The correct answer rates for Manner, Directionality, and Path among three L2-learner groups and the native control group

a. Manner and Directionality



b. Manner and Path



(3) Confusion matrix for Manner: actual answers in the row & expected answers in the column

	Response							Sum	rec
	crawl	fly	ride	run	swim	walk	x		
crawl	42	0	0	0	0	14	20	76	0.553
fly	0	456	68	0	0	47	37	608	0.750
ride	0	0	273	4	0	64	39	380	0.718
run	0	1	0	310	0	111	34	456	0.680
swim	0	0	51	1	407	81	68	608	0.670
walk	0	1	16	2	0	668	73	760	0.879
Sum	42	458	408	317	407	985	271	2888	0.747
prec	1.000	0.996	0.669	0.978	1.000	0.678			

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L2 Acquisition of French prenominal possessives: contributions of syntax & morphology

Prenominal possessives vary cross-linguistically in gender agreement. English encodes agreement with *possessors* (1) while French (and Spanish) with *possessums* (2).

- (1) Sarah is stressed because **her**_{FEM} father forgets to pay the rent.
- (2) Sarah est stressée parce que **son**_{MASC} père oublie de payer le loyer.

Morphological gender encoding is not always paradigmatically consistent (Fabricius-Hansen et al., 2017). Mexican Spanish only encodes possessums' gender in 1st plural (*nuestro/nuestra* [our]), while French encodes gender only for singular (*ma/mon* [1st], *ta/ton* [2nd] *sa/son* [3rd]). Two agreement mechanisms have been proposed: *semantic* (English) and *syntactic* (French, Spanish) (Anton-Méndez, 2011). Previous studies find evidence of L1 transfer (Anton-Méndez, 2011), but research has only focused on semantic agreement: L2/L3 English (Pozzan & Anton-Méndez, 2017; Agirre & García Mayo, 2018); or L3 German: (Lago, et al., 2019). Our research fills this gap by studying acquisition of **L2 French possessives** (syntactic agreement) by speakers of **English** (semantic agreement) and **Spanish** (syntactic agreement).

Slabakova (2008) proposes morphology represents the bottleneck of L2 acquisition (**Bottleneck Hypothesis** (BH)). Under Distributed Morphology (Marantz, 1995), the lexicon is distributed into *narrow lexicon* (only formal features), *vocabulary* (relating phonological strings with insertion contexts) and *encyclopedia* (relating vocabulary items to meaning). Morphological operations, responsible for inconsistent gender encoding, are post-syntactic and precede vocabulary insertion. Although French and Spanish encode the same syntactic information (narrow lexicon), they diverge in these post-syntactic morphological operations, leading to different agreement realizations. If morphology is the bottleneck of acquisition, positive L1 transfer of narrow features does not provide unique advantages if/when morphological operations differ. Thus, we expect difficulty with French prenominal possessives for both L1 English & L1 Spanish learners.

Procedure: The fill-in-the-blank task (2x2; factors: *kin* (same/different), *gender* (masc./fem); 40 items) included two sentences. Two human referents introduced with pictures (to avoid gender ambiguity); Answer options: feminine, masculine, and 'Both.' Items in the **self-paced reading task** (2x2; factors: gender and grammaticality, 32 items) consisted of a sentence introducing two human referents (3a-3d). The gender of the proper noun was unambiguously marked on the adjective. Items were kin-different (encoded different genders). We included two proficiency tasks. **Participants:** French NSs [n=35] and L2 French learners: L1 Spanish [n=49] and L1 English [n=22], collection ongoing) **Results: Fill-in-the-blank:** NSs scored at ceiling, confirming expectations (Table 1). Learners from both groups were inaccurate (no differences between them) (L1-Eng: 62.1%, L1-Sp: 67.7%), especially in different gender contexts. Proficiency effects significant for L1 Spanish only. **Self-paced reading:** (Fig.1; RTs log transformed, length-adjusted). Mixed-effect models per segment (main effects: gender, grammaticality; random intercepts: subjects, items) showed effect of grammaticality for NSs ($\beta=.1423$, SE .02835, $t(72.8)=5.019$, $p<.001$). Segment 6 shows a gender*grammaticality interaction ($\beta= .07990$, SE=.0276, $t(998.2)=2.89$, $p <.004$), showing that NSs took longer to recover from the ungrammaticality in masculine. **For L2 learners**, the only significant effect was gender (masculine was read faster overall), but there was no effect of grammaticality ($p > 0.05$).

Conclusion: Persistent difficulties, both online and offline, with learning morphological exponents, despite L1-L2 similarities (Spanish-French) or differences (English), showing that morphology, rather than syntax, is problematic. Results support the Bottleneck Hypothesis.

Sample tokens for SPR (/ indicate segments)

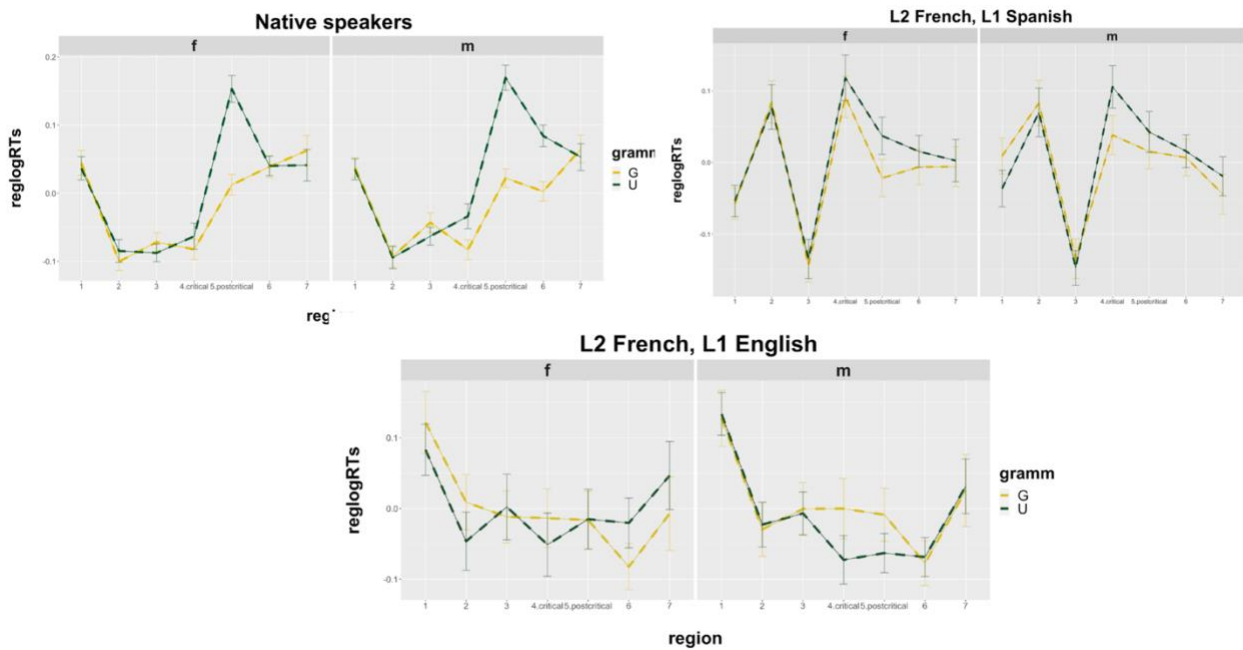
- (3a) Sarah / est stressée / parce que / son père / paresseux / oublie / de payer le loyer.
- (3b) *Sarah / est stressée / parce que / sa père / paresseux / oublie / de payer le loyer.
- (3c) *Hugo / est stressé / parce que / son mère / paresseuse / oublie / de payer le loyer.
- (3d) Hugo / est stressé / parce que / sa mère / paresseuse / oublie / de payer le loyer.

‘Sarah/Hugo is stressed because his/her lazy father/mother forgets to pay rent.’

Table 1. Accuracy proportions: Fill-in-the-blank task

Group	Kin	Accuracy	Correct	Incorrect	Count
NS	Diff	98.75	711	9	720
NS	Same	99.44	716	4	720
L2 Eng	Diff	43.86	193	247	440
L2 Eng	Same	80.45	354	86	440
L2 Sp	Diff	58.78	576	404	980
L2 Sp	Same	76.53	750	230	980

Fig 1. Log-transformed length-adjusted RTs per segment; Self-paced reading task



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How adults interpret disjunction under negation in native and nonnative Korean

Background: Languages differ in regard to how negated disjunction is interpreted (Szabolsci 2002). For instance, negation scopes over disjunction (NEG > OR) in English, as in (1), resulting in the *conjunctive* ‘neither’ reading, whereas disjunction scopes over negation (OR > NEG) in Japanese, as in (2), resulting in the *disjunctive* ‘not both’ reading:

- (1) The pig didn’t eat the carrot *or* the pepper.
 (= The pig didn’t eat the carrot AND the pig didn’t eat the pepper.) **conjunctive reading**
- (2) Butasan-wa ninjin-*ka* piiman-o tabe-*nakat*-ta.
 pig-TOP carrot-*or* pepper-ACC eat-*NEG*-PST
 ‘The pig didn’t eat the carrot OR the pig didn’t eat the pepper.’ **disjunctive reading**

Adapting into written format the Truth Value Judgment Task (TVJT) of Goro & Akiba (2004), Grüter, Lieberman & Gualmini (2010) compared the acquisition of negated disjunction by L1-English L2ers of Japanese and L1-Japanese L2ers of English. The results revealed, first, a proficiency effect, with lower-level L2ers more likely to have L1-like interpretations and higher-level L2ers more likely to have target-like interpretations, and, second, an asymmetry between the comparably-proficient L2 groups, with L1-English L2ers mostly evincing target-like behavior vs. the overwhelming majority of L1-Japanese L2ers evincing L1-like behavior.

Native and nonnative interpretation of Korean negated disjunction, as in (3), is the current focus. O’Grady, Lee & Lee (2011), again adapting the TVJT of Goro & Akiba, found that L1-Korean adults appear to allow *both readings*, with conjunctive predominating over disjunctive (100% vs. 33%). These seemingly curious results coupled with methodological concerns, such as uncontrolled prosody and pragmatic infelicity, prompt further inquiry into Korean.

- (3) Ama sasum-un capci-*na* sinmwun-ul *an* pilli-l-keya.
 Maybe deer-TOP magazine-*or* newspaper-ACC *NEG* borrow-FUT-SE

Study: Our bi-modal (aural-written) TVJT in the Prediction Mode addresses both concerns: Recorded prosody is carefully controlled; not knowing whether “X and/or Y” happens is more felicitous in non-past situations (Tieu, Yatsushiro, Cremers, Romoli, Sauerland & Chemla 2017). Specifically, a character (“Piggy”) in 15 video clips—see Figure 1—makes guesses about what will/won’t happen before each story plays out. There are two critical conditions ($k = 5$ each): CONJUNCTIVE, where the conjunctive reading is true (and the disjunctive reading is false); DISJUNCTIVE, where the disjunctive reading is true (and the conjunctive reading is false). Critical items are interspersed with 20 fillers (presentation order being pseudo-randomized); 10 video clips have 1 critical item and 1 filler, and 5 clips have 2 fillers. For each of Piggy’s guesses, participants judge whether it turned out true vs. false. Following the TVJT, participants—so far, 51 Korean native speakers (KNSs), 26 L1-English learners of Korean (ELKs), 19 L1-Japanese learners of Korean (JLKs)—also complete a language background questionnaire and two Korean proficiency tasks: a 100-item C-test (Lee-Ellis, 2009) and a self-rating questionnaire.

Results & Discussion: All three groups (Figure 2) show a preference for the conjunctive reading, despite varying acceptance rates for the disjunctive reading. Notably, the disjunctive acceptance rate is higher in the JLK group (37%) than in both the ELK group (25%) and the KNS group (27%). In addition, individual analysis (Figure 3) reveals that one JLK consistently prefers the disjunctive reading (80% vs. 60%), a pattern not observed in ELKs (or KNSs)—even though JLKs have higher mean Korean proficiency than ELKs do ($p < .05$). This suggests interpretation is influenced by L1 even in advanced learners. In light of these results, plans are underway (a) to test lower-proficiency ELKs and JLKs, since so far Korean proficiency across learners was generally high and (b) to translate the protocol into English/Japanese in order to test L1-English/L1-Japanese adults as a way to verify whether the new instrument is unbiased.

Figure 1. Excerpts from a Sample Video Clip (Disjunctive Condition): Critical Item and Filler


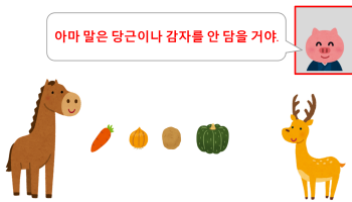
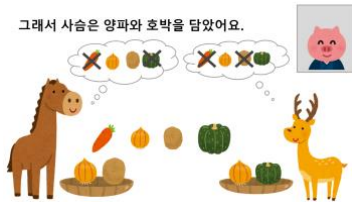

SCENE	SCRIPT (translated into English)
<p>어느 날, 말과 사슴이 채소를 사러 농장에 갔어요.</p> 	<p>NARRATOR (unseen): One day, the horse and the deer went to a farm to buy some vegetables. At the farm, they found carrots, onions, potatoes, and pumpkins. Piggy, can you guess what will happen next? Tell us your thoughts!</p> <p>PIGGY: I'm not sure about what will happen, but I can make a guess about what won't happen.</p>
<p>아마 말은 당근이나 감자를 안 담을 거야.</p> 	<p>PIGGY: <i>Maybe the horse will not take carrots or potatoes.</i> (Critical item)</p> <p><i>And maybe the horse or the deer will not take onions.</i> (Target-TRUE Filler)</p>
<p>그래서 사슴은 양파와 호박을 담았어요.</p> 	<p>NARRATOR (unseen): Let's continue listening to the rest of the story. The horse was thinking, "I have a dislike for carrots and pumpkins. Instead, I'll choose onions and potatoes." So the horse took onions and potatoes. The deer was thinking, "I have a dislike for carrots and potatoes. Instead, I'll choose onions and pumpkins." So the deer took onions and pumpkins. Was Piggy correct? Listen again to what Piggy said and tell us what you think.</p>
<p>아마 말은 당근이나 감자를 안 담을 거야.</p> 	<p>PIGGY (unseen): <i>Maybe the horse will not take carrots or potatoes.</i> <i>Maybe the horse or the deer will not take onions.</i></p>

Figure 2. Mean Acceptance by Condition and Group; error bars show standard errors

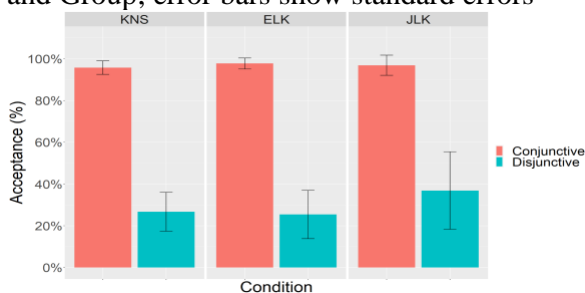
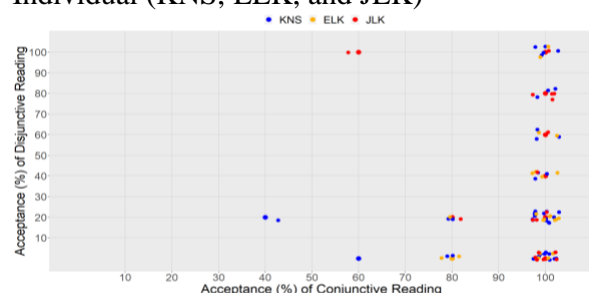


Figure 3. Distribution of Acceptance by Individual (KNS, ELK, and JLK)



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Typological effects of the lexicon on L3 syntax

While leading third language acquisition (L3) models agree that transfer/cross-linguistic influence (CLI) is possible from both previous languages in beginning L3 acquisition, typology's role is not well-defined. Rothman's Typological Primacy Model (2015) proposes a cue hierarchy that the parser uses to determine the typologically closer language, forming the basis for continued L3 acquisition. Slabakova (2017) and Westergaard et al. (2017) agree that typology matters, without specifying its role or how CLI is triggered. Moreover, structural priming has been shown in many contexts (Hartsuiker and Bernolet, 2015) with a stronger effect with repeated words, either in the same language or a translation, known as the *lexical boost effect* (Pickering and Branigan, 1998), echoing Rothman's highest cue, the lexicon. Despite its abundance, structural priming remains enigmatic (Hurtado and Montrul, 2020).

This study uses priming via the lexical boost effect to push the boundaries: having shown that we can prime structures from one language to another, and that repeating words across languages increases priming, it might be possible to prime syntactic structures solely through L3 words, with input type as the independent variable. If given an X-like lexicon, will participants prefer X-like syntax? Closely related languages in an innovative paradigm are used to investigate the typological effect of the lexicon.

German/English bilinguals were divided into two groups and learned either an English-like Swedish lexicon or a German-like Swedish lexicon, such as *kniv/knife* (German *Messer*) or *läsa/lesen* (English *to read*), taught via a silent slideshow of 154 slides consisting of pictures, words, and phrases. Crucially, the input's syntax was consistent with both English and German. Each group included 20 native speakers of both English and German for 80 total participants. For production data, they completed a sentence creation task consisting of 72 items testing 4 properties with word order differences between English and German: modal sentences, verb second, negation with definite objects, and verbs in subordinate clauses. Participants unscrambled 3 constituents to finish writing sentences started for them. For perception, they completed a grammaticality judgment task with 84 items testing the same four properties. Each property had 7 items with English-like word order, 7 with German-like, and 7 with a word order not possible in either. Responses were coded as accept or reject.

If participants are using one previously learned syntax, their perception and production should correlate. In a pilot study that tested verb second and modals, L1 English/L2 German participants given German-like input were significantly more likely to follow German-like verb placement (86% of target items) than participants given English-like input (51.5% of target items). A two-tailed Fisher's exact test shows this difference is statistically significant ($p = 0.0001$). The data collected so far in the expanded study with two more properties suggest a similar trend. As this study more deeply explores typology's role in beginning L3 through exploring the relationship between syntax and the lexicon, it has the potential for significant theoretical impact, while also expanding the research on structural priming to the L3.

Syntactic Properties and Resulting Word Order in All Three Languages

Property	English	German	Swedish
Modal	modal + verb	verb at end	modal + verb
Verb second	not V2	V2	V2
Neg. w/def art	before main verb	at end	after verb
Subordinate clause	SVO	SOV	SVO (unless V2)

Lexicons

English-like all en words	German-like both en and ett words	Additional Words Learned in both input types/all en words
present/present (Geschenk)	en blomma/Blume (flower)	säng/bed/Bett
lunch/lunch (Mittagessen)	en fågel/Vogel (bird)	pojke/boy/Junge
ambulans/ambulance (Krankenwagen)	ett fönster/Fenster (window)	kvinn/woman/Frau
get/goat (Ziege)	ett brev/Brief (letter)	bil/car/Auto
kniv/knife (Messer)	ett berg/Berg (mountain)	sova/to sleep/schlafen
potatis/potato (Kartoffel)	en spegel/Spiegel (mirror)	tvätta/to wash/waschen
penna/pen (Kuli)	en karta/Karte (map)	på kvällen/in the evening/am Abend
kopp/cup (Tasse)	en stad/Stadt (city)	har/has/hat
cykla/to cycle (Fahrrad fahren)	läsa/lesen (to read)	ser/sees/sieht
tala/to talk (sprechen)	spela/spielen (to play)	säger/says/sagt
lyssna/to listen (hören)	skriva/schreiben (to write)	kan/can/kann
driva*/to drive (Auto fahren)	arbeta/arbeiten (to work)	ofta/often/oft
klockan X/X o'clock (um X Uhr)	i morgon/morgen (tomorrow)	i/in/in
		måndag/Montag/Monday
		fredag/Freitag/Friday
		söndag/Sonntag/Sunday

*driva in Swedish is not *drive a car* but it has been used like this due to lack of appropriate verbs

Example from Sentence Creation Task

Property: Verb second

Unscramble: driver/en ambulans/Lisa

Sentence begins: Klockan 3...

English-like word order: Klockan 3 Lisa driver en ambulans.

German-like word order: Klockan 3 driver Lisa en ambulans.

Examples from Grammaticality Judgment Task (Bad/possibly bad/possibly good/good)

Property: Modal verbs

Bad order: Klockan 3 cykla Lisa kan.

English-like: Lisa kan cykla klockan 3.

German-like: Lisa kan klockan 3 cykla.

Property: Subordinate clauses

Bad: Kevin ser att klockan 3 har en lunch Lisa.

English-like: Kevin ser att Lisa har en lunch klockan 3.

German-like: Kevin ser att Lisa en lunch klockan 3 har.

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The L2/L3 acquisition of Mayan ejectives: the redeployment of dimensions and learning of gestures

In this talk, we explore the L2/L3 acquisition of Mayan ejectives from multiple languages. We propose a unified analysis of their acquisition in the feature framework of Avery & Idsardi (2001; Figure 1). Versions of this model have been used in recent work (Purnell, Raimy, & Salmons, 2019), including some on laryngeal contrasts (Natvig & Salmons, 2021; Figure 2) and on acquisition (Kwon & Starr, 2023; Table 1).

González Poot (2011, 2014) probed the acquisition of L2 Yucatec Mayan ejectives by L1 Spanish speakers. Using a discrimination task and a lexical identification task he argued (following Howe & Pulleyblank, 2004) that the L2 learners had acquired a new contrastive phonological feature [constricted glottis]. Wagner & Baker-Smemoe (2013) examined the L2 acquisition of Q'eqchi' ejectives by L1 English learners, finding that the learners “distinguished between ejectives and [plain] stops accurately” (p. 464). Nelson (2023) investigated the L3 acquisition of Kaqchikel ejectives by two groups of Spanish-English multilinguals, one with L1 Spanish and the other with L1 English arguing that both groups successfully acquired the glottalization contrast of Kaqchikel. Under the Avery & Idsardi model, we argue for a unified account of these studies in which the acquisition path for glottalized stops, including ejectives, would look as in (1):

(1) English: Glottal Width [spread] → Glottal Width [constricted]

Spanish: Glottal Tension [slack] → Glottal Tension [stiff]

The L1 *dimensions* Glottal Width and Glottal Tension have been successfully redeployed into the L2/L3 and only the new completion *gestures* [constricted] and [stiff] must be learned. This is significant as “only the dimensions are contrastive, not the gestures themselves” (Avery & Idsardi, 2001, p. 45). Plain stops would be unspecified for a Laryngeal dimension, identical to the representation for the *unmarked* stops in both English (i.e., lenis) and Spanish (i.e., voiceless). An advantage of this analysis is capturing that *marked* glottalized stops may have various phonetic realizations cross-linguistically. In Kaqchikel, the glottalized labial and uvular stops are often voiceless implosives rather than the ejective realization exhibited by coronal and velar stops. In Yucatec Mayan the glottalized labial is an implosive while the coronal and velar stops are ejectives.

The implications for L2/L3A theory are that these learners are acquiring: (1) non-targetlike grammars (with respect to dimensions) but representationally constrained by UG; (2) potentially a new dimension (i.e., Larynx Height), albeit as an enhancement feature; furthermore, they are acquiring a new gesture to implement within an existing dimension. In this talk we will also outline a range of factors which influence the ease/difficulty of the learning path such as: robust phonetic cues; non-local phonological information; and morpheme structure constraints.

We hope that this paper's phonological architecture as well as the understudied nature of the languages and phenomena in question will combine to make a significant theoretical and empirical contribution to the L2/L3A literature.

Figure 1.

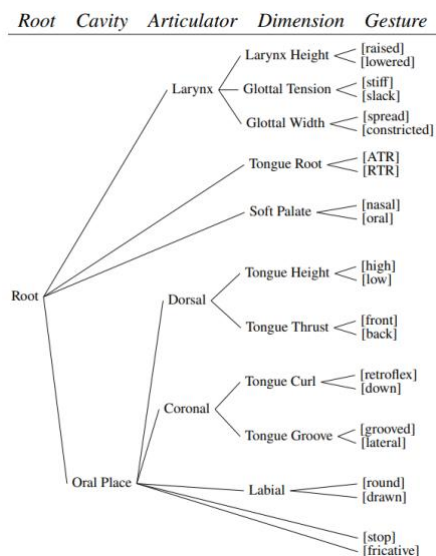


Figure 2.

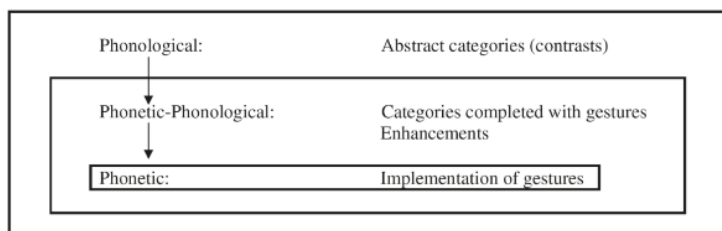


Table 1.

Language	Length?	Feature hierarchy
Mandarin	long	Root > Tongue Height > Tongue Thrust > Tongue Root > Labial
English	long	Root > Tongue Root > Tongue Thrust > Tongue Height > Labial
	short	Root (> Tongue Root) > Tongue Thrust > Tongue Height (> Labial)

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Acquisition of English Objects and the effect of the computational burden by L1 Japanese learners

This study investigates the acquisition of English objects by first language (L1) Japanese second language (L2) English learners at the beginner and intermediate levels with a focus on their ability to overcome their L1 knowledge of null objects and co-occurring quantificational (Q-) and sloppy (S-) readings. Japanese null objects and Q-/S- readings have garnered attention (e.g., Oku, 1998; Saito, 2007; Takahashi, 2008), but more needs to be discussed in L2 acquisition research. Q- and S- reading is one of the ambiguous interpretations observed in Japanese; the interpretation of abbreviated object pronouns varies depending on whether they are quantifiers or not. S- reading in Japanese is limited to two references for the omitted object pronoun, whereas Q- reading is not as limited (Sample materials 1).

This research aims to answer the following question: How do beginner and intermediate learners acquire English objects and associated Q- and sloppy readings with their limited input, and how does their L1 influence this acquisition process? The hypotheses here is: For L1 Japanese L2 English learners, eliminating Q-readings/Sloppy readings from L2 interlanguage may have different paths.

24 beginner (aged 14-15, OPT mean = 44.3) and 24 intermediate (aged 17-18, OPT mean = 68.1) leveled participants completed an interpretation task (pre-test) and a grammaticality judgment task (main test). For the pre-test, participants were provided 24 Japanese Sloppy/Strict or Strict/Q- reading stimulus sentences (6 tokens each) and asked to choose the matching interpretation; presented their preference for unitary interpretations when objects are abbreviated (Sample materials 2). Participants also completed the main test, in which they rated 42 English sentences on a 5-point Likert scale. The sentences were divided into six sets of seven sentences. Each set contained sentences with either S- and Q- interpretations and the case when the abbreviated objects are proper noun, with or without objects (Table 1).

A generalized linear model with Poisson distribution with the Latin Square method was used with the obtained raw results as response variables and the six question types with participant types as predictor variables. The overall regression was statistically significant ($R^2 = .68$, F-statistic = 35.83 on 9 and 1466 DF, p-value < 2.2e-16). Results indicate that five predictor variables significantly affected the response variable except for S- reading in null object case for intermediate group, Q- reading in object case for beginner group, and , Q- reading in object case for intermediate group at $p < .05$.

The results of the Obj task (Figure 1) present that participants do not show native-like performance and Intermediate learners pronounced more difficulties. Participants consistently presented the gap in S-'s performance from PN and Q-, a consistent trend with Null Obj's result (Figure 2). However, the group differences between beginner and intermediate groups were not as explicit as Obj type, although the beginner group performed worse in the Q-test. From these, we can say that 1: English proficiency was not reflected in the experiment results, 2: The test on PN and Q- readings presented a similar tendency, and 3: The knowledge of sloppy reading seems like the easiest to learn and unlearn. These might be due to computational burden, since learners have to add new information as reference of omitted object pronouns with their own cost in Q- reading, which is the contrast to the S- reading which learners can refer to the given information (Slavakova et.al 2017, Schneider et.al 2020, Chien and Wexler 1990). Additionally, in Q- readings, the only operation required to fill in the omitted parts and create a grammatical sentence is to apply the object of the proceedings, which is not the case with S-readings.

Figures and Materials

1. Sample materials for the pre-test

SS: Emma-wa zibun-no fuku-o kataduketa-ga, Keito-wa [sorera-o] katadukenakatta.
 Emma self clothes put away-past-but, Kate [them] put away-neg-past
 ‘Emma put her clothes away, but Kate didn’t put [his/hers] away.’

SQ: John-wa toshokan-de yonnsatu-no honn-o yonnda-ga, Keito-wa [sorera-o] yomanakatta.
 John library at four books. read-past-but Kate [them] read-neg-past
 ‘John read four books at the library, but Kate didn’t read [them].’

*The test type with “Null-” is the case when the object in the brackets [] is being abbreviated.

2. Sample materials for the main Test

Obj+PN: Sarah found her keys, but David couldn't find [his].

Obj+Q-: The boy read four books in the library, but the girl didn't read [them].

Obj+S-: The boy picked up his toys, but the girl didn't pick up [hers].

*The test type with “Null-” is the case when the object in the brackets [] is being abbreviated.

Table 1: Stimuli List

Proficiency	Stimuli	Object Status
Beginner	PN	Object
		Null Object
	Q-	Object
		Null Object
	S-	Object
		Null Object
Intermediate	PN	Object
		Null Object
	Q-	Object
		Null Object
	S-	Object
		Null Object

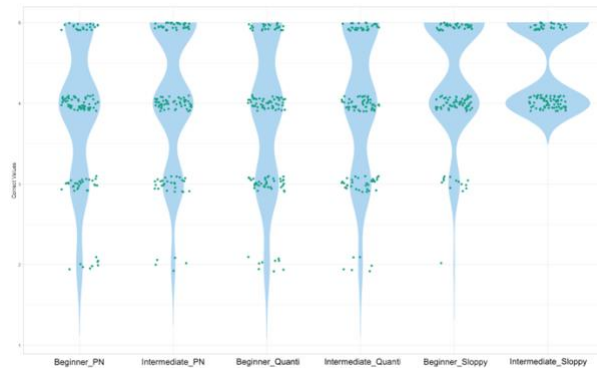


Figure 1: Results from the main test (Obj)

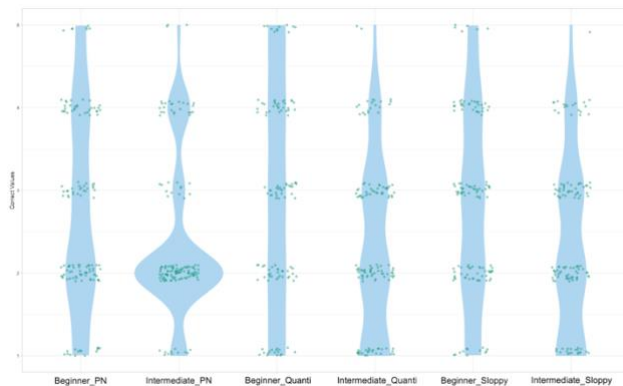


Figure 2: Results from the main test (Null Obj)

Selected References

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Acquiring scope of logical connectives and negation in Japanese as a second language

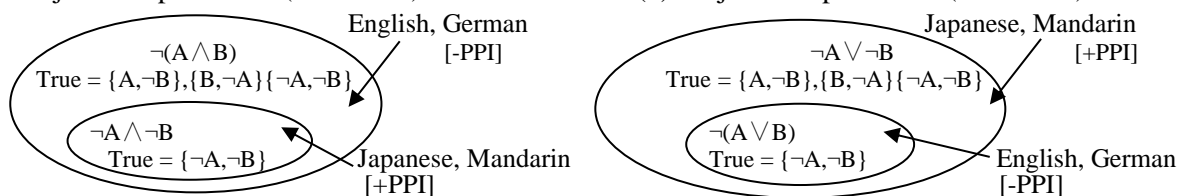
This study investigated how native (L1) English and Mandarin speakers of Japanese as a second language (L2) interpret negated logical connectives. The interpretation of the conjunction “and” and disjunction “or” in negative sentences exhibit cross-linguistic variations. The negated conjunction (shown in sample sentence 1) and negated disjunction (2) have disjunctive and conjunctive interpretations in English and German, respectively. Conversely, in Japanese and Mandarin, they have opposing interpretations (3,4). These interpretive variations can be attributed to scope interactions between the logical connectives and negation. Logical connectives take scope under negation (i.e., they are not positive polarity items, -PPI) in English and German, but over negation (i.e., they are +PPI) in Japanese and Mandarin (Goro and Akiba 2004, Goro 2007, Crain 2012). The cross-linguistic variations in scope assignment result in superset/subset relations of interpretations (5, 6).

Although interpretations of negated logical connectives have been parameterized, their L2 acquisition processes have not been fully clarified. Grüter, Lieberman, and Gualmini (2010) found that L1 Japanese speakers of L2 English are less accurate in interpreting negated disjunction in the L2 compared with L1 English speakers of L2 Japanese. Acquiring the target interpretation in L2 English (i.e., L2 is the subset in (6)) should be more challenging than in L2 Japanese (i.e., L2 is the superset in (6)), considering L1 transfer and learnability. To the best of our knowledge, the acquisition of other logical connectives has not been clarified. Goro (2011) reported that L1 English speakers of L2 Japanese are less accurate in interpreting negated disjunctions than negated conjunctions.

Therefore, we investigated the interpretation of negated conjunctions and disjunctions in L2 Japanese. We administered the truth-value judgment task adapted from Grüter et al. (2010) with modifications to 20 native Japanese speakers, 23 native English speakers of L2 Japanese, and seven native Mandarin speakers of L2 Japanese (as in 8 and 9). The test sentences included lexical forms of conjunction and disjunction, *to* (“and”) and *ka* (“or”). The results suggested that the intermediate L1 English group was more accurate at interpreting negated conjunctions (80%) than disjunctions (61%), contrary to the learnability account. To clarify whether the low accuracy of negated disjunction is attributable to the lexical form *ka* (“or”), we administered a follow-up experiment that tested another lexical form, *ka mataha* (“or”), to 14 L1 English speakers. The results showed that the intermediate L1 English speakers were more accurate in interpreting *ka mataha* (61%) than *ka* (55%) but still less accurate compared with conjunction *to* (73%). The cognitive complexity of negated disjunctions, along with the polysemy of *ka*, may be a factor delaying the acquisition of the correct interpretation of negated disjunctions.

In sum, our empirical study found that L1 English speakers had more difficulty interpreting negated disjunctions than negated conjunctions, contrary to predictions based on learnability. We attribute the difficulty to the polysemy of the Japanese disjunct *ka* and cognitive complexity of negated disjunctions. Thus, apart from L1 transfer and learnability, the lexical and cognitive complexity of logical connectives are involved in L2 development.

- (1) English-negated conjunction
 a. Mary did not eat (both) the apple and the banana.
 ✓ Mary did not eat the apple OR did not eat the banana. (Disjunctive “not-both” interpretation)
- (2) English-negated disjunction
 a. Mary did not eat the apple or the banana.
 ✓ Mary did not eat the apple AND did not eat the banana. (Conjunctive “neither” interpretation)
- (3) Japanese-negated conjunction
 a. Mary-wa ringo to banana-o tabe-naka-tta.
 ✓ Mary did not eat the apple AND did not eat the banana. (Conjunctive “neither” interpretation)
- (4) Japanese-negated disjunction
 a. Mary-wa ringo ka banana-o tabe-naka-tta.
 ✓ Mary did not eat the apple OR did not eat the banana. (Disjunctive “not-both” interpretation)
- (5) Conjunction parameter (Crain 2012) (6) Disjunction parameter (Crain 2012)



- (7) Stimuli example in the truth-value judgment task adapted from Grüter et al. (2010)
 The participants read a short story on an eating contest in which animals received prizes for eating vegetables: a crown for eating both the carrot and pepper, a necklace for eating only one, and so on.
 Kuma-wa keeki-o tabe-ta ga ninjin-to piiman-o tabe-naka-tta.
 Bear-Top cake-Acc eat-Pst but carrot-and pepper-Acc eat-Neg-Pst □ True ✓ False

(8) Conditions

Conditions (n)	Truth Value		Picture	Sentence
	in J/M	in E		
Con-T (4)	True	False	No vegetable eaten	[Doubutsu]-wa ninjin-to piiman-o tabenakatta.
Con-F (4)	False	True	One vegetable eaten	‘The animal did not eat the carrot AND did not eat the pepper.’
Dis-T (4)	True	False	One vegetable eaten	[Doubutsu]-wa ninjin-ka piiman-o tabenakatta.
Dis-F (4)	False	True	No vegetable eaten	‘The animal did not eat the carrot OR did not eat the pepper.’

(9) Participants

Group		n	Age, years	J-proficiency (%)	Age of onset, years	Residence, years
Control	Native Japanese	20	19 (18–20)	n.a.	n.a.	n.a.
L2 speakers	L1 Mandarin (advanced)	7	22 (20–26)	82 (55–97)	17 (5–25)	1.1 (0.3–2)
	L1 English (advanced)	8	33 (23–39)	81 (76–94)	20 (14–28)	4.1 (0.1–8)
	L1 English (intermediate)	15	35 (19–61)	48 (18–72)	21 (12–35)	5.6 (0.3–14)

(10) Group results (“True” responses %, figures in parentheses show SD)

groups	conditions	Con-T	Con-F	Dis-T	Dis-F
Control	Native Japanese	90 (25)	4 (12)	88 (29)	18 (28)
L2 speakers	L1 Mandarin (advanced)	100 (0)	0 (0)	100 (0)	11 (13)
	L1 English (advanced)	75 (35)	3 (9)	86 (20)	29 (28)
	L1 English (intermediate)	80 (24)	13 (22)	61 (34)	52 (36)

(11) Follow-up experiment (“True” responses %)

	n	to “and”		mo “and”		ka “or”		ka mataha “or”	
		Con-T	Con-F	Con-T	Con-F	Dis-T	Dis-F	Dis-T	Dis-F
L1 E (advanced)	4	63	0	69	6	79	38	81	31
L1 E (intermediate)	10	73	18	78	55	55	65	61	53

Selected References: Crain, S. (2012). *Emergence of Meaning*. Cambridge, UK: Cambridge University Press. Goro, T. (2011). *Scope of logical connectives in Second Language Acquisition*. A two-page abstract for the 26th Annual Meeting of the Sophia University Linguistic Society. Grüter, T., Lieberman, M. and Gualmini, A. (2010). Acquiring the Scope of Disjunction and Negation in L2: A Bidirectional Study of Japanese and English Learners. *Language Acquisition* 17(3), 127–154.

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The role of animacy in subject-verb agreement in L2 Turkish: Examining Feature Reassembly

In Turkish, 3rd person plural agreement is optional depending on the animacy of the subject [1]. Animate plural subjects can take both plural-marked and singular verbs, but inanimate plural subjects have a strong preference for singular verbs (**1a-b**) [2, 3]. We examine whether English-speaking and Persian-speaking L2 learners of Turkish are sensitive to how animacy impacts 3rd person plural agreement, and how L1 transfer and L2 proficiency modulate learners' judgments within the framework of the Feature Reassembly Hypothesis [4], which predicts difficulty when the conditioning factors for a given feature differ in the L1 and L2. Animacy does not affect 3rd person plural agreement in English, so English-speaking learners need to add animacy as a conditioning factor for plural-marked verbs in Turkish and also learn that singular form of the verb is compatible with both singular and plural subjects in Turkish. Animacy affects 3rd person plural agreement in Persian, but it is inanimate plural subjects that take optional agreement and animate plural subjects take only plural-marked verbs (**2a-b**). Therefore, Persian-speaking learners need to learn the agreement is optional for animate plural subjects, and that agreement is not required for inanimate plural subjects in Turkish.

24 Turkish native speakers, 26 L1 English and 26 L1 Persian learners completed a speeded acceptability judgment task in which they rated sentences on a scale from 1-5. The experiment manipulated subject animacy (animate/inanimate), subject number (singular/plural) and verb number (singular/plural). Experimental stimuli also included 3rd person singular agreement, a context where animacy does not play a role (similar in all languages) (**3a-c**). There were 48 target items and 96 fillers. Participants also took a vocabulary test and a cloze test, which were used to develop a composite proficiency score.

As predicted, mixed-modeling results for native speakers showed no difference between singular and plural-marked verbs for animate plural subjects ($t = .87$) but singular verbs received higher ratings than plural-marked verbs for inanimate plural subjects ($t = 7.29$). In contrast, L1 English learners treated singular and plural-marked verbs similarly for both animate and inanimate plural subjects (t 's ≤ 1.42). L1 Persian learners rated plural-marked verbs higher for animate plural subjects ($t = 3.27$) and accepted singular and plural-marked verbs similarly for inanimate plural subjects ($t = -.86$). However, when proficiency scores were added to the model, results showed that higher proficiency L1 English learners showed an increased use of singular verbs with inanimate plural subjects ($t = 3.32$). Higher proficiency did not lead to higher ratings for singular verbs for L1 Persian learners (t 's $\leq .92$). All groups gave higher ratings to sentences with singular verbs for 3rd person singular agreement (t 's ≥ 4.78). (**Figures 1&2**)

Overall, neither L2 group showed the animacy asymmetry for 3rd person plural agreement in Turkish. More specifically, L1 English learners showed no difference between singular and plural-marked verbs regardless of the animacy of the subject. However, higher proficiency L1 English learners showed higher acceptability of singular verbs for inanimate plural subjects, a context where singular is generally required in Turkish. Regardless of L2 proficiency, L1 Persian learners showed robust transfer effects yielding patterns in Turkish that would be predicted for Persian. Responses to the background questionnaire revealed that higher proficiency L1 English learners had more years of classroom instruction and longer length of residence in Turkey than higher proficiency L1 Persian learners, factors which may have facilitated feature reassembly in the L1 English group [5, 6]. Overall, our results suggest that feature reassembly in the L2 may be particularly difficult for features showing optionality since the evidence in the input is variable.

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Examples:

Turkish: Animate (optional agreement) and Inanimate (strong singular preference) plural subjects

- (1) a. Şarkıcı-lar bu yıl final-de yarış-tı-Ø / -lar. (animate plural subject)
 singer-PL this year final-LOC compete-PAST-3rdSG/3rd PL
 b. Şarkı-lar bu yıl final-de yarış-tı-Ø / ?/*-lar. (inanimate plural subject)
 song-PL this year final-LOC compete-PAST-3rdSG/3rd PL
 ‘The singers/songs competed in the final this year.’

Feiz & Cowles (2019): Persian

(2) a. **Animate plural subjects can take only plural-marked verbs:**

Qul-ha æsb-ha ro hæml kærd-æn (*kærd).
 giant-PL horse-PL OM carrying did-3rdPL (*did.3rdSG)
 ‘The giants carried the horses.’

b. **Inanimate plural subjects (optional agreement):**

Abpash-ha ræhgozær-ha ro xis kærd /kærd-æn.
 sprinkler-PL passerby-PL OM wet did-3rdSG /did-3rdPL
 ‘The sprinklers made the passers-by wet.’

(3) **Materials (with predicted judgments for native speakers):**

a. **3rd person singular agreement - Only singular verbs are grammatical:**

Ressam/Tablo geçen gece stüdyo-da kal-dı-Ø / *-lar.
 painter/painting last night studio-LOC stay-PAST-3rdSG/*3rd PL

b. **3rd person plural agreement - Animate plural subjects have optional agreement:**

Ressam-lar geçen gece stüdyo-da kal-dı-Ø / -lar.
 painter-PL last night studio-LOC stay-PAST-3rdSG/3rdPL

c. **3rd person plural agreement - Inanimate plural subjects predominantly take singular verbs:**

Tablo-lar geçen gece stüdyo-da kal-dı-Ø / ?/*-lar.
 painting-PL last night studio-LOC stay-PAST-3rdSG/3rd PL
 ‘The painter(s)/the painting(s) stayed in the studio last night.’

Main results:

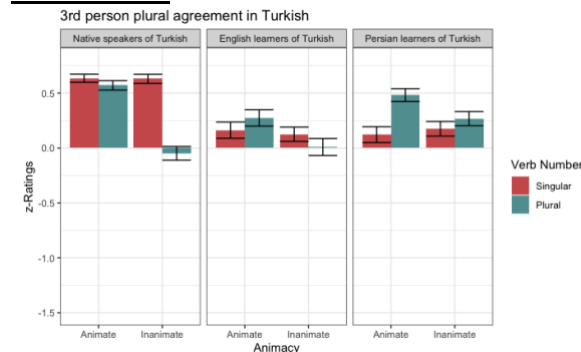


Figure 1: z-transformed ratings for 3rd person plural agreement in Turkish

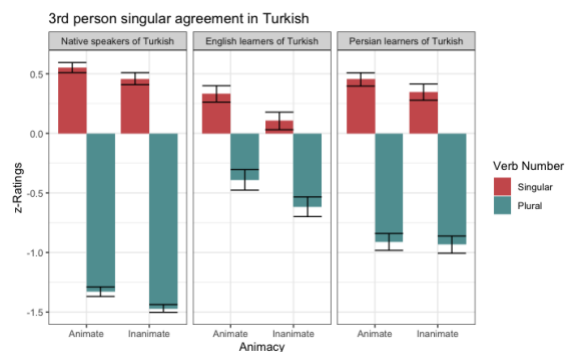


Figure 2: z-transformed ratings for 3rd person singular agreement in Turkish

The acquisition of object clitics pronouns in child L3 French

This paper focuses on the acquisition of object clitic pronouns in French as a third language (L3) by 31 children (ages 8-17) who grow up in Toronto and are exposed to Heritage Romanian (HR) since birth in their home. These children use English as their dominant language and are learning French (L3) in a school immersion system (intermediate/ advanced). While Romanian (HR) and French (L3) are clitic languages, English only has strong pronouns. The context of L3 is interesting for the investigation of the acquisition of clitics as there are two possible languages that may influence it and several competing models attempt to predict which language acts as the source of influence. **Objective.** Our goal is to identify the role of transfer in the context of L3 acquisition. The knowledge of the pronominal domain is investigated in all languages of the participants. **Background.** Previous research shows that there can be influence from either (or both) background language over the L3 depending on factors such as language typology (Rothman et al. 2019; Westergaard et al. 2017), language proficiency (Tremblay, 2006) or cognitive associations (Bardel & Sanchez 2017 for L2; Hermas 2015 for L1). **Questions.** How are pronominal clitics learned in French L3 and what is the contribution of the background languages? Is there divergent production/interpretation of clitic forms, and if yes, does transfer play a role? If so, what is the source of transfer? **Methodology.** Both production (Clitic Elicitation task) and comprehension (Picture Choice Task) of pronominal object clitics were measured, in both L3 and HR. The production of pronouns was also measured in English. The tasks focused on syntax (i.e., clitics production/omission, and their location) and on morphology (i.e., gender and number inflections). In comprehension, clitic pronouns were compared with strong pronouns for reasons pertaining to their syntactic representation and acquisition. We used a Working Memory Test and a questionnaire provided information on the amount of input and use in each language; PPVT/EVIP provided a measure of overall language abilities. **Results.** In HR, clitic pronouns (when produced) are correctly located (Table 1). In English, strong pronouns are also correctly located in the post-verbal field (Table 2). In L3 however, pronouns are produced in clitic positions in clitic form, or post-verbal in what appears to be strong pronoun forms (see similar results in Prévost 2009). Interestingly, in our data, the post-verbal forms are used in nominative (“Le garçon frappe elle/il”). In terms of clitic comprehension children are performing in a similar manner in L3 and HR, however, pronoun comprehension is weaker in L3 than in HR (Table 4). Both production and comprehension show inflectional errors for gender on accusative clitics in L3 and in HR (Tables 3 and 4). The majority of these replace the feminine form with the masculine form. Among the predictor variables, age of acquisition and the amount of French in the current year are significant factors for better performance ($p < .001$, $r_s = -.642$, and $p = .020$, $r_s = .480$, respectively). **Analysis.** Data shows that the parameter setting for object clitic pronouns is well set in the previous languages, i.e., positive for HR and negative for English. In French L3 the object clitic parameter is also well set: object clitics are correctly located. However, there is transfer of use of post-verbal pronouns. It should be noted that HR displays Case syncretism between Nom/Acc in 3rd person strong pronouns. This analysis is also convergent with English, where subject/object pronouns are strong, with the proviso that Case morphology differs for Nom vs Acc. Our results show that both background languages transfer to the L3. Specifically, HR, as a clitic language, seems to positively transfer this aspect to French, as all object clitic forms are well placed in L3 (see similar results in Grüter & Grago, 2012 Spanish L1 to French L2). There is also negative transfer of case syncretism from HR, in the context where both HR and English have strong forms in object position.

	Target clitics	Omissions	DPs	Non-target pronouns
French L3 (248 responses)	.52 (131)	.07 (18)	.26 (66)	.13 (33)
Heritage Romanian (247 responses)	.72 (179)	.12 (30)	.12 (31)	.02 (7)

Table 1. French L3 and Heritage Romanian responses in the production task

	Target pronouns	Omissions	DPs
English (240 responses)	.64 (155)	.025 (6)	.32 (79)

Table 2. English responses in the production task

	Total Accusative Clitics	Total correct
French L3	131	.77
Heritage Romanian Children	179	.77

Table 3. Correct clitic production in French L3 and Heritage Romanian

	Total	Total Correct	Correct %
French L3			
Clitics	372	315	.84%
Strong pronouns	371	329	.88%
Heritage Romanian			
Clitics	372	317	.85
Strong pronouns	372	371	.99

Table 4. Type of responses in the Comprehension task – French L3 and Heritage Romanian

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Unveiling DOM optionality in Catalan: asymmetries between acceptance and processing

This study explores the impact of language dominance (LD) on the acceptance/rejection and processing of Differential Object Marking (DOM) in the Catalan of Catalan-Spanish bilinguals with varying degrees of LD. While DOM exists in both languages, standard grammars report distributional differences. Empirical research on Catalan also shows differing levels of acceptance (Perpiñan, 2018; Puig-Mayenco, et al. 2018; Benito, 2017, 2023), production (Pineda, 2023; Benito, 2023), and processing (Puig-Mayenco, et al. 2018) of DOM in younger adults, suggesting Spanish influence on Catalan with asymmetries in acceptance and production data (Benito, 2023). As such, our study examines four object types (see below) where prescriptive and empirical differences are reported to explore the extent to which speakers of Central Catalan with differing LD accept DOM and whether they are sensitive to its appearance in processing.

To examine this property and the effects of language dominance (LD), two experimental tasks were devised. The first, an acceptability judgment task (AJT), was comprised of 96 tokens across 4 conditions with 12 tokens each, plus 48 fillers: Proper Name, Human Definite DP, Human Indefinite DP, and Inanimate Indefinite DP. Half the tokens in each condition were marked, half were not (Table 1). In Spanish, the first 3 conditions require DOM, while DOM is not required in any condition in Catalan. The second task, a self-paced-reading task (SPR), employed the same conditions and tokens as the AJT, and were presented using a segment-by-segment moving-window paradigm. Twenty-eight Catalan-Spanish bilinguals (mean age= 48.72, sd=14.25) with varying LD (mean=79.25; sd=58.92, min=-97.34; max=161.28) completed these tasks as well as the Bilingual Language Profile (BLP, et al. 2012) to provide a quantifiable LD score.

In the AJT, participants showed a clear definiteness effect, accepting sentences with and without DOM in the two definite conditions (Proper Name, Human Definite DP; see Table 2/Figure 1), and varying outcomes for indefinite conditions. For indefinite DPs, participants generally preferred sentences without DOM, showing considerable intra- and interspeaker variation. Unlike Pineda (2023), our findings suggest DOM is not accepted with inanimate DPs. Statistical analysis revealed an interaction of condition, marker, and LD, with Spanish-dominant speakers favoring DOM with indefinite objects, while Catalan-dominant speakers preferred them without DOM. AJT results highlight variability in DOM appearance in Catalan, aligning with Benito (2023). SPR results (see Table 3) showed slower reaction times for three conditions (Human Definite DP, Human Indefinite DP, and Inanimate Indefinite DP), with no such effect for Proper Names. This finding indicates optional DOM in Catalan proper names, which are higher on the referential stability scale. Statistical analysis indicated an interaction of condition, marker, and LD, suggesting a stronger slow-down effect in Catalan-dominant individuals, while Spanish dominance reduces sensitivity to DOM in Catalan. Results are discussed considering recent proposals on LD, language contact, and linguistic change in Catalan DOM (Benito, 2023).

Table 1. Experimental conditions with sample items.

Condition	marker	Example item	K=
Proper Name	+	L'Adriana ha vist <u>a la Rosa</u> <i>a l'entrada</i> de l'hotel.	6
(n=12 total)	-	En Vicenç ha trobat <u>la Maria</u> <i>a la porta</i> del museu.	6
Definite DP	+	La Laia ha vist a l'actriu <u>a la sortida</u> de la biblioteca.	6
(n=12 total)	-	En Ramon ha trobat <u>la nena</u> <i>al final</i> del túnel.	6
Indefinite DP	+	La Raquel ha vist <u>a una cantant</u> <i>a la barra</i> del restaurant.	6
(n=12 total)	-	En Daniel ha trobat <u>una veïna</u> <i>a la cua</i> de correus.	6
Inanimate DP	+	La Victòria ha vist <u>a una bicicleta</u> <i>al pati</i> de l'escola.	6
(n=12 total)	-	L'Oriol ha trobat <u>una clau</u> <i>al terra</i> del menjador.	6

*verb was controlled for; the tasks included six different verbs (look for, see, visit, need, find, introduce).

**the critical region appears bolded and underlined; the spillover region appears italicized and underlined.

Table 2. Descriptive AJT results.

Condition	marker	Mean (SD)
Proper name	+	89.86 (23.12)
	-	79.23 (34.39)
Definite DP	+	87.09 (26.87)
	-	85.36 (29.10)
Indefinite DP	+	66.08 (41.39)
	-	86.57 (28.79)
Inanimate DP	+	22.12 (38.76)
	-	88.73 (26.74)

Figure 1. Raincloud plot of the AJT results.

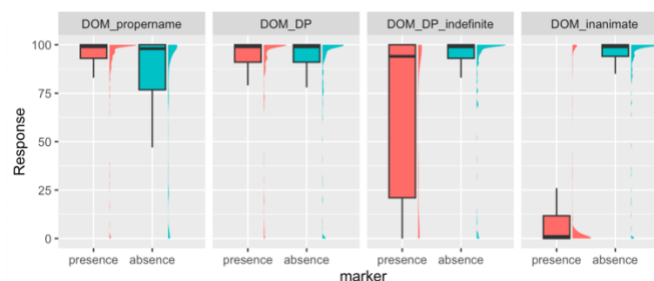


Table 2. SPR Results

Condition	marker	Critical Region	Spillover Region
		Mean (SD)	Mean (SD)
Proper name	+	1150.87 (707.04)	952.15 (707.86)
	-	1192.81 (1120.51)	1074.41 (1140.62)
Definite DP	+	1293.84 (613.13)	1139.26 (813.12)
	-	1052.71 (1240.61)	1049.56 (743.97)
Indefinite DP	+	1319.71 (934.21)	900.36 (862.35)
	-	1191.49 (1423.12)	964.48 (645.48)
Inanimate DP	+	1538.15 (1077.32)	1117.64 (907.12)
	-	1034.49 (675.21)	941.98 (622.12)

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Case resilience in Marathi heritage speakers

We show that Marathi-speaking heritage children (aged 4-14yrs) are sensitive to and rely on grammatical case information (contra previous reports, e.g., Kim et.al., 2018, Chondrogianni & Schwartz, 2020) in both ergative-absolutive and nominative-accusative alignment systems. We conclude that the reported fragility of case in heritage populations (*ibid*) may not be uniform, and may be modulated by the individual (case) properties of the heritage language.

Case in Marathi (Indic, split-ergative: ERG-ABS in the perfective; NOM-ACC in the imperfect) has been shown to be a strong cue for verb learning: when Marathi children (and adults) encounter intransitive verbs, they use case as their primary cue for determining transitivity (authors, 2022). Thus, knowledge of case is vital to Marathi verb-learning.

However, case is claimed to be vulnerable in heritage language: Heritage children struggle with case when interpreting non-canonical sentences (Kim et al., 2018; Chondrogianni & Schwartz, 2020). Note: because non-canonical sentences occur in marked pragmatic contexts with particular intonation (likely rare in heritage input), non-canonical sentences may not be the clearest measure of heritage speakers' (HS) ability to use case. HS also over-accept case-marking in superfluous contexts (Montrul et al., 2012; 2015). However, this may stem from under-confidence in their language abilities (Zyzik & Sanchez, 2018). We investigate case sensitivity in HS through a picture selection task (avoiding issues of confidence), examining canonical, though ungrammatical (through omission of causative morpheme), sentences to determine whether case information is used to determine verb valency. If HS use case to assign NPs agent (ERG) or patient (ACC) roles, they will select the causative image. If HS are insensitive to case, they will either favor conjoined subject images for all conditions as the target verbs are intransitive, or prefer causative images for all conditions as all tokens have two NPs. Thus, we only expect a difference between conditions if HS are case sensitive.

Child HS (n=50) were tested with a picture selection task and elicited verbal correction in three conditions (A-C): (A) ERG condition (see 1), (B) ACC condition (2) and (C) a (control) bare-case condition (3). Despite being English-dominant, heritage children show high frame-compliance by case when ACC is present (90%). When ERG is present, frame-compliance still dominates, but to a lesser degree (70%). In the (control) bare condition, children surprisingly tended to interpret sentences as intransitives with conjoined subjects (Fig. 1), showing that with the absence of case information, Marathi heritage-children prefer an intransitive interpretation even though there are multiple arguments presented and a causative interpretation is possible.

Though HS participants showed sensitivity to both alignment systems, ACC was a stronger cue which might be due to language contact with English. While the ERG cue showed some instability (Fig. 2), we also found potential phonological reasons for why ERG might result in a conjoined subject interpretation. We conclude that unlike previous reports on HS, Marathi heritage children show strong case resilience for both ACC and ERG and are able to integrate case information, similar to their Marathi-dominant counterparts in India, when interpreting verb transitivity.

Example Sentences

1. hət̥ti-**ni** popət rəd-l-ə
Elephant-**ERG** parrot cry-PFV-NEU
Case-predicted Interpretation: “The elephant made the parrot cry”

2. hət̥ti pop̥t-a-**la** rəd-t-ə
Elephant parrot-MASC-**ACC** cry-IPFV-NEU
Case-predicted Interpretation: “The elephant made the parrot cry”

3. hət̥ti popət rəd-t-ə
Elephant parrot cry-IPFV-NEU
Case-predicted Interpretation: “The elephant and the parrot cried”

Conditions

- A. Ergative marking on first NP (1)
- B. Accusative marking on second NP (2)
- C. Bare NPs (not case marked – 3)

Each participant hears a sentence and is asked which picture best matches the sentence, and to give a correction if the sentence is incorrect. Corrections were qualitatively analyzed, not reported here.

N.B. ERG is used in the perfective, signaled most easily with the aspect marker (normed by adults as highly acceptable). **N.B.2:** All the examples are ungrammatical necessitating that the participant makes some correction. Use of perfective allows for both the possibility of a causative or a conjunctive interpretation.

Figure 1

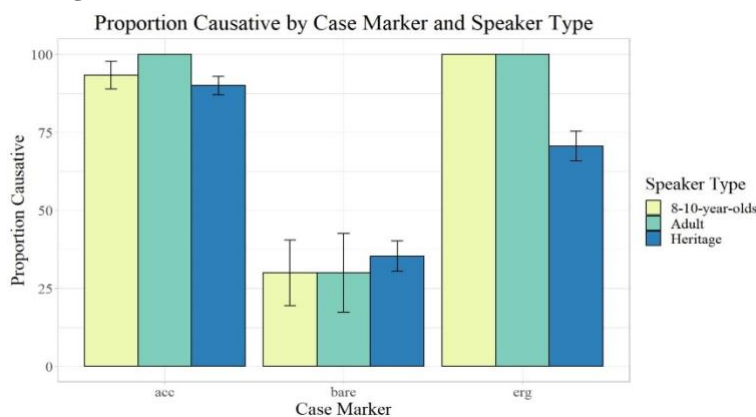
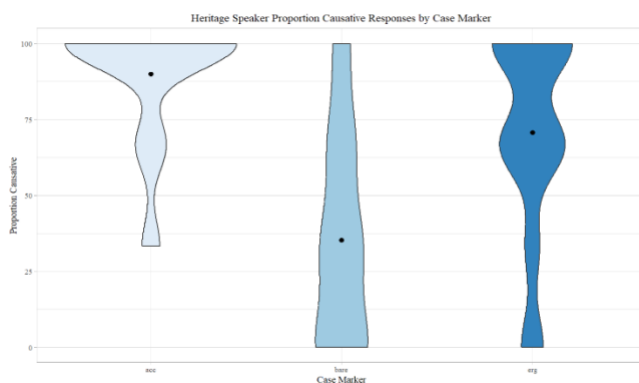


Figure 2



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Does typological similarity facilitate ultimate attainment? A look at the morphology and syntax of restructuring in heritage and L2 grammars

In a recent study comparing heritage and L2 speakers of Italian dominant in Swedish to native Italian controls, Romano (2020) found that ultimate attainment of target-like syntax and morphology of accusative clitics is indeed possible in bilingual speakers despite clear differences in the placement and morphology of accusative pronouns between Swedish and Italian. A structural priming task and a GJT examining Italian 3SG/PL.MASC/FEM accusative clitics use in clitic-left dislocated structures involving restructuring verbs (examples 1-3) found a discrepancy in the level of ultimate attainment heritage speakers reach for syntax and morphology. While their abstract representation of clitic structures approximates that of monolingual speakers, their morphological knowledge of clitics aligns more closely with L2 speakers, consistent with previous studies reporting more target-like attainment for heritage speakers in the syntactic domain (Montrul, 2016 a.o.). The heritage and L2 speakers omitted clitics in the priming task at the rate of 33% compared to only 11% in the monolinguals. Romano explained this finding as interface vulnerability (Sorace, 2011 for L2; Dominguez, 2009 for heritage), amounting to difficulty with topicalization at the level of discourse-pragmatics which characterises clitic-left dislocation. This result was corroborated by the fact that no significant group differences ($\alpha = .05$) were found at a more explicit level of morphological knowledge, namely in the GJT. What is unclear, however, is whether differences in the placement and morphology of accusative pronouns between Swedish and Italian may have also been implicated. The Swedish near-equivalent structures to (1-3) imply different V-pro word order as well as pronoun typology (clitics in Italian, weak pronouns in Swedish).

To this effect, we report on a *direct* replication of Romance testing heritage ($n = 12$) and L2 learners ($n = 19$) of a typologically similar combination (Spanish > Italian). In particular, Spanish and Italian are nearly identical with respect to the syntax, morphology and discourse-pragmatic constraints active on clitics in the structures tested. Following the original study, the L2 and heritage speakers were recruited at very advanced proficiency level and proficiency-matched by means of a cloze task. The L2 group started learning Italian after the age of 13 while the heritage group had its first exposure from birth via one or both native-speaking first generation Italian parents. Both the L2 and heritage speakers were born and raised in Spain. The structural priming task primed 8 items for each of the 3 structures in (1-3) masked by an equivalent number of distracter primes, yielding two measures: priming strength and accuracy of clitic form. The GJT presented the same items in a grammatical and ungrammatical condition where ungrammaticality in the critical items consisted of an incorrect clitic form in each of the 3 restructuring conditions. Results show a facilitative effect of typological similarity between Spanish and Italian for morphology and in production only. Rates of omission in the L2 and heritage groups dominant in Spanish were as low as 14% (table 2) and clitic use not statistically significantly different from the monolinguals. Nevertheless, as in the original study, no significant differences were found at an explicit level of knowledge for clitics (GJT, $\alpha = .05$), while qualitative aspects of the data show an advantage for syntax in the heritage group dominant in Spanish compared the L2 group. In our talk, we highlight these aspects together with some interesting cases where typological similarity did not play a facilitative effect on clitic realization, for instance, where lexical gender incongruence of the noun between the two Romance languages was involved and propose that previous claims of a heritage advantage in the domain of syntax as well as more L2-like knowledge in the morphological domain are crucially moderated by typological (dis)similarity between the dominant and family language.

Examples

- (1) Lexical
- a. I pesci, Pietro li cucina all'aperto
 the fish Pietro cl.ACC.3PL cooks.v in-outdoors
 'the fish, Pietro cooks them outdoors'
- b. *I pesci, Pietro cucina li all'aperto
 The fish Pietro cooks.v cl.ACC.3PL in-outdoors
- (2) Modal
- a. I pesci, Pietro li vuole cucinare all'aperto
 the fish Pietro cl.ACC.3PL want.MOD cook.v-INF in-outdoors
 'the fish, Pietro cooks them outdoors'
- b. I pesci, Pietro vuole cucin-ar-li all'aperto
 the fish Pietro cl.ACC.3PL cook.v-INF-cl.ACC.3PL in-outdoors
- (3) Causative
- a. I pesci Pietro li fa cucinare all'aperto dalla zia
 the fish Pietro cl.ACC.3PL make.CAUS cook.v-INF in-outdoors by auntie
 'The fish, Pietro has them cooked outdoors by auntie'
- b. *I pesci Pietro fa cucin-ar-li all'aperto dalla zia
 the fish Pietro cl.ACC.3PL make.CAUS cook.v-INF in-outdoors by auntie

Table 2. Distribution of responses for clitic use in the oral structural priming task (%)

Response	Spanish Heritage (n = 12)	Spanish L2ers (n=19)	Swedish Heritage (n = 13)	Swedish L2ers (n=12)	Italian L1 (n=18)
Correct	79	80	62	59	86
Omission	14	15	34	32	11
Incorrect co-referent	0	1	2	4	1
Misagreement	4	3	2	2	0
Gender incongruency	3	3	0	0	0
Other	0	0	1	3	2

Table 3. Priming strength in the structural priming task expressed in %s

Spanish Heritage (n = 12)		Spanish L2ers (n=19)		Swedish Heritage (n = 13)		Swedish L2ers (n=12)		Italian L1 (n=18)	
Primed	Non-primed	Primed	Non-primed	Primed	Non-primed	Primed	Non-primed	Primed	Non-primed
65	35	67	33	69	31	66	34	85	15

Table 3. Accuracy in judgment of clitic form in the GJT expressed in %s

Spanish Heritage (n = 12)		Spanish L2ers (n=19)		Swedish Heritage (n = 13)		Swedish L2ers (n=12)		Italian L1 (n=18)	
Correct	Incorrect	Correct	Incorrect	Correct	Incorrect	Correct	Incorrect	Correct	Incorrect
84	16	85	15	84	16	83	17	93	7

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Considering linguistic transfer and heritage language (HL) experience in initial third language (L3) morphosyntactic processing using event-related potentials (ERPs)

Generative approaches to third language (L3) acquisition have enjoyed prominence in the literature on how learners acquire languages beyond the second language (L2). Particularly prevalent within this work is the role of prior linguistic knowledge (i.e., transfer), forming the basis for several existing models (e.g., the L2 Status Factor (L2SF), Cumulative Enhancement Model (CEM), etc.). More recently, the relevance of variation in language experience and the social/situational contexts in which language learning occurs to L3/ L_n learning outcomes has been raised (Kroll & Degani, 2023). In considering which set of variables to pursue, proposing to study heritage speakers (HSs) as L3 learners may prove to address both. As native speakers of both of their languages, L3 models would form predictions about which of the two languages might be the source of transfer (i.e., the heritage language (HL) and/or the societal language). Regarding contextual factors, HSs typically are dominant not in their HL, the L1, but the societal language, or L2 (if learned sequentially), which might influence potential transfer source selection. This study will pursue questions related to the language processing domain, which has been demonstrated to be shaped by language use factors. This study aims to address how online language processing strategies that arise within the HL context may potentially have consequences for L3 acquisition, such that these processing strategies better enable HSs derive morphosyntactic representations of target L3 features. As an ongoing study, the following research questions are considered: RQ1: What are the underlying cognitive mechanisms that HSs deploy, as revealed by neurophysiological signatures (ERPs), when processing L3 morphosyntactic violations? RQ2: (How) Does this change as a function of increased L3 exposure? To test the role of cross-linguistic transfer, Spanish HSs (Spanish-English bilinguals) are exposed to a mini-artificial based on Russian that shares one linguistic feature with Spanish (i.e., gender) and one with English (i.e., prenominal adjective placement). To test the role of HL experience, a third feature not substantiated in either Spanish or English (i.e., nominative-accusative case marking), but involving overt morphological inflection, is considered. Of relevance to generative approaches to L3 is the potential cross-linguistic influence from the language processing dimension. While L3 studies typically consider transfer from the dimension of innate grammatical knowledge, it remains to be answered whether processing strategies that emerge within particular language contexts have direct consequences for L3/ L_n development. During the first session, these learners are predicted to elicit an ERP component related to the engagement of attentional and memory resources (i.e., an N200 or P300 response) after encountering a gender violation. This prediction follows a previous study that revealed an N200 effect among Italian HSs (Italian-German bilinguals) learning L3 Latin case agreement (Pereira Soares et al., 2022). The HSs in that study were argued to fixate on overt morphological inflections in order to make generalizations about grammaticality in the L3. As for case violations, although not substantiated in their L1/L2, these learners are nonetheless predicted to elicit an N200/P300 response, suggesting that the fixation on overt morphological inflections by HSs (e.g., Di Pisa et al., 2022; Luque et al., 2023) also extends to the L3 context. This effect is not expected for violations involving illicit word order (unattested adjective word order). As for the second session, given that the amount of exposure will be doubled, language-related ERP indices (e.g., N400 or P600) are predicted for ungrammatical violations. Data collection/analysis is currently ongoing but preliminary data will be presented at the conference.

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Table 1

Adjective-Noun Agreement in L3 Mini-Russian

Gender	Nominative		Accusative	
	Adjective	Noun	Adjective	Noun
Masculine	-ego	-e	-ogo	-y
Feminine	-iyi	-i	-uyu	-u

Note. Only nouns in the accusative case will be modified by an adjective.

Example sentences from the grammaticality judgement task (GJT). A sentence is either grammatical (1) or features one of three grammatical violations: gender (2), case (3), or adjective order (4). The violation is always on fourth/final word in the sentence.

- (1) Devochk-i vyruchaet korotk-ogo chelovek-y
the.girl-NOM.F rescues short-ACC.M the.man-ACC.M
“The girl rescues the short man,”; Grammatical
- (2) *Devochk-i vyruchaet korotk-ogo chelovek-u
the.girl-NOM.F rescues short-ACC.M the.man-ACC.F
“The girl rescues the short man,”; Ungrammatical (Gender)
- (3) *Devochk-i vyruchaet korotk-ogo chelovek-e
the.girl-NOM.F rescues short-ACC.M the.man-NOM.M
“The girl rescues the short man,”; Ungrammatical (Case)
- (4) *Devochk -i vyruchaet chelovek-y korotk-ogo
the.girl-NOM.F rescues the.man-ACC.M short-ACC.M
“The girl rescues the short man,”; Ungrammatical (Adjective order)

Adding L2 options to L1 attrited grammars: evidence from CLLD

A question in language acquisition research is whether attrition can affect L1 grammatical representation, and if so, under what conditions. This paper tests the Attrition via Acquisition model (Hicks & Dominguez, 2020), which takes a Feature Reassembly approach (Lardiere, 2009) to predict how L2 properties may affect L1 feature representations after prolonged change in the speaker's primary linguistic input during adulthood. The AvA argues that feature changes to the L1 grammar involve the addition of grammatical forms transferred from an analogous L2 structure. Specifically, options from the L2 grammar are predicted to supplement the existing grammar (see also Gürel and Yilmaz, 2011) rather than to overwrite them.

The current study examines the different features associated with CLLD in Romanian versus Italian, which forms an ideal test case for the AvA model. We compare two types of object left dislocation: contrastive topic and contrastive focus fronting. Although English allows object left dislocation, it does not use clitics. Italian and Romanian do use clitics, but differ in the contexts in which they are used. In Romanian, both fronted topics [+anaphor] and fronted foci [-anaphor] require a clitic in this construction (compare 1b to 2b), but only when the left dislocated object is specific (compare 1b to 3b). The specificity distinction is irrelevant for Italian (compare 1a to 3a). In Italian, the insertion of a clitic after a dislocated direct object is restricted to contrastive topics and is disallowed with contrastive focus fronting (compare 1a to 2a). Thus, in Italian, CLLD is constrained by discourse anaphoricity (following López, 2009) and in Romanian by specificity.

In order to examine whether L2 options are added to the L1 grammar, we report on an acceptability judgment task presented in oral and written form where participants rated answers to questions (see (1)-(3)) and on a written elicitation task where participants had to complete missing verbs or clitics+verbs in sentences with object initial word orders (see example in (4)). Participants were 17 Romanian and 18 Italian monolinguals, and Romanian immigrants to Canada/US (n=30) and Italy (n=37), tested in Romanian.

Results from both tasks confirm a discourse effect for Italian monolinguals and a specificity effect for Romanian monolinguals. Specificity was also the only significant factor for Romanians in Canada/US, while there was more variability for Romanians in Italy, suggesting influence from L2 Italian (see Fig. 1). Since attrition is typically categorized by individual variation, we further categorized the L2 Italian group based on their reported language dominance, defined as frequency of current language and self-reported language proficiency. We found a significant effect of both discourse and specificity for Romanians in Italy who were dominant in Italian (n=14). Like monolinguals and Romanian dominant speakers, they allowed clitics with fronting of both specific topics and foci, but also with non-specific topics, an option transferred from their L2. Written elicitation task results follow the same pattern, excluded here for space reasons.

Our findings support the AvA, as grammatical attrition was found for Romanians in Italy, resulting in the addition of the L2 option without loss of the L1 option. Recently, Smeets (2023) has shown that near-native L2ers also show evidence of L1 properties relating to clitics occurring alongside L2 properties. In other words, both attrited L1 and near-native L2 grammars allow clitics whenever this can be accommodated by either the L1 or L2 grammar. Our findings can inform a more general theory of acquisition and attrition, potentially contributing to an explanation of why grammatical representations in near-native grammars and in attrition remain non-native (see also Montrul, 2020).

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Examples (contexts, questions and answers are presented in Romanian)

- (1) Q: What did you do with the couch and the table? **[+anaphor, +specific]**
 a. [Il divano]_i *(I')ho messo in soggiorno, ma il tavolo si è rotto
 The couch cl.acc.m.sg. have put in living room but the table refl is broken
 b. [Canapeaua]_i am pus-*(o) în sufragerie, dar masa s-a rupt
 Couch.def have put-cl.acc.m.sg in living room but table.def refl-is broken
 'The couch I put in the living room, but the table broke.'
- (2) Q: You put the table in the living room, right? **[-anaphor, +specific]**
 a. Il DIVANO *(I') ho messo in soggiorno, non il tavolo.
 The couch cl.m.3sg have.1sg put in living room not the table
 b. CANAPEAUA am pus-*(o) în sufragerie, nu masa.
 couch-the have.1sg put-cl.f.3sg in living room not table-the
 'The couch I put in the living room, not the table. The table broke during the transportation.'
- (3) Q: Did you find a red skirt and a pair of boots? **[+anaphor, -specific]**
 a. Una gonna rossa *(Ia) cerco già da due mesi, però ho trovato un paio di stivali neri.
 a skirt red cl.f.3sg search.1sg already since two months but have.1sg found a pair of boots black
 b. O fustă roșie *(o) caut deja de două luni, dar am găsit o pereche de ghete negre.
 a skirt red cl.f.3sg search already for two months but have.1sg found a pair of boots black
 'I've been looking for a red skirt for two months, but I did find a pair of black boots'
- (4) **Example trial Written Elicitation task**
 Anna and Beatrice are talking about Lea and Gianni who recently got married. Anna says to Beatrice:
 Q: They have visited the Virgin Islands if I remember correctly.
 A: Insulele MALDIVE le au vizitat în luna de miere, nu Insulele Virgine
 The Maldives (CL) have.3pl visited for the honeymoon, not the Virgin Islands.

Table 1: Distribution of clitics in Italian and

	[+anaphor] (topic)		[-anaphor] focus	
	[+Specific] Condition 1	[-Specific] Condition 2	[+Specific] Condition 3	[-Specific] Condition 4
English	X	X	X	X
Italian	✓	✓	X	X
Romanian	✓	X	✓	X

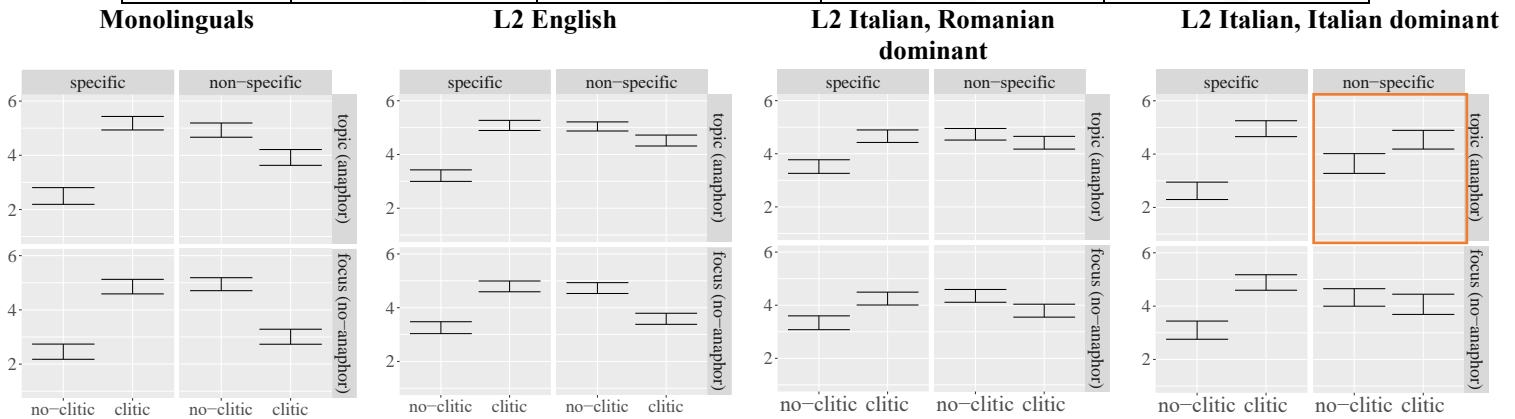


Figure 1: Mean acceptability ratings (1-6) of Romanian monolinguals and Romanians in US/Canada and Italy. Error bars show 95% confidence intervals.

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***Caminando* era su hobby favorito: Gerund vs. infinitive use in Spanish/English bilingual children**

Infinitive and gerund forms are not interchangeable in Spanish. Infinitives can function as subject of the main clause (1a), as the object of a preposition (2a) or as part of prepositional verbs where the type of preposition alters the verb's meaning (3a-4a). Using the gerund in any of these contexts would render the phrase ungrammatical in Spanish. This differs in English, where infinitives are restricted to specific syntactic positions, with a preference for gerunds. In English, the gerund form is typically favored as the main clause subject (1b), and it is obligatory as the object of a preposition (2b). However, some verbs allow both the infinitive form (3b) or a gerund NP object (4b), contingent on the intended meaning (3b-4b).

- | | |
|---|--|
| (1) a. Caminar es mi hobby favorito. | (2) a. Siempre tomo una siesta después de comer . |
| b. Walking is my favorite hobby. | b. I always take a nap after eating lunch. |
| (3) a. Samuel <i>paró a</i> fumar . | (4) a. Samuel <i>paró de</i> fumar . |
| b. Samuel stopped to smoke . | b. Samuel stopped smoking . |

Given these typological divergences in both languages, we predict crosslinguistic influence effects from English into Spanish in contexts where the two languages overlap at the surface level in simultaneous Spanish/English bilingual children born and raised in the US (Cuza & Perez-Tattam, 2016; Hulk & Müller, 2000; Shin et al., 2023; Van dijk et al., 2022). This aligns with recent work documenting gerund overextension in subject position in adult heritage speakers of Spanish (Solano-Escobar & Cuza, 2023). It is still unclear, though, if this pattern of overextension also occurs in contexts where the type of preposition presupposes a change in meaning as in (3a and 4a) and the extent to which these divergences can be observed in child and adolescent simultaneous bilingual children.

Ten Spanish/English bilingual children born and raised in the US (age range, 14-17; $M=15.5$, $SD=1.11$) participated in the study (data collection is ongoing). We tested the production of infinitive vs. gerund forms as subjects of the clause, object of a preposition and in prepositional phrases with change of meaning. In the production task (EPT), a question-and-answer format was employed, requiring the children to use the expected infinitive form based on a provided context (5a-5b). The task consisted of 10 test items for INF in subject position, 12 items for prepositional phrases with change of meaning, 6 items for INF as objects of a preposition and 12 distracters. All items were counterbalanced and randomized. Preliminary results from the EPT revealed overextension of the gerund form in subject position (48%), change of meaning with preposition *de* (10%), and as object of a preposition (27%) (Figure 1). There were no divergences with change of meaning with preposition *a*, which was expected as both languages require the infinitive in this case. Change of meaning with preposition *de* also showed a high proportion of "other" responses (22%). The "other" category included cases where participants substituted the preposition *de* with *a*. Results are discussed along the lines of recent work arguing for crosslinguistic influence effects, dominance and language experience in the extent of morphosyntactic shifts.

(5) a. Production Task: INF in Subject Position

A Antonio le encantan los lápices de colores y la pintura.
 ¿Cuál es su hobby favorito?

_____ es su hobby favorito

Expected response: ***Pintar*** es su hobby favorito.

Unexpected response: ***Pintando*** es su hobby favorito.



b. Production Task: INF use in change of meaning contexts

Andrea bailaba salsa cuando era niña pero ahora ya no.

¿Qué pasó con Andrea?

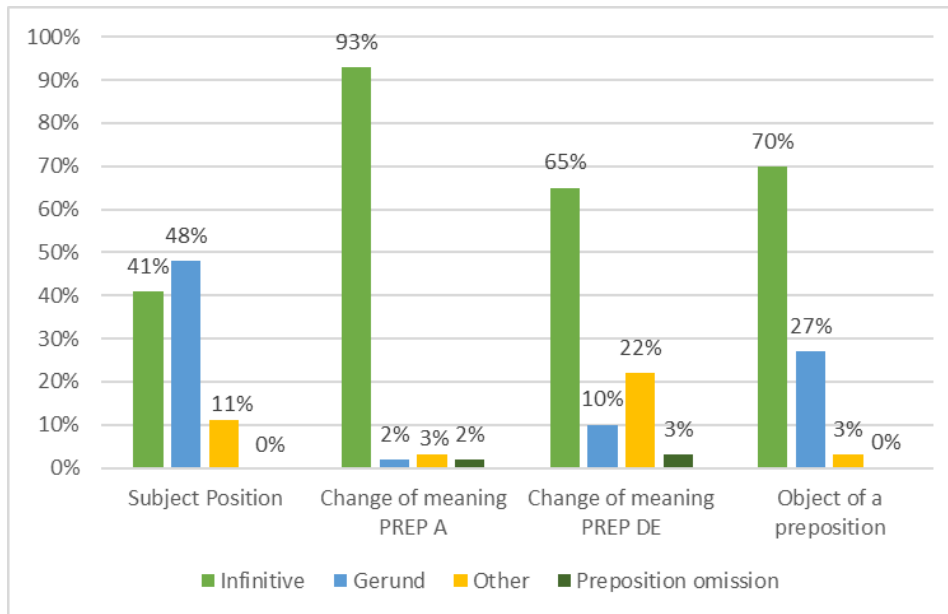
Andrea paró _____ salsa y ahora baila reggaetón.

Expected response: Andrea paró ***de bailar*** salsa y ahora baila reggaetón

Unexpected response: Andrea paró ***bailando*** salsa y ahora baila reggaetón



Figure 1. Sentence-completion task.



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Subjunctive mood selection in obligatory and variable contexts: Evidence from child heritage Spanish

We examine the acquisition of the subjunctive mood by child heritage speakers of Spanish of Mexican background parents. To what extent does the use of the subjunctive in obligatory and variable contexts is constrained by the modality of the proposition including deontic, epistemic, and epistemological dimensions? In Spanish, the use of the subjunctive can be characterized as obligatory or variable across various modalities; it is obligatory when the matrix verb of the main clause syntactically selects the subjunctive in the subordinate clause (1a) but variable when both the indicative or the subjunctive are acceptable with a subtle change in meaning (1b-c).

(1) a. Laura quiere que Juan *coma* (SUBJ) los vegetales.

“Laura wants John to eat vegetables”

b. Laura busca un jardinero que *corte* (SUBJ) el pasto.

“Laura is looking for a gardener to cut the grass”

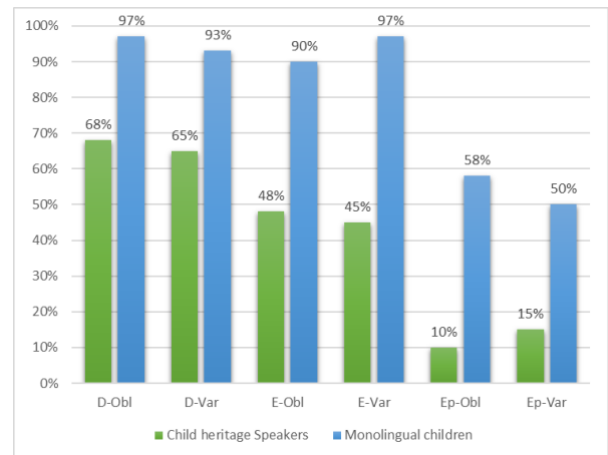
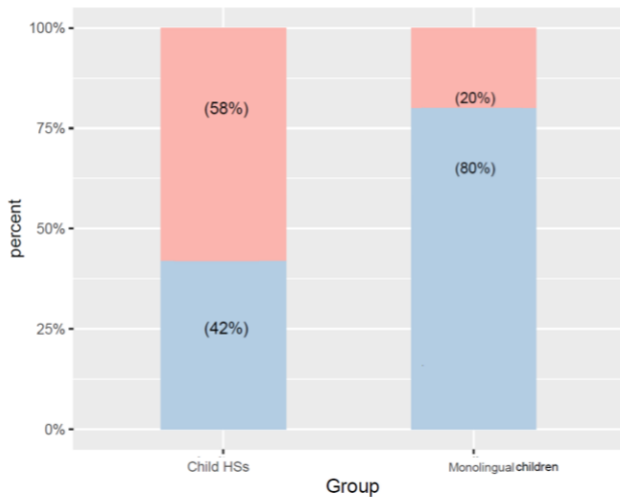
c. Laura busca un jardinero que *corta* (IND) el pasto.

“Laura is looking for a gardener to cut the grass”

Previous research has documented difficulties in the mastery of the subjunctive mood with Spanish heritage speakers showing lower rates of subjunctive use in variable contexts, but higher rates in obligatory contexts (Montrul, 2007, 2009; Silva-Corvalán, 1994; Van Osch & Sleeman, 2018). Lustres et al. (2020) and Perez-Cortes (2021) have claimed that differences between obligatory and variable subjunctive might be mitigated if the modality of the predicates is controlled. We add to previous work by examining subjunctive use in obligatory and variable contexts among child heritage speakers and by controlling the modality of the predicate.

Ten child heritage speakers of Spanish ($n = 10$, age range 4-15) and ten monolingual children from Mexico ($n = 10$, age range 5-11) participated in the study. All participants completed a sentence-completion task. The heritage children also completed the MiNT dominance test. The results showed significant differences between groups in the use of the subjunctive ($\chi^2 = 109.54$, $df = 1$, $p < .001$). The heritage speakers showed decreased use of the subjunctive (42%) compared to the monolingual children (80%) (Figure 1). However, the results showed that the response of the participants was modulated by modality. Despite the overall low rates of production, the heritage speakers exhibited more use of the subjunctive in deontic contexts (~65%), some usage in epistemic contexts (~55%), but minimal use in epistemological contexts (~10%). The Monolingual children exhibited high subjunctive use in deontic and epistemic contexts (~90%) but displayed lower use in epistemological contexts (~50%) (Figure 2). No differences were found in obligatory and variable contexts within the same modality type. The results showed a significant association between language dominance and subjunctive use ($p < .001$). The more dominant in Spanish the children were, the more accurate they were with the subjunctive. These findings underscore the importance of considering both linguistic and pragmatic factors in understanding heritage language development.

Figure 1. Distribution of responses by group. Figure 2. Rates of Subjunctive use by modality.



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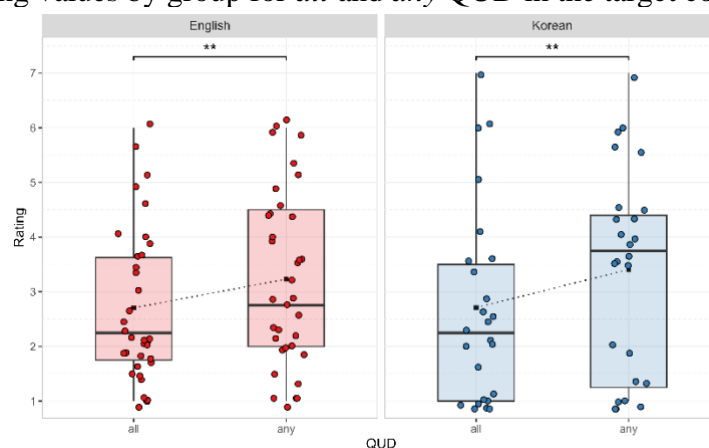
QUD sensitivity and attentional control in L2 interpretation of scalar *some*

An increasing amount of research has emerged in the past two decades concerning purported advantages of bilingualism on executive function. Some studies report that bilinguals have pronounced abilities in attentional and inhibitory control (Costa, Hernández, & Sebastián-Gallés, 2008; Tao, Marzecová, Taft, Asanowicz, & Wodniecka, 2011), but others return findings that are either inconsistent or non-significant (van den Noort, Struys, Bosch, Jaswetz, Perriard, Yeo, Barisch, Vermeire, Lee, & Lim, 2019). These inconsistencies have led some to claim that a confirmation bias exists in bilingualism research (Paap, 2014; de Bruin, Treccani, & Della Sala, 2015). Still others, however, hold that aggressive data-trimming procedures are to blame for masking the effects of the bilingual advantage (Zhou & Krott, 2016). Nevertheless, research investigating the extent to which properties of executive function might affect the comprehension or parsing of L2 input is ongoing. With respect to the influence of context on the comprehension of pragmatic inferences, recent psycholinguistic research suggests that individual differences in cognitive control among native speakers may account for a large share of performance discrepancies, particularly with regard to the incorporation of cues which promote particular readings of scalar *some* (Yang, Minai, & Fiorentino, 2018).

By way of a picture-sentence matching judgement task, this experiment investigated L1-Korean L2-English learners' awareness of the effect of *all* and *any* quantifiers in "questions under discussion" (QUD) on the interpretation of a scalar *some* phrase. In the question "Are all/any of the squares red?", the *any* cue allows for a strictly semantic "*some and possibly all squares are red*" interpretation for *some* while *all* (a scalemate of *some*) primes a pragmatic "*some but not all squares are red*" reading. The questions were presented together with pictures depicting a series of zero, three, or five of five same-colored shapes. In the target condition with five of five of the same-colored shapes, the "*some squares are red*" response is pragmatically infelicitous. Thus, an *all* QUD should elicit lower ratings in comparison to the *any* QUD condition provided participants incorporate the signals from the two cues. Participants' attentional control abilities were assessed via a Stroop task, a commonly used neuro-psychological test that quantifies an individual's ability to suppress cognitive interference while attending to a task (Stroop, 1935; Kane & Engle, 2002; Boudewyn, Long, & Swaab, 2012).

Using a cumulative link mixed model with Likert-scale ratings as the dependent variable, the analysis revealed that both L2 learners and native speakers distinguished between the two target conditions (Figure 1). Contrary to the results reported in Yang et al. (2018), attentional control aptitude as measured by the Stroop task did not modulate rating sensitivity in native speakers. However, goal maintenance and inhibitory control ability predicted L2 differential sensitivity to QUD. Additionally, ex-Gaussian analysis of the reaction time distribution revealed that the longer a learner spent resolving conflict introduced by congruency effects, the more likely they were to demonstrate differential rating behavior in the judgement task. This result is interpreted to mean that longer decision time facilitates L2 awareness of context. Furthermore, though L2 learners recorded fewer errors and comparably faster response times than native speakers in congruent and incongruent trials of the Stroop task, these differences did not reach significance. These findings demonstrate that although native speakers and L2 learners are equally sensitive to contextual cues that influence the reading of a *some* phrase, they differ in the strategies they adopt and in the way they allocate attentional control resources to generate meaning from context. This experimental approach accords with recent suggestions to couple neurocognitive and linguistic dimensions in bilingualism research (Leivada, Dentella, Masullo, & Rothman, 2023).

Figure 1. Mean rating values by group for *all* and *any* QUD in the target condition.



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Exploring scalar diversity in L2 learners

A speaker who utters *Some students passed the exam* often implies that not all students passed the exam. This is known as scalar implicature (SI), which arises from inferring the speaker's intentions in choosing a weaker scalar expression over a stronger one. Previous research on L2 SI has yielded conflicting results regarding whether L2 learners are more pragmatic in deriving SIs (e.g., Slabakova, 2010; Mazzaggio et al., 2021). So far, these studies have primarily focused on the scale *<some, all>*. However, there is a variety of scalar expressions beyond *some* (see Table 1). Recent L1 studies have shown that different scalar expressions give rise to SIs at different rates, known as the scalar diversity effect. While quantifiers and modal expressions consistently give rise to SIs, there is much greater variability within adjectives and verbs. This raises the question of whether L2 learners also exhibit a similar diversity pattern when interpreting different scalar expressions. Building on the work of van Tiel et al. (2016) and Sun et al. (2018), we conducted inference tasks to examine SI rates of different scales with different dependent measures.

Method: The inference task contained 43 scalar expressions. L1-Chinese L2-English speakers read a statement containing a scalar expression and had to decide whether the speaker implied the corresponding SI, which is the negation of the stronger alternative. Forty-five participants made binary choices, while an additional forty-four participants gave their answers on a continuous scale (see Figure 1). A 'Yes' or a higher rating on the continuous scale indicates an endorsement of the SI. All L2 participants completed an English proficiency test, and there was no significant difference in proficiency between the two L2 groups ($p = .71$). The native speakers' data and all test materials were obtained from van Tiel et al. (2016) and Sun et al. (2019).

Results: Firstly, we compared the rankings and variability in mean SI rates for 43 scalar expressions between L1 and L2 groups (see Figure 2). The rankings between the two groups within each response type were found to be significantly in agreement (all $ps < .001$). Levene's test showed no significant difference in variances between the two groups. Taken together, these findings suggest that L2 speakers exhibit a scalar diversity pattern comparable to that of L1 speakers. However, there were also differences in SI rates between the L1 and L2 groups. The Wilcoxon signed rank test showed significantly lower SI rates for L2 compared to L1 in the binary study ($p = .04$), and higher SI rates with the continuous scale ($p = .04$). What's important is that while native speakers' SI acceptance rates were not greatly affected by the response type ($p = .3$), L2 speakers showed significantly higher acceptance rates with the continuous scale compared to the binary scale ($p = .02$). We found that this increased mean rates with the continuous scale were mainly driven by adjective scales, as shown in Figure 3. While non-adjective scales showed similar mean rates with the binary scale (all $ps > .05$), the adjective scales had higher mean rates with the continuous scale than with the binary scale ($p = .002$).

Discussion & Conclusion: The overall findings suggested that when interpreting various pairs of scalar expressions, L2 speakers showed a scalar diversity effect similar to native speakers. The results highlighted the distinctness of adjectives in L2 computation of SIs. Unlike quantifiers and models, acceptance of SIs triggered by adjectives varies with response types, revealing ambiguity in their interpretation with finer-grained scales. This ambiguity may be due to factors such as the polysemy of adjectives (McNally, 2019), their semantic complexity, and contextual variability. The continuous scale offers a more sufficient space to reason with ambiguity and further reflect the intricacy of scalar expressions. Therefore, another contribution of the current study is a methodological one that underscores the effect of task features on the implicature measure. This study hopes to contribute to the growing area of L2 pragmatic inference at the semantics-pragmatics interface.

Table 1. Various pairs of scalar expressions (adapted from van Tiel et al., 2016)

Category	Examples
Adjectives	< intelligent, brilliant > < warm, hot > < good, excellent > < cool, cold >
Adverbs	< possible, certain > < improbably, impossible >
Connectives	< or, and >
Determiners	< some, all > < not all, none >
Nouns	< vehicle, car >
Verbs	< like, love > < try, succeed > < dislike, loathe > < cut down, quit >

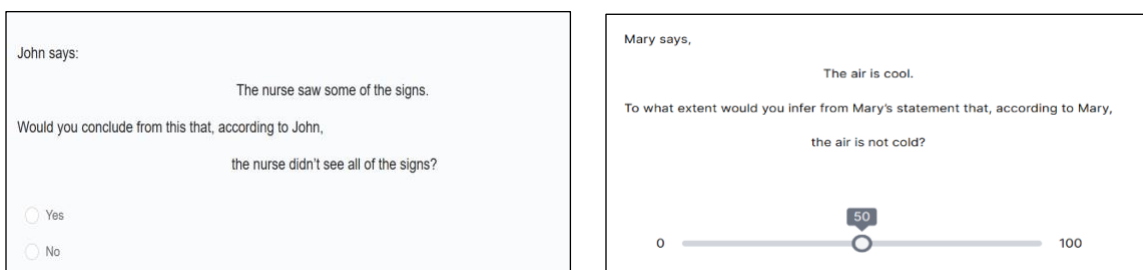


Figure 1. A sample test item from the two experiments (Left: binary response; Right : continuous scale)

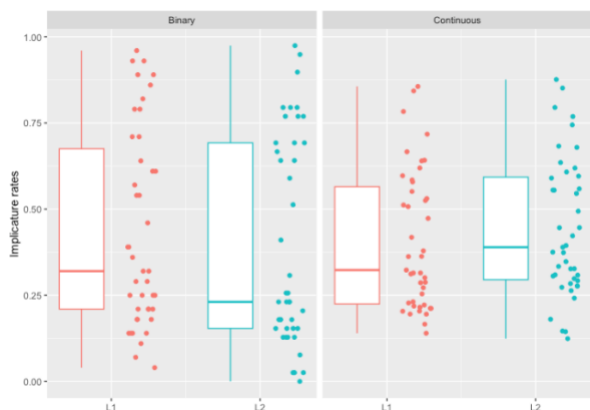


Figure 2. The distribution of by-scale SI rates for each task and speaker.

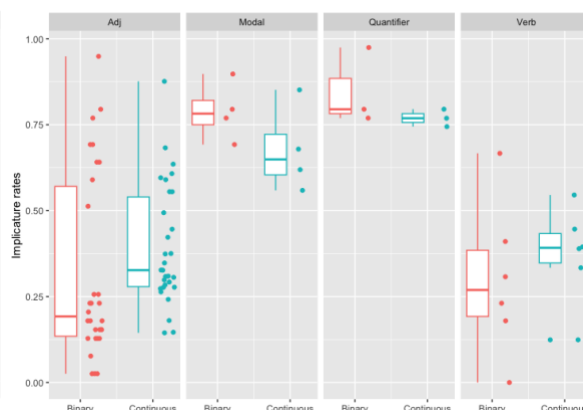


Figure 3. The distribution of SI rates by response type and lexical category for L2 speakers.

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Transfer of the L1 functional structure by Japanese learners of English: A case of the *that*-trace effect involving adverbial intervention

This study examines the initial state and development of interlanguage grammar in the acquisition of the *that*-trace effect by Japanese learners whose L1 does not involve the corresponding effect. The *that*-trace effect in L1 has been examined based on *wh*-movement in terms of accessibility of Universal Grammar (UG) (White, 2000). Specifically, recent studies have addressed the *that*-trace effect based on the anti-locality, which bans movement that is too short (e.g., Brillman & Hirsch, 2016; Erlwine, 2020). The theory further accounts for the so-called adverb effect, in which the ungrammaticality in question is ameliorated by inserting adverbs between the complementizer *that* and the subject trace.

As to L2 acquisition of the *that*-trace effect, some studies have examined accessibility of universal constraint on movement (e.g., Kim & Goodall, 2022; Kimura, 2023). These two studies argued that L2 speakers whose L1 does not exhibit the *that*-trace effect have difficulty acquiring the effect in question. On the other hand, Takahashi and Ono (2023) reported that Japanese learners of English showed degradation for subject extraction from *that*-clause, suggesting the learnability of the *that*-trace effect. However, there are few studies dealing with the issue of the initial state and the L2 development (Kush & Dahl, 2022). Concerning the transfer issue, there are the following hypotheses on L1 transfer proposed in the literature: Full Transfer hypothesis (Schwartz & Sprouse, 1996); and Partial Transfer hypothesis such as the Minimal Trees approach (Vainikka & Young-Scholten, 1996).

If the Full Transfer hypothesis were employed, then the CP structure and the obligatory complementizer (e.g., Japanese “*to*”) would be directly transferred into the initial state of interlanguage grammar (e.g., English “*that*”) and the amelioration effect by adverbial insertion would be consistently obtained. On the other hand, if the effect is not consistently obtained at the initial stage and the interaction with proficiency level might provide evidence for restructuring into CP structure in the interlanguage grammar due to the L2 input and access to the universal constraint, then the Minimal Trees approach would be supported. In this way, providing data on the adverb effect involving proficiency level in the experiment is an important research agenda to investigate which L1 transfer hypothesis is supported and whether JLEs develop to acquire the L2 knowledge of the *that*-trace effect.

A total of 69 Japanese university students (CEFR: B2-C1) participated in two acceptability judgment studies. In each of the two experiments, 2 x 2 factorial designs were employed: [*extraction site* (extracted from subject/object)] and [\pm *that* (presence/absence)] in Experiment 1; and [\pm *that* (presence/absence)] and [\pm *adverbials* (presence/absence)] in Experiment 2. A total of 56 target items were constructed (7 tokens per condition), along with 56 fillers (Tables 1 & 2).

The result showed that JLEs exhibited the *that*-trace effect and the adverb effect with inclusion of English proficiency as a fixed variable (Figure 1). There is a significant interaction (proficiency \times \pm *that* \times \pm *adverbials*) (Table 3). The amelioration effect by adverbial insertion was not obtained consistently at the lower level. The results are consistent with the Minimal Trees approach, which suggests that functional maximal projections such as the CP of L1 does not transfer during the early L2 acquisition, but we propose that the TP level structure initially transfers. Then, the CP structures involving the complementizer *that* could be acquired later in the L2 development via L2 input and UG access. As to the inconsistency of the judgement, we propose that early learners recognize *that* as a verb-related particle, instead of the complementizer. We discuss, based on our interview and production data, that early L2 learners recognize *that* as part of the verb (i.e., [*think that*]_{verb} + [TP...]) as if it were an idiomatic phrase, rather than *think*

followed by a complementizer *that* (i.e., [*think*]_{verb} + [_{CP} *that*...]), due to the instruction or memorizing strategies of early L2 learners.

Table 1: Materials in Experiment 1

Factors		Extraction site	
		Subject	Object
<i>that</i>	+	a. * Who did you think [that [__ wrote the letter]]?	b. What did you think [that [the man wrote __]]?
	-	c. Who did you think [__ wrote the letter]?	d. What did you think [the man wrote __]?

Table 2: Materials in Experiment 2

Factors		Adverbials	
		+ (presence)	- (absence)
<i>that</i>	+	a. Who do you think that last Friday played baseball?	b. * Who do you think that saw the professor?
	-	c. ? Who do you think last Friday played baseball?	d. Who do you think saw the professor?

Figure 1: Results of Experiment 2

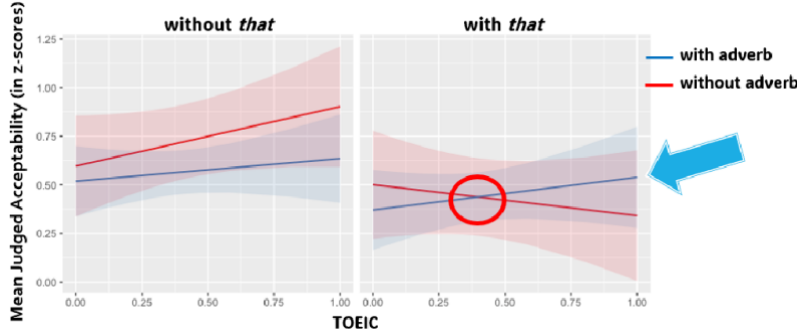


Table 3: Linear mixed effects results for experiment 2

Fixed Effect	Estimates	SE	df	t-value	p-value
(Intercept)	0.496	0.086	23.960	5.800	< .001 ***
TOEIC	0.108	0.160	19.080	0.670	.509
adv	-0.104	0.079	50.150	-1.310	.197
that	-0.122	0.122	33.300	-0.100	.325
TOEIC× <i>that</i>	-0.206	0.212	22.300	-0.970	.342
TOEIC×adv	0.068	0.106	466.000	0.650	.520
adv× <i>that</i>	-0.052	0.159	50.150	-0.330	.746
TOEIC×adv× <i>that</i>	0.515	0.212	466.000	2.430	.016 *

Notes. $p < .05^*$, $p < .01^{**}$, $p < .001^{***}$

Formula: lmer (acceptability ~ TOEIC + adv + that + TOEIC*that*adv + (1 + that | subject) + (1 | item), REML = TRUE)

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Towards a unified theory of heritage language acquisition: Evidence from Spanish differential object marking across childhood

Generative approaches to heritage language (HL) acquisition have frequently been couched within the incomplete acquisition framework (e.g., Montrul, 2008, 2016), which has revealed differences in end-state grammatical knowledge between heritage speakers (HSs) and other groups. Alternatively, Putnam and Sánchez's (2013) approach to HL acquisition has adapted the predictions of Lardiere's (2009) feature reassembly hypothesis, and has focused on the experiential factors that can account for variability between individual HSs. These researchers emphasize that the frequency with which HSs use their HL modulates increasing challenges mapping features onto morphology or the altogether reassembly of these features, beginning in production and extending to underlying representation. These researchers thus emphasize that experiential variables such as bilingual education and frequency of use account for differences between individual HSs.

Through data from English-Spanish bilingual children's and adults' acquisition of differential object marking (DOM), a highly variable structure in Spanish HSs (e.g., Cuza et al., 2019; Montrul & Sánchez-Walker, 2013), this project illustrates how some aspects of both theories are necessary to provide a holistic generative account for HL development. 17 Spanish-dominant bilingual adults (SDBAs), 34 HS adults (HSA), 24 HSs in 7th/8th grades (ages 12-14; HS7/8), and 33 HSs in 5th grade (ages 10-11; HS5) completed production and forced choice tasks tapping their productive and receptive knowledge of DOM with [+animate, +specific] direct objects. This approach addresses the "missing link" (Montrul, 2018, p. 534) in HL research, as evaluating multiple age groups of children and adults elucidates if and when HL acquisition plateaus and/or if there is attrition between childhood and adulthood.

Results, summarized in Figure 1 and supported through binomial logistic regression, indicate that SDBAs used DOM categorically. The HSA group produced and selected more DOM than the HS7/8 group ($\beta = 1.79, p = .009$), and the HS7/8 group produced and selected more DOM than the HS5 group ($\beta = 2.06, p = .029$). Therefore, DOM production and selection increased with age. Furthermore, HSs selected DOM more than they produced it ($\beta = 2.93, p < .001$), particularly those who reported less-frequent use of Spanish ($\beta = -0.34, p = .023$). Finally, participants with bilingual education were more likely to produce DOM ($\beta = 2.16, p = .014$). As depicted in Figure 2, all participants produced and/or selected DOM in at least two instances.

These results partially support both approaches to HL acquisition. Putnam and Sánchez's (2013) feature-oriented approach correctly predicted stronger receptive over productive performance, and education in the HL and use of Spanish, both experiential variables, accounted for individual differences. However, HSs' knowledge of DOM improved with age, so there was no evidence of feature reassembly (e.g., decreasing production/selection). Moreover, while no HS categorically omitted DOM, theories of incomplete acquisition correctly account for group-level differences. While incomplete acquisition has generated criticism (e.g., Otheguy, 2016), Putnam and Sánchez's (2013) approach alone cannot explain differences between (some) HSs and SDBAs. By incorporating data across a broad age spectrum, these results argue that a unified theory of generative HL acquisition rests on certain tenets of both approaches. Future directions, including the possibility that Putnam and Sánchez's (2013) approach runs in reverse (e.g., receptive HL knowledge is acquired before production), are proposed. Despite the limitation that this study only tests [+animate, +specific] direct objects, it makes important contributions to an understudied component of generative research in HL acquisition.

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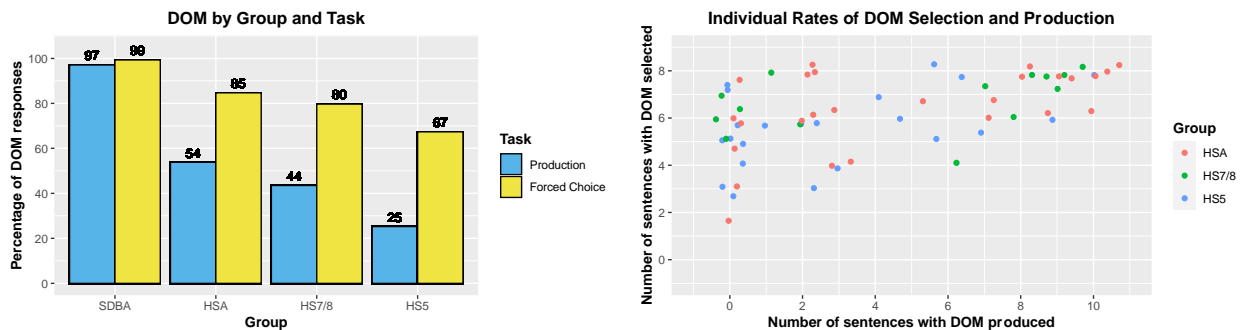


Figure 1 (left). Rates of DOM production and selection by age group and task.

Figure 2 (right). Individual rates of DOM production and selection by HS participant.

Examining the relationship between filler words and code-switching

Code-switching has many proposed uses (Poplack, 1988; Grosjean and Li, 2013), including as a speech planning and production tool that allows the speaker to retrieve the most accessible words to use in an utterance (Beatty-Martínez et al., 2020). There is a psycholinguistic debate on the extent to which code-switching incurs processing and production costs. One way of evaluating production costs is through measuring filler words, (um, like) which can be used as a hesitation marker to give the speaker more time to formulate the rest of the utterance (Buysse, 2012). Multiple studies have found a correlation between code-switching and fillers in corpus analyses of bilingual speech (Hlavac, 2011; Fricke et al., 2016) which Fricke et al. (2016) theorize is because code-switching incurs a production burden. However, previous research has only looked at corpus data in dialogue contexts where code-switching is permitted. This does not allow a full view of code-switched phrases, as it does not make comparisons to contexts where codeswitching is inhibited.

The goals of this study were to attempt to replicate the findings of co-occurring codeswitching and filler words in a controlled setting, to examine differences in the use of filler words across switching-permitted and switching-inhibited speech, and to perform further exploratory analysis on the relationship between these phenomena. This study examined 22 high-proficiency English-Spanish bilinguals who reported codeswitching between English and Spanish daily. The participants completed a picture-based oral narrative task with one of three conditions - instructions to use only English or Spanish or instructions that they could switch freely (English, Spanish, Mixed). We found this methodology successful in eliciting code-switching for the Mixed condition, and inhibiting in other conditions. Narrations were transcribed and annotated for phrase boundaries, code-switching, filler words, and other cues of disfluency. In the Mixed condition, **phrases that contained a code-switch were significantly more likely to contain filler words** than phrases without code-switching ($p < .001$; Figure 1). Between conditions, speakers used significantly more filler words in the English condition than the Spanish condition ($p < .001$), which could be attributed to the sociolinguistic acceptability of certain filler words - 'like' and 'um' - in English. **The speakers in the Mixed condition patterned significantly differently than the Spanish condition** ($p < .001$; Figure 2). They used fewer fillers than the English condition, but more than the Spanish condition, despite the vast majority of their utterances being in Spanish. These results suggest that speakers use filler words differently in different language contexts, but more research is necessary to confirm whether the reason for this difference is due to processing cost or other factors. These preliminary results support the correlation between filler word and code-switching use, and offer evidence that speakers use filler words differently when they are permitted to code-switch.

Figures

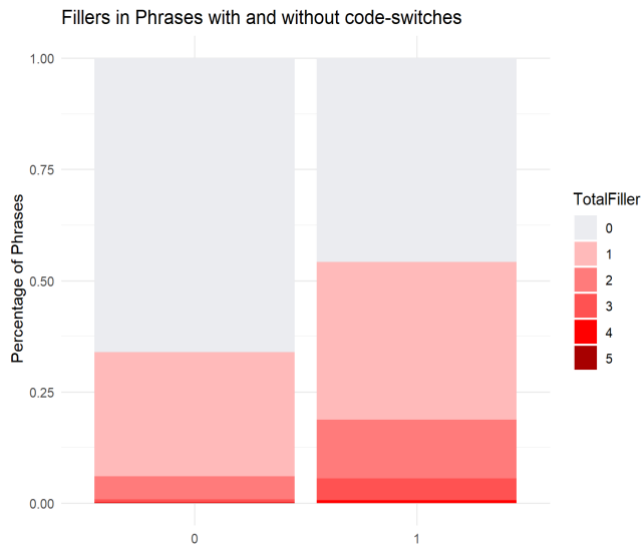


Figure 1: Percentage of phrases containing filler words in code-switched utterances and non-codeswitched utterances in Mixed condition

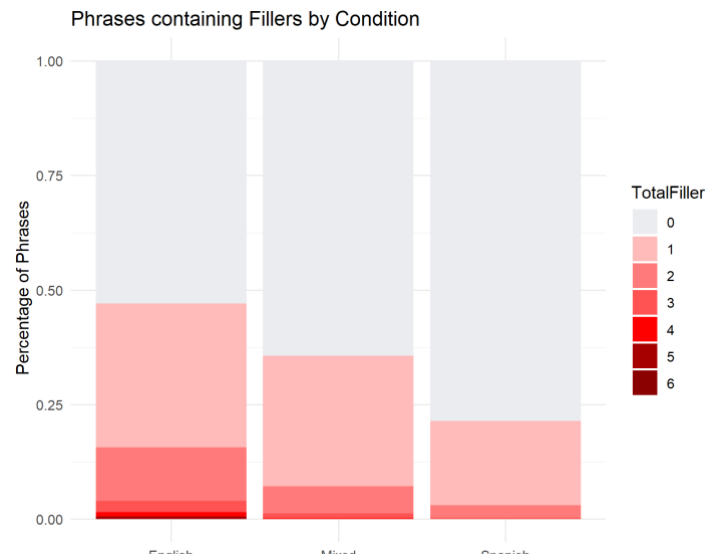


Figure 2: Percentage of phrases containing filler words in the inhibited English and Spanish and the Mixed Condition

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Acquisition of genericity in L2 English: The effect of multilingualism

This study explores the acquisition of genericity in English as a second language (L2) by native speakers of Polish or Norwegian. Genericity, a universal semantic property, is an aspect of language that expresses generalizations (1), or statements about categories or kinds (2) (Krifka et al., 1995). In addition to the two major generic meanings, we include an additional meaning, the type-denoting (TD) generic, inspired by Borthen (2003) (3).

Acquiring genericity expressions in the L2 presents difficulties, as learners must reconfigure form-to-meaning mappings (Table 1). Previous empirical studies have demonstrated that the L1 influences the understanding of genericity in L2 (Ionin et al., 2011; Snape, 2013).

The current study investigates knowledge of genericity marking in L2 English by Norwegian native speakers ($n = 23$) and two distinct groups of Polish speakers: bilinguals ($n = 22$) and multilinguals ($n = 24$). The multilingual participants were enrolled in L3/Ln Norwegian classes. We sought to determine if multilingualism impacts the comprehension of nuanced differences in L2 generic meanings. Three singular forms of nominals (NP) were tested: the definite, indefinite, and bare singular. Norwegian uses all three forms for expressing different generics, while Polish only employs the bare singular form (Table 1).

The task was a contextualised acceptability judgment task (AJT) distributed online. Each target sentence followed a context sentence as in (4) and used one of the three singular NPs. The Polish multilinguals also completed the task in Norwegian; the results indicate that the *form-to-meaning* mapping had not yet been acquired in the L3. Proficiency levels were assessed through filler items (grammatical/ungrammatical and comprehension questions). All L2 groups differed significantly from native speakers; however, the Polish multilinguals scored the lowest.

Acceptability choices on each NP form (Figure 1) were analysed using *glmer* models (Bates et al., 2015) with response as the dependent variables (group and condition as independent variables). *Glmer* models were also run on each group with response as the dependent variable (NP form and condition as independent variables). Participant and test item were set as random effects. We observed minimal differences in how the NP forms were accepted across conditions by the Polish bilingual group, but more pronounced differences in the Polish multilingual group. The Norwegian group demonstrated strong target-like choices, signifying a comprehensive understanding of L2 genericity marking.

The analyses reveal that the Norwegian speakers largely pattern with the native English controls. This can be attributed to L1 influence, as Norwegian has genericity form-to-meaning mappings similar to English. Conversely, the Polish speakers differ from the native controls in their acceptance of forms across all generic conditions. These differences are more pronounced for the bilingual group, suggesting that the multilingual group had a better understanding of the subtle differences than the bilinguals. The observed differences cannot be attributed to proficiency (since the bilingual group was stronger on the filler items), or to transfer from the L3 in the multilingual group, as the Norwegian generic mappings had not yet been acquired. We conclude that multilingualism can positively influence L2 acquisition, when knowledge of an additional language enables learners to better recognize complex genericity marking. We will explore possible reasons for the attested multilingual advantage.

- (1) **A giraffe** has a purple tongue.
- (2) **The rabbit** reached Great Britain in the 11th century.
- (3) It is healthy to have **a dog**.
- (4) Context: A lot of animals that live in Britain today are not native to it. You see,
Test item: the rabbit/a rabbit/ rabbit reached Great Britain in the 11th century.

Table 1: Overview of generic form-to-meaning mapping across the three languages

	Def.sg.	Indef.sg.	B.sg.	Def.sg.	Indef.sg.	B.sg.	Def.sg.	Indef.sg.	B.sg.
English				Polish			Norwegian		
Kind	√	X				√	√	X	√
Characterizing	√	√				√	√	√	√
Type-denoting	X	√				√	X	√	√

Note: Shading stands for the form not being acceptable, X = not available with that meaning



Figure 1: Overview of acceptability choices

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Genericity in the third language: Polish-English bilinguals learning Norwegian

This study investigates how Polish speakers with L2 English acquire genericity in L3 Norwegian. We consider different types of genericity: *Kind* (1), *Characterizing* (2) (Carlson & Pelletier, 1995), and *Type-denoting* generics (3) (Borthen, 2003), as they are marked differently in the three languages under investigation. Genericity is susceptible to crosslinguistic influence (CLI) in both L2 (Ionin *et al.*, 2011) and L3 acquisition (Ionin, Montrul, & Santos, 2011).

- | | |
|---|---|
| (1) Elefantfuglen er utryddet.
elephant_bird-DET is extinct | (3) Det er sunt å ha hund .
it is healthy to have dog |
| (2) En sjiraff har lilla tunge.
one/a giraffe has purple tongue | |

In Polish (L1), bare forms (singular and plurals) denote both generic and non-generic meanings. In English (L2), five forms express the various types of generic meanings, but the bare singular is ungrammatical for count nouns. Norwegian (L3) also employs five NP forms to express some type of genericity. Our general research question investigates CLI from the previously acquired languages into the L3. Potentially, Polish native speakers could benefit from both of their previously acquired languages to master genericity in Norwegian, provided they have acquired the English mappings (Table 1).

It was hypothesized that all previously acquired languages can potentially influence the development of the third language (The Linguistic Proximity model, Westergaard *et al.*, 2017). We furthermore expected additional variables such as the complexity of the form–meaning mappings to be influential as well (The Scalpel Model, Slabakova 2017).

We used two tasks to assess comprehension of five NP forms: a contextualized acceptability judgment task (AJT) for singulars (definite, indefinite, bare) testing distinct generic conditions, and a truth value judgment task (TVJT) for plurals (definite, bare) testing the contrast between the characterizing and episodic (non-generic) conditions. Our trilingual participants resided either in Norway (PolN, $n = 29$) or in Poland (PolP, $n = 28$), since we questioned whether exposure to naturalistic or mainly classroom input would influence L3 development. Learner groups were also tested in their L2 English. Control groups comprised of Norwegian native speakers ($n = 33$) and native English speakers ($n = 38$).

We fitted *glmer* models for each NP form. The AJT results showed the PolN group understood the generic contrasts, unlike the PolP participants, who accepted all forms indiscriminately. Both groups accepted bare singular, influenced by their L1. The TVJT results suggest target-like behavior, indicating a good grasp of the distinction. Group comparisons reveal that definite plurals are comprehended better than bare plurals. However, while the PolP group accepted the bare plurals significantly more in characterizing compared to episodic contexts ($p < .05$), the PolN group was not sensitive to this distinction.

The complexity of results reflects the interplay of form ambiguity, language proficiency, and exposure length. Results from the AJT highlight the form ambiguity effect: the Polish groups revert more strongly to the bare form when confronted with new NPs. Thus, facilitation from form–meaning similarities (Table 1) is to an extent undone by the complexity of Norwegian genericity expressions. The characterizing vs. episodic contrast appears easier to acquire, as the distinction is more categorical than gradient. Interestingly, the PolP group demonstrates more precise use of the definite plural than the PolN group. We attribute this to the instructional setting, which may lead to more consistent exposure to the written variety of Norwegian (Bokmål) used in the experiment.

In conclusion, while naturalistic settings can enhance exposure to the nuances of generic meaning, instructional settings may be beneficial for learning how to use a form not attested in the first language. We will explore which theoretical model of L3 acquisition is compatible with the findings.

Table 1. Distribution of form-to-meaning mappings in the three languages.

		Def. sg ¹	Indef. sg	Bare. sg	Def. pl	Bare pl.
Polish L1	Kind			√		√
	Characterizing			√		√
	Type-denoting			√		√
English L2	Kind	√	#		#	√
	Characterizing	√	√		#	√
	Type-denoting	#	√		#	√
Norwegian L3	Kind	√	#	#	√	√
	Characterizing	√	√	√	#	√
	Type-denoting	#	~ ²	√	#	~
		N=E≠P	N=E≠P	N=P≠E	N≠E≠P	N=E=P

Notes: Grey shades = unavailable form, # = not generic, √ = generic.

(4) **AJT context:** På skolen i dag lærte vi noen ganske ukjente fakta om dyreriket. Et eksempel er at
Translation: Today at school we learned some little-known facts about the animal kingdom. For example,

Test item: *Sjiraffen/en sjiraff/sjiraff* har lilla tunge.
the giraffe/a giraffe/giraffe has a purple tongue

(5) **TVJT context:** Det er en dagligvarebutikk i byen som selger uvanlig frukt og grønnsaker. Mens en banan vanligvis er en gul frukt, er deres bananer blå og de smaker som vaniljeis.

Translation: There is a supermarket in town that sells unusual fruit and vegetables. While the banana is usually a yellow fruit, their bananas are blue, and they taste like vanilla ice cream.

Characterising test items:

Bananer er gule/Bananene er gule.
 Bananas are yellow/bananas-DEF are yellow

Episodic test items:

Bananer er blå./Bananene er blå.
 Bananas are blue / bananas-DEF are blue

Figure 1: Response (%) for singular forms

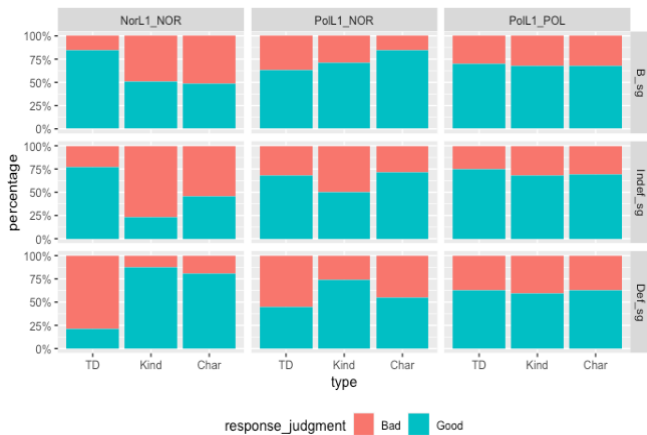
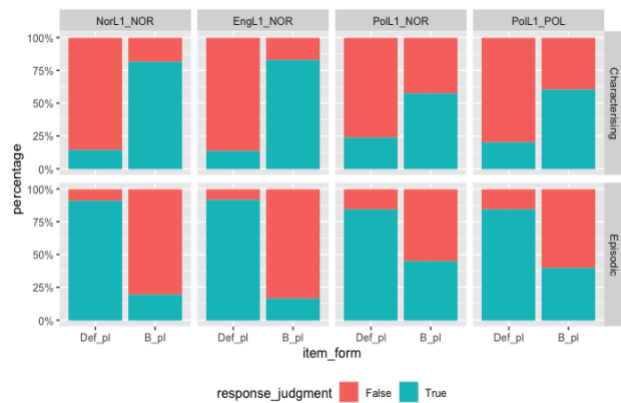


Figure 2: Response (%) for plural forms



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The L2 acquisition of Dutch quantitative *er*: A test for the Interface Hypothesis

Dutch and French both contain a pronoun inherently linked to quantity, respectively *er* and *en*. While Dutch *er* and French *en* behave similarly in that they are obligatory when referring to quantified object DPs (1), there are also differences between the pronouns. For instance, Dutch *er* cannot be used if an adjective occurs in object position, while French *en* is obligatory (2).

- | | |
|--|---|
| 1) <i>Dutch</i> : Jan heeft *(er) drie gekocht. | 2) <i>Dutch</i> : Marie heeft *(er) een rode gekocht. |
| <i>French</i> : Jean *(en) a acheté trois.
'Jan bought three.' | <i>French</i> : Marie *(en) a acheté une rouge.
'Marie bought a red one.' |

Since the use of *er* and *en* is subject to syntactic, semantic and pragmatic constraints, its L2 acquisition was used by Sleeman and Ihsane (2017) as a testing case for the Interface Hypothesis (IH) (Sorace & Filiaci, 2006; Tsimpli & Sorace, 2006). The IH states that properties at the syntax-pragmatics interface are more vulnerable for L2 acquisition than properties at the syntax-semantics interface, which are in turn more difficult to acquire than purely syntactic properties. Alternatives to this hypothesis have been put forward by Rothman (2008) and Slabakova, Kemchinsky and Rothman (2012). According to them, interface phenomena are problematic only for less advanced L2 learners, while syntactic phenomena may continue to present difficulties for advanced learners. Let us call this variation of the IH the Revised Interface Hypothesis (RIH).

Sleeman and Ihsane (2017), who focused on the L2 acquisition of French quantitative *en* by native speakers of Dutch, found partial evidence for the IH. Our study contributes to the debate by investigating the same phenomenon in the opposite direction: the L2 acquisition of Dutch *er* by native speakers of French. We conducted a Grammaticality Judgment Task with 18 native speakers of French learning Dutch as L2 and 21 control native speakers of Dutch. The test material consisted of 56 sentences and 56 filler sentences. The stimuli targeted syntactic properties of *er* as well as syntactic-semantic properties and syntactic-pragmatic properties.

A comparison of the performance of the two groups revealed no significant difference in most of the syntactic-semantic/pragmatic conditions, not even in most of the conditions in which *er* and *en* behave differently, see Figures 1 and 2. In only one syntactic-semantic condition in which the languages differ, a significant difference was found, namely the mass noun condition. Hence, this was the only interface condition in which there was negative transfer. Interestingly, the L1 French group scored significantly lower than the L1 Dutch group in a syntactic condition as well, namely the adjective condition. Thus, our findings support the RIH in that some syntactic properties are problematic for the L2 learners, whereas some interface phenomena do not pose challenges.

The difference between our study and the study of Sleeman and Ihsane (2017) mainly concerns non-referential NPs, which can be replaced by French *en* (3), but not by Dutch *er* (4):

- | | |
|---|------------------------|
| 3) Jean boit des bières. ('Jean is drinking some beers.') | 4) Jan drinkt bierjes. |
| a. Jean en boit. ('Jean is drinken some.') | a. *Jan drinkt er. |
| b. *Jean les boit. ('Jean is drinking them.') | b. Jan drinkt ze. |

The difference between the two studies might be due to the fact that the “ungrammatical” sentences used by Sleeman and Ihsane (2017) in their non-referential NP condition, in which a non-referential NP is replaced by a definite pronoun as in (3b), are not *per se* ungrammatical but only inappropriate as a continuation of sentences involving a non-referential NP as in (3). Hence, the contexts used by Sleeman and Ihsane (2017) could have contributed to the acceptance of sentences as (3b) by Dutch L2 learners of French and might thus explain why the authors found support for the IH.

Figure 1
Mean Percentages of Correct Answers for the Conditions in which Dutch and French are Similar

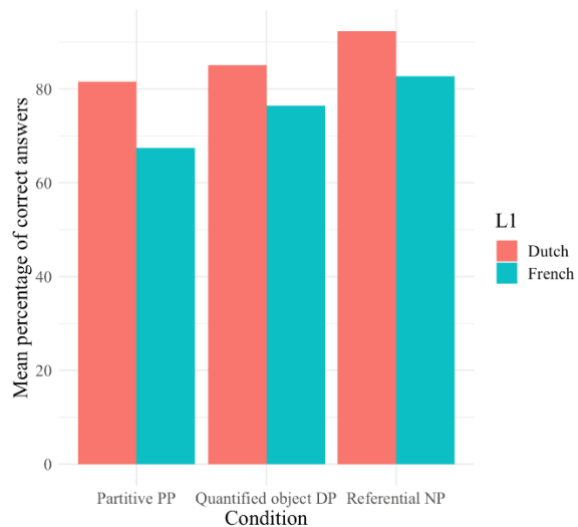
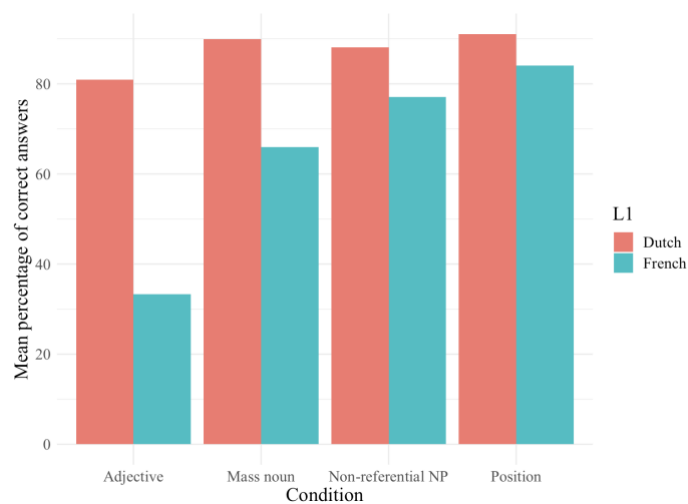


Figure 2
Mean Percentages of Correct Answers for the Conditions in which Dutch and French are Different



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Pronoun interpretation in English: When native speaker performance is unexpected

In bi-clausal sentences in null subject languages like Italian, the preferred antecedent for a null pronoun is prominent (henceforth subject). The antecedent for an overt pronoun, in contrast, is typically an NP other than the subject (henceforth object) (e.g., Carminati 2002). Interpretation of pronouns in non null subject languages like English is more open to ambiguity: the antecedent for an overt pronoun can be either the subject or the object. Nevertheless, native speakers are reported to prefer an interpretation where the antecedent is the subject (e.g., Contemori & Dussias 2020; Cunnings et al. 2017); see (1).

However, prosody can impact pronoun interpretation, leading to a shift in preferences. Grimshaw and Rosen (1990) report that unstressed pronouns in English prefer a prominent antecedent, while stressed pronouns prefer non-subject antecedents; compare (1) and (2). Similarly, Gargiulo et al. (2019) find that a shift in antecedent preferences can be signalled in production by stress on a pronoun or by a pause between clauses for native speakers of Swedish, another non null subject language. The role of prosody in L2ers' interpretations of pronouns in non null subject languages has not previously been considered.

We examine interpretation of English pronouns by L1 Italian speakers, as well as by English native speakers. We hypothesize that both native English speakers and Italian-speaking L2ers will show a preference for subject antecedents for unstressed pronouns and that there will be a shift away from subject antecedents in cases involving stressed pronouns or a pause between clauses. The hypothesis for the native speakers stems from previous findings on the effects of stress, as noted above; the hypothesis for the L2ers is based on the finding that L2ers are sensitive to prosodic cues to pronoun interpretation in the case of L2 Italian (White et al., 2024).

We report on an experiment, administered online (via Alchemer), involving 21 Italian speakers (intermediate/advanced English proficiency) and 21 native speakers of English. Stimuli were 24 biclausal sentences (similar to those in (1) and (2)), recorded by a native English speaker and presented auditorily. Stimuli manipulated presence/absence of stress on the pronoun and presence/absence of pause between clauses. Stressed pronouns were produced with higher pitch peaks, increased duration and greater intensity relative to unstressed pronouns; pauses averaged 400ms in length. Each sentence was preceded by a written context introducing potential referents (subject, object or external). After listening to a sentence, participants indicated their preferred referent for the pronoun. See example test item in (3).

Results are presented in Figure 1. The L2ers showed sensitivity to prosody, as predicted: subjects were the preferred antecedents for unstressed pronouns while stress led to a statistically credible decrease in subject antecedent choices, regardless of the presence of a pause ($\hat{\beta} = -0.99$, 95% HDI = [-1.89, -0.14] (no pause); $\hat{\beta} = -1.60$, 95% HDI = [-2.58, -0.69] (pause)). (There was no credible effect of pause by itself.) The results from the native speakers, on the other hand, were unexpected. Although the data show an overall preference for subject over object antecedents ($\hat{\beta} = 0.56$, 95% HDI = [-0.08, 1.18]), confirming earlier findings, neither stress nor pause led to a shift in antecedent choices.

The L2ers' sensitivity to stress may be indirectly attributable to the L1, in the sense that the two different pronoun types in Italian (null versus overt) differ in their antecedent preferences, which may make L2ers extra-sensitive to differences in the L2 (unstressed versus stressed). In contrast, the lack of sensitivity shown by the native speakers suggests that prosody alone may be insufficient to lead to changes in choice of antecedents and that richer contextual cues may be required as well.

Example sentences (potentially ambiguous; subscripts indicate *preferred* interpretations):

- (1) Monica_i phoned Claudia_j when she_i was in the office.
- (2) Monica_i phoned Claudia_j when SHE_j was in the office.

(3) **Example test item:**

Written context (on screen)	Carol, Janet and Laurel are working on a project together
Test sentence (audio)	Carol called Laurel when she was in the office
Question (on screen)	Who was in the office?
Choices (on screen)	Carol/Laurel/Janet

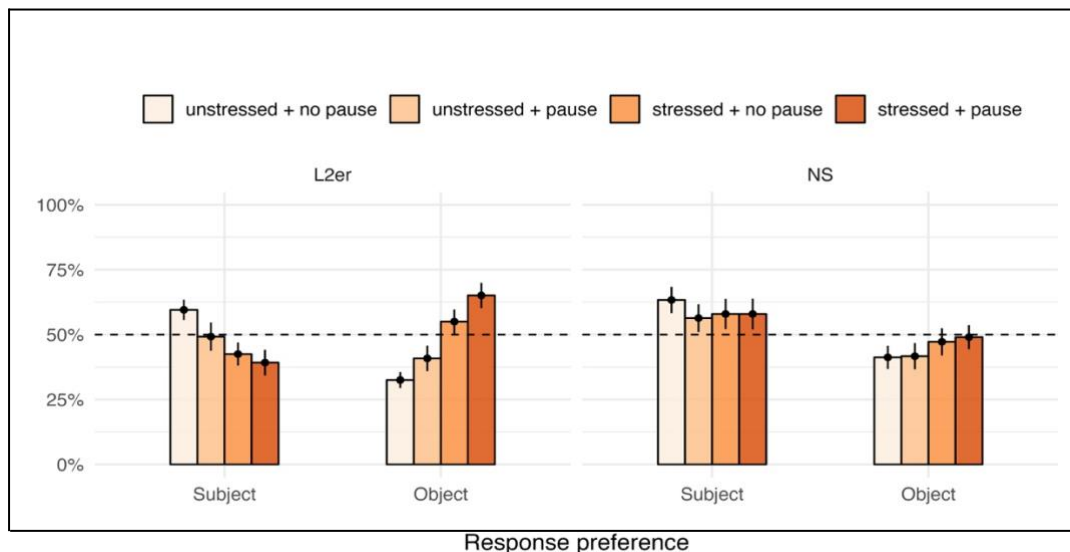


Figure 1. Antecedent choices in English by L2ers and native speakers (in %) (Note: external referents were rarely chosen, ~5% of all responses.)

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Noticing, reporting, but not understanding: The role of awareness in L2 learning

More research on the cognitive processes involved during L2 learning has been encouraged to understand how target input is comprehended (Leow, 2019). One line of research is on examining learners' awareness during learning. As a seminal study, Leow (1997) divided awareness into three levels: noticing, reporting, and understanding; between noticing the linguistic structure and fully understanding its usage, the level of reporting refers to learners reporting not only being aware of the target structure but also in the process of figuring out the correct linguistic rules. As a result, the input or instruction is only conducive to learning if learners can reach higher levels of awareness (Robinson et al. 2012), and the effect of input/instruction may depend on the linguistic characteristics of the target structure.

As an extension to Wu & Ionin (2023), this study further explored how L1-Mandarin speakers learn inverse scope in English, which is absent in Mandarin. The sentence in (1) is ambiguous between two readings, resulting from the different interpretation orders between the quantifier and the negation; the surface-scope reading matches Figure 1 (the "None" context), while the inverse-scope reading matches Figure 2 (the "Partial" context). The complex form-meaning mapping was speculated to be a source of learning difficulty (Wu & Ionin, 2023); even if learners could notice a sentence such as (1) used in a "Partial" context, learners might have difficulty mapping two different readings onto the same structure. This hypothesis was tested in an intervention study examining learners' levels of awareness and learning outcomes. During the intervention, learners read 30 passages embedded with a sentence such as (1), with 15 describing a "None" context and 15 describing a "Partial" context. However, the "Textual Enhancement" group (N=43) read passages with the target sentence and a key phrase closely relevant to the context (e.g., *only two of the boys* in a "Partial" context) highlighted, and the group was instructed to pay attention to the enhanced parts. The "Guided Questions" group (N=41) received three guided questions including "Have you noticed the sentence *All the...didn't...* at the end of each passage?", "In what kind(s) of contexts did the sentence *All the...didn't...* appear?", and "What do you think the sentence *All the...didn't...* means in English?" to raise their awareness. Finally, the "Guided Instruction" group (N=41) had the same treatment as the "Guided Questions" group, but received explicit instruction on scope at the end. To measure learners' awareness, learners were asked to think aloud (verbalizing their thoughts) during the intervention and fill out a debriefing questionnaire (indicating whether they noticed and learned anything). The pre-test, immediate post-test, and delayed post-test (two months after) were in the form of a picture-based acceptability judgment task, in which learners judged sentences such as (1) against "None" pictures and "Partial" pictures. There was also a learner control group (N=18) and an English native control group (N=54), who simply completed the acceptability judgment tasks (in one sitting for English native speakers).

Figures 3-7 present descriptive results of the judgment tasks, with ratings against the "Partial" context further analyzed using a cumulative link mixed model in R, and Tables 1-2 present the results of the debriefing questionnaire. The pre-/post-test results showed that the "Guided Instruction" group made the largest improvement, having significantly higher ratings in the immediate and delayed post-tests compared to the other groups ($p < .05$). Though the "Guided Questions" and the "Textual Enhancement" groups did not differ significantly in the judgment tasks, results from the debriefing questionnaire suggested that the guided questions were more effective than textual enhancement in inducing noticing of the target feature. Think-aloud data also showed that most learners in the "Guided Questions" group reached the level of reporting as they were trying to process the input; however, many learners were still confused or concluded that only the surface-scope reading exists in English (possibly due to negative L1-transfer), which indicated that learning the complex form-meaning mapping of English scope ambiguity is challenging and requires explicit instruction for L1-Mandarin speakers.

(1) All the birds didn't fly out of the cage.

Surface-scope reading (all>not): For every bird, that bird did not fly out of the cage.

Inverse-scope reading (not>all): It is not the case that every bird flies out of the cage (maybe some did, and some did not).

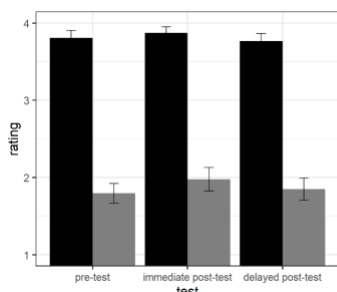
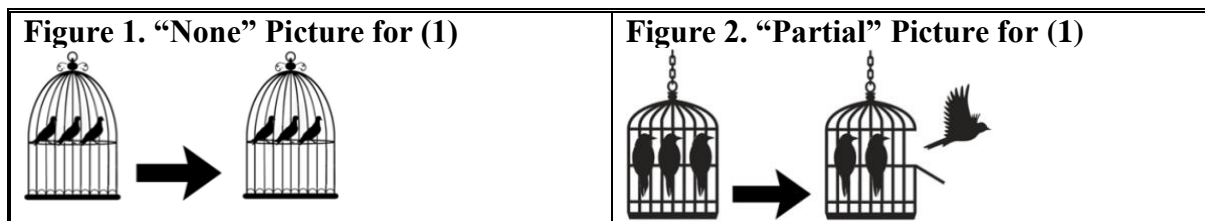


Figure 3.

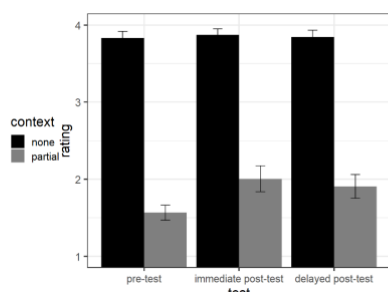


Figure 4.

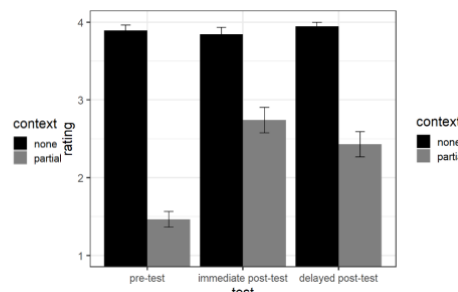


Figure 5.

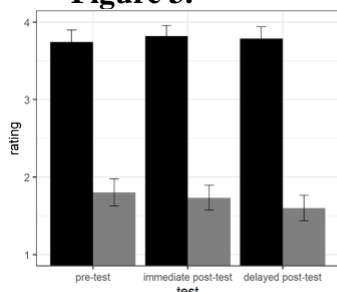


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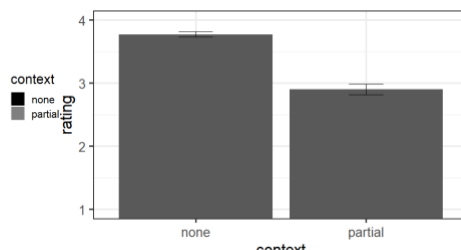


Figure 7.

Note:

Figure 3: Textual Enhancement

Figure 4: Guided Questions

Figure 5: Guided Instruction

Figure 6: Learner Control

Figure 7: English Native Control

Table 1. Debriefing Questionnaire Results: Noticing (by N of Learners)

	both <i>all...didn't</i> and the key phrase	only <i>all...didn't</i>	only the key phrase	nothing
<i>Textual Enhancement</i>	18	6	11	8
<i>Guided Questions</i>	29	5	7	0
<i>Guided Instruction</i>	37	1	3	0

Table 2. Debriefing Questionnaire Results: Learning (by N of Learners)

	yes	no
<i>Textual Enhancement</i>	10	33
<i>Guided Questions</i>	15	26
<i>Guided Instruction</i>	40	1

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L2 and L3 acquisition of Quebec French (QF) vowels contrasts by L1 English learners and L1 Mandarin-L2 English learners

L3 phonology is an understudied domain. The current study aims to add to our understanding of multilingual phonological acquisition by looking at the L2 and L3 perception of Quebec French (QF) tense and lax vowels [y, ʏ] and /e, ε/ and rounded vowels /y-u/ and /œ-ɔ/. Inspired by the linguistic proximity model (LPM) (Westergaard, 2021), I predict that the trilingual participants will outperform the bilingual participants because the trilingual can transfer phonological features [+round] from L1 Mandarin and [+tense] from L2 English to acquire L3 contrasts.

The contrastive hierarchy theory, a representational and learning model proposed by Dresher (2009) is adopted to explain the sources of potential transfer in phonological acquisition. According to Dresher, phoneme inventories are best understood in relation to contrastive feature specifications, assigned in language-specific hierarchies. A comparison of the vocalic feature hierarchies of the three languages, Mandarin, English and Quebec French is given in (1-3).

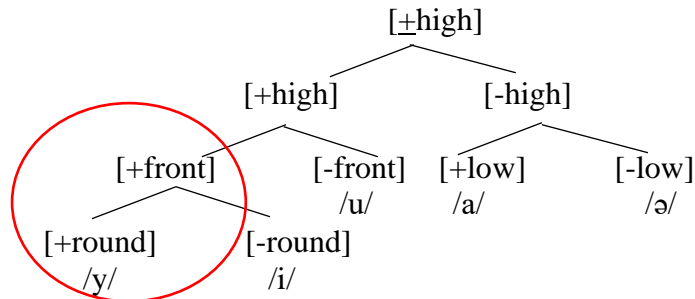
The present study provides a comparison of the perceptual performance of three groups: (1) L1 Mandarin; L2 English; L3 QF (n=22), (2) L1 English; L2 QF (n=20) and (3) QF natives (NS) (n=20). Two learner groups are at the upper-intermediate level of QF proficiency measured by self-rated background questionnaire (based on instructional hours and course level). The Mandarin speakers' L2 English proficiency level was measured by IELTS (average 7.0). An ABX discrimination task (with 1500msISI) was conducted by embedding [y, ʏ] and /e, ε/ and /y-u/ and /œ-ɔ/ in CVC syllables ([bVb], [dVt], [sVz]) in a total of 120 trials. I ran a linear mixed effect model with 'subject' as a random effect and 'contrast' and 'language background' as fixed factors. Accuracy scores and p-values are reported below.

	[y, ʏ]	/e, ε/	/y-u/	/œ-ɔ/
L1 Mandarin-L2 English-L3QF (L3QF)	76%	65%	88%	85%
L1 English-L2 QF (L2QF)	59%	58%	71%	66%
QF natives	77%	69%	92%	89%

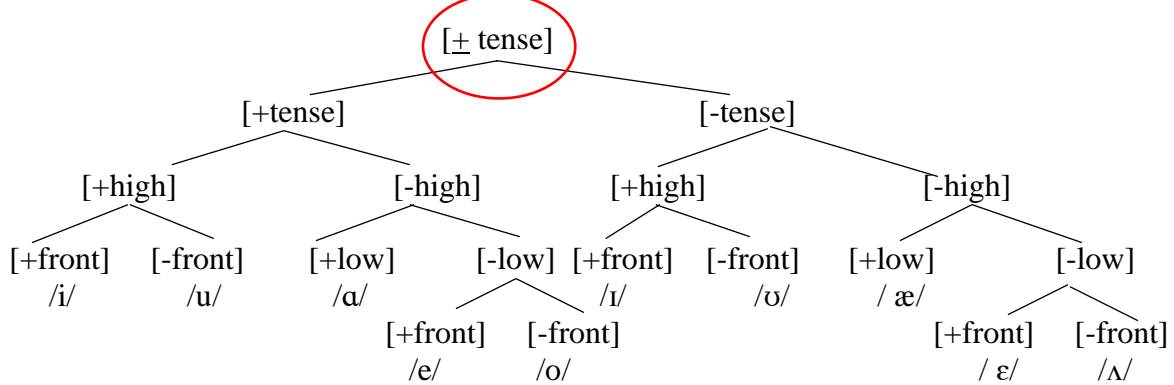
Groups / p-value (<0.05)	[y, ʏ]	/e, ε/	/y-u/	/œ-ɔ/
L3 QF vs L2QF	< 0.0001*	0.0288*	< 0.0001*	< 0.0001*
L3 QF vs QF natives	0.9341	0.26	0.5584	0.9341

The results indicate that the L3 group's behaviour is indistinguishable from the NS group on all the contrasts while the L3 groups' behaviour is significantly different from the L2 group on all the four contrasts. The sources of potential transfer are shown in (1-3). Mandarin has [+round] used to distinguish /y/ from /i/. In English, [+tense] is used to differentiate tense from lax vowels. My findings suggest that the trilingual Mandarin/English learners of L3QF, transferring [+round] from L1 Mandarin and [+tense] from L2 English, are able to successfully parse the L3 QF tense and lax vowels [y, ʏ] and /e, ε/. In relation to rounded vowels, Mandarin has [+front] > [+round] used to distinguish /y/ from /i/ and /u/. Quebec French has [+front] > [+round] used to distinguish /y/ from /u/ and /i/; /œ/ from /ɔ/ and /ε/, so the L3 QF learners, transferring [+front] > [+round] from L1 Mandarin, are able to successfully parse /y-u/ and /œ-ɔ/. Because of the lack of [+round] in English hierarchy and the influence of L1 phonetic cues, the bilingual L1 English-L2 Quebec French learners parse these contrasts ambiguously.

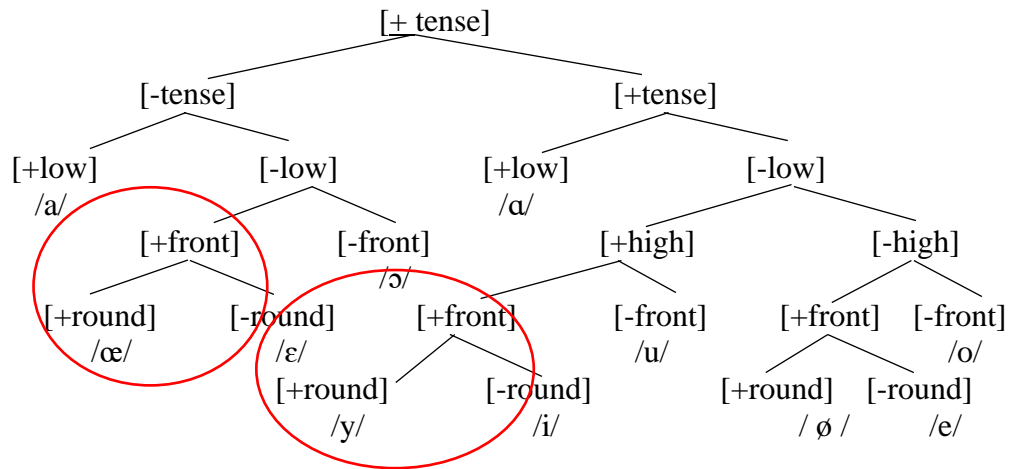
(1) Mandarin vowel feature hierarchy (Wu, 2022)



(2) Canadian English vowel feature hierarchy (Gardner & Roeder, 2022)



(3) Quebec French vowel feature hierarchy (partial) (Hall, 2016)



Reference

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Constraining contexts that exploit real world knowledge lead to L2 acceptance of, but not L2 acquisition of, English inverse scope

Background: English doubly-quantified sentences, as in (1), allow both a surface reading (SR), as in (1a), and an inverse reading (IR), as in (1b); the latter, by contrast, is not allowed in Mandarin analogues.

- (1) A horse jumped over every fence. (*a-every* configuration)
- a. Surface reading (*a > every*): There was one horse that jumped over every fence.
 - b. Inverse reading (*every > a*): For every fence, there was a horse that jumped over it.

Previous studies report that IR is not available to intermediate-to-advanced L1-Mandarin L2 learners of English (Chu et al., 2014; Wu & Ionin, 2019), and acquisition of IR remains elusive even after both long U.S. residence (Wu & Ionin, 2022) and intensive input via IR-matching stories (Wu & Ionin, 2023). Indeed, debriefing results of Wu and Ionin (2023) suggest that about half of their L2 participants failed to notice the target pattern and almost none reported awareness of IR, despite their input providing seemingly ample positive evidence. It thus remains unclear what kind of input, if any, could lead L1-Mandarin speakers to the L2 acquisition of English IR.

Study: Experiment & Results: We propose a new experimental design (inspired by Philipp & Zimmermann, 2023) that enables scrutiny of, first, whether *contexts that—in light of real-world knowledge—allow only IR* for *a-every* sentences like in (1) (henceforth “IR-biased contexts”) can help L1-Mandarin L2 learners accept IR in English, and if so, second, whether they can then extend IR (a) to contexts that allow both SR and IR (henceforth “neutral contexts”) and/or (b) to the *every-a* configuration. In a semantic judgment task (see Table 1), participants read a series of two-sentence stories that each end with a target *a-every* or *every-a* sentence, after which they then make a “Yes/No” judgment about whether a subsequent statement that is consistent with either only IR or only SR of the target sentence fits the given story. Critical (and filler) items were divided into three blocks (see Fig. 1): Block 1, neutral contexts, tested baseline SR vs. IR acceptance; Block 2 examined the impact of IR-biased contexts on IR acceptance of *a-every* sentences; Block 3, neutral contexts, probed for changes to IR acceptance for *a-every* and *every-a* sentences.

Twenty-six L1-English speakers and 31 intermediate-to-advanced L1-Mandarin L2 learners of English took part in the experiment. Results from the *a-every* configuration show that IR was already available to L1-English speakers before exposure to IR-biased contexts (see Block 1 in Fig. 2a), while L1-Mandarin L2 learners of English tended to reject IR at this phase (see Block 1 in Fig. 3a). By contrast, in Block 2, the L1 group accepted IR items and rejected SR items, and the L2 group showed that acceptance significantly increased ($p < 0.001$) for IR items and significantly decreased ($p < 0.001$) for SR items. For both groups, however, IR acceptance in Block 3 was no different from that in Block 1, both for *a-every* items (see Figs. 2a and 3a) and for *every-a* items—for which, recall, no IR-biased contexts had been given (see Figs. 2b and 3b).

Conclusion: In sum, we find that even when L1-Mandarin L2 learners are exposed to highly constraining contexts that, owing to real-world knowledge, exclusively support IR *and the L2 learners accept IR in these contexts*, there is no evidence of acquisition of IR. Discussion will also consider (a) lack of L2 generalization of IR and (b) patterns of results by individual.

Examples and Results

Table 1. Example stimuli in the semantic judgment task

<p>Blocks 1 & 3: Neutral context; sample of the <i>a</i>-every configuration</p> <p><i>During a classroom cleanup, the teacher hoped that the windows could be washed by boys. To her delight, a boy washed every window.</i></p> <p>The situation in the story involves [one/more than one] boy. Yes No</p>
<p>Block 2: IR-biased context; sample of the <i>a</i>-every configuration</p> <p><i>The local government had suggested that the backyards be surrounded by house fences. As a result, a fence surrounded every backyard in the city.</i></p> <p>The situation in the story involves [one/more than one] fence. Yes No</p>
<p>Blocks 1 & 3: Neutral context; sample of the <i>every-a</i> configuration</p> <p><i>Three burglars sneaked into a jewelry store late at night. Every burglar saw a large diamond.</i></p> <p>The situation in the story involves [one/more than one] diamond. Yes No</p>

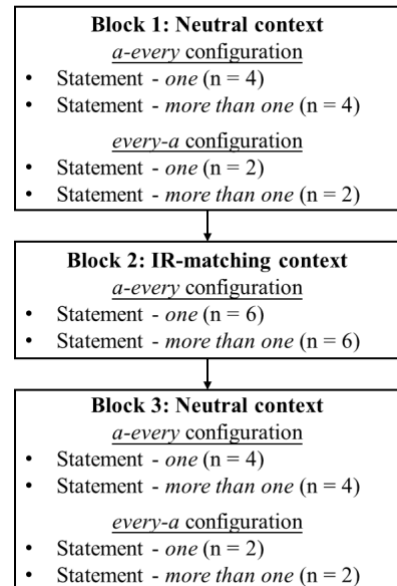


Figure 1. Experimental design

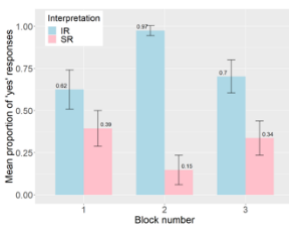


Figure 2a

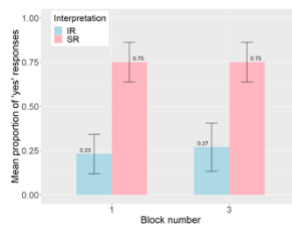


Figure 2b

Figure 2. L1-English participants: Proportion of “Yes” responses to IR vs. SR of *a*-every sentences (left) and *every-a* sentences (right). Error bars indicate 95% confidence intervals.

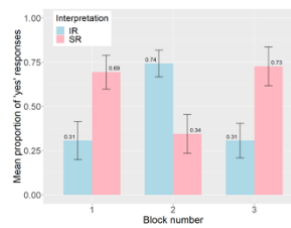


Figure 3a

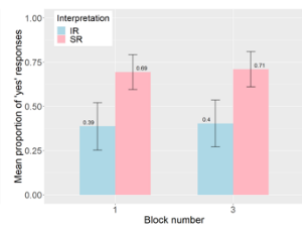


Figure 3b

Figure 3. L1-Mandarin L2 learners of English: Proportion of “Yes” responses to IR vs. SR of *a*-every sentences (left) and *every-a* sentences (right). Error bars indicate 95% confidence intervals.

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Cross-linguistic influence in the interpretational preferences of null/overt subject pronouns: A case of heritage Mandarin Chinese children

BACKGROUND The current study investigates how Chinese null and overt subject pronouns develop in heritage Chinese children with English as a dominant language. It specifically tests if there is a cross-linguistic influence (CLI) from dominant English to heritage Chinese in heritage children with different Chinese proficiency levels. Previous L1 studies (e.g., Lust et al., 1996; Zhao et al., 2022) find that monolingual Chinese adults (MA) prefer the subject antecedents for the null subject pronouns in both forward and backward anaphora. For the overt subject pronouns, the MA also prefers the subject antecedents in forward anaphora. However, in backward anaphora, they prefer the discourse antecedents and this is due to a Chinese-specific constraint (Huang & Lin, 2021). In English, the preferred antecedents for the overt subject pronouns are the subject antecedents in both forward and backward anaphora (Lust et al., 1996; Contemori et al., 2019). The example sentences and cross-linguistic similarities and differences between Chinese and English subject pronouns are provided in examples 1-2 and Table 1.

HYPOTHESIS & PREDICTIONS If there is a CLI from dominant English to heritage Chinese: (i) The HC will overgeneralise the use of English overt pronouns to Chinese null and overt subject pronouns, and hence show strong subject antecedent preferences across all anaphora conditions, following the pattern of English pronouns, even in the [Overt+Backward] conditions (Table 1); (ii) The English-like pattern in this latter condition will appear, either initially or across all proficiency groups.

METHODOLOGY Our participants include 88 heritage children aged 4-6 and 8-10 in the UK, divided into 4 proficiency groups (HC1-4) by the Peabody Picture Vocabulary Test (Table 2). We also have 48 monolingual Mandarin Chinese adults (MA) as baseline. The data were collected by the Picture Selection Task: when hearing the sentence, the participants were required to choose one out of three pictures (the coreferential reading with either “subject”, “object” or discourse referent) that best matches the meaning of the sentence (Figure 1).

ANALYSIS The Generalized linear mixed-effects model was run on the data with MA as baseline. Responses were dichotomised into “subject” vs. “non-subject”. We ran the model on each condition, separately to show group comparisons. Results were plotted in Figure 2 and Table 3.

RESULTS & DISCUSSION Results from Figure 2 show that the HC groups are approaching the MA’s target responses - subjects as antecedents - in [Null+Forward], [Null+Backward] and [Overt+Forward]. However, in the [Overt+Backward] conditions where English and Chinese differ, the HC groups still present a high preference for the subject antecedents (non-target response), with a significant difference from MA (also shown in Table 3). This can also be observed from the three-antecedent comparison (Figure 3) that high subject preferences are shown in [Null+Forward], [Null+Backward] and [Overt+Forward]. In the [Overt+Backward] conditions, though the subject preference is relatively lower than in other conditions, it still appears to be the most preferred antecedent in the highest proficiency HC groups (HC3 and HC4). This subject preference matches the English pattern, supporting our prediction (i) - a CLI from dominant English to heritage Chinese. Also, Figure 2 shows the subject preference in the [Overt+Backward] conditions is demonstrated consistently across all proficiency levels, with a significant difference from MA. This supports our prediction (ii). Hence, we argue that their dominant language English influences the acquisition of Chinese subject pronouns.

- (1) **Forward anaphora**
 [subject]
 Mama_i qin nūhai_j de shihou, ta_{>|/k}/e_{>|/k} zai ting yinyue.
 mother kiss girl DE time she Prog listen music
 'When the mother_i kisses the girl_j, she_{>|/k} is listening to music.'
- (2) **Backward anaphora**
 Ta_{>|/k}/e_{>|/k} ting yinyue de shihou, [subject] mama_i zai qin nūhai_j.
 she listen music DE time mother Prog kiss girl
 'When she_{>|/k} listens to music, the mother_i is kissing the girl_j.'
 (The same-gender discourse referent is indicated by 'k'.)

Table 1. Interpretational preferences for null and overt subject pronouns in Chinese and English

	Null		Overt	
	Forward	Backward	Forward	Backward
Chinese	Subject	Subject	Subject	Discourse referent
English	NA	NA	Subject	Subject

(Lust et al., 1996; Zhao et al., 2022; Contemori et al., 2019)

Figure 1. Examples of a picture set



Table 2. Basic information for proficiency groups by heritage Mandarin Chinese children

Groups(N)	Chinese proficiency score		Age	
	Range	Mean (SD)	Range	Mean (SD)
HC1 (20)	10-40	25 (9.35)	4;00-8;04	5;06 (1.60)
HC2 (24)	41-72	58 (8.70)	4;00-10;06	7;02 (1.66)
HC3 (22)	73-96	82 (7.35)	5;00-10;09	8;03 (2.14)
HC4 (22)	97-154	119 (15.12)	5;10-10;11	9;02 (1.51)
MA (48)	NA	NA	19;06-46;00	28;08 (4.71)

Table 3. Statistical differences for group comparisons regarding the selection of subject antecedents by conditions

	Null+Forward	Null+Backward	Overt+Forward	Overt+Backward
	HC1 vs. MA	***	***	*
HC2 vs. MA	***	***	NS	**
HC3 vs. MA	***	*	NS	***
HC4 vs. MA	**	NS	NS	***

Figure 2. Selection of subjects as antecedents among heritage proficiency groups by conditions

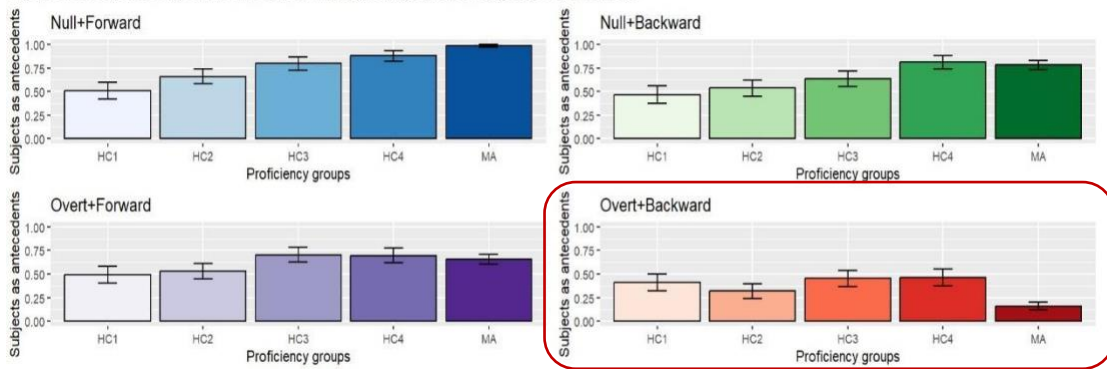
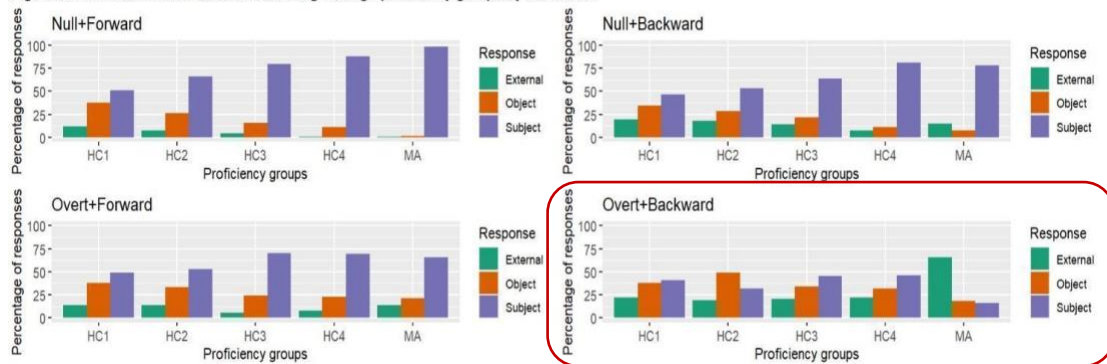


Figure 3. Three-antecedent distribution among heritage proficiency groups by conditions



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L2 comprehension of English relative clauses: Resumption mitigates processing strain

Background: It is not uncommon for L2ers to produce relative clauses (RCs) of the resumptive type—as in **the man that they hired him*—even when the L1 and the target language permit only RCs of the gapped type—as in *the man that they hired*. Observing that L2ers produce resumptive RCs (a) whether or not the L1 allows resumption in RCs and (b) more often in environments considered difficult for relativization, Hylltenstam (1984) conjectured that resumption facilitates the L2 processing of RCs. Although L2 research continues to examine production of RCs (resumptive and otherwise), almost no L2 studies have probed the processing of resumptive pronouns (RPs) vs. gaps during real-time RC comprehension—a curious lacuna given ongoing debate about whether RPs facilitate L1 comprehension of RCs (see, e.g., Meltzer-Asscher, 2021). **Study:** Whether English direct object RCs (ORCs) containing an RP constitute licit grammar representations and/or a subconscious strategy for facilitating comprehension was investigated via an acceptability judgment task (AJT) and a self-paced reading task (SPRT). The latter tested online processing of RPs vs. gaps in three ORC environments—short-distance, long-distance, and *wh*-island (Table 1)—the assumption being that these are increasingly difficult relativization contexts (e.g., Hawkins, 1999, 2004). Each trial ended with a comprehension question whose correct answer depended on accurate resolution of the RC dependency. The AJT gathered offline ratings of the same three RP-vs.-gap sentence types, using a 6-point scale (plus an I-don’t-know option). Each task had 30 critical items (6 conditions × 5 tokens, Latin-squared) and 42 fillers.

Participants (Table 2) comprised 90 English native speakers (ENSs), 69 L1-Korean L2ers of English (KLEs), and 76 L1-Mandarin L2ers of English (MLEs). To investigate L1 effects (resumptive ORCs are allowed in Mandarin but not in Korean), we also had the L2ers complete a closely-translated version of the AJT in their L1. English proficiency was assessed via a C-test.

Results: In the SPRT (Figure 1), log-transformed reading times (log RTs) at the critical region—the three words following the RP/gap—were significantly faster for ENSs after RPs than gaps in only the Island condition; for KLEs and MLEs, the advantage for RPs manifested across all three environments (especially the Long condition), likely reflecting augmented difficulty in L2 (vs. L1) sentence processing (e.g., Kilborn, 1992). Comprehension-question accuracy (Figure 2) was higher for RPs than gaps in all GROUP × ENVIRONMENT pairings, with the contrast being significant for KLEs in all environments and for MLEs in the Island condition.

In the English AJT (Figure 3), mean RP-trial ratings were relatively low and never surpassed corresponding mean gap-trial ratings. MLEs had the highest overall RP-trial ratings, attributable to L1 influence for some MLEs. Indeed, the sole (negative) relation between English proficiency and RP-trial rating was for MLEs on English *wh*-islands. As for the SPRT, all groups showed clear signs of processing facilitation for resumption (even with consistent RP acceptors removed).

Discussion & Conclusion: Taken together, these SPRT and AJT results indicate that resumption in English ORCs reflects *an ungrammatical processing strategy* for ENSs and for many KLEs/MLEs. Both reading-time data and comprehension-question accuracy data from the SPRT also provide strong evidence that RPs ease comprehension of English ORCs under processing strain (a) for both L2 groups—regardless of acceptability ratings of analogue L1 sentence types and (b) for all groups—regardless of English acceptability ratings of the same sentence types.

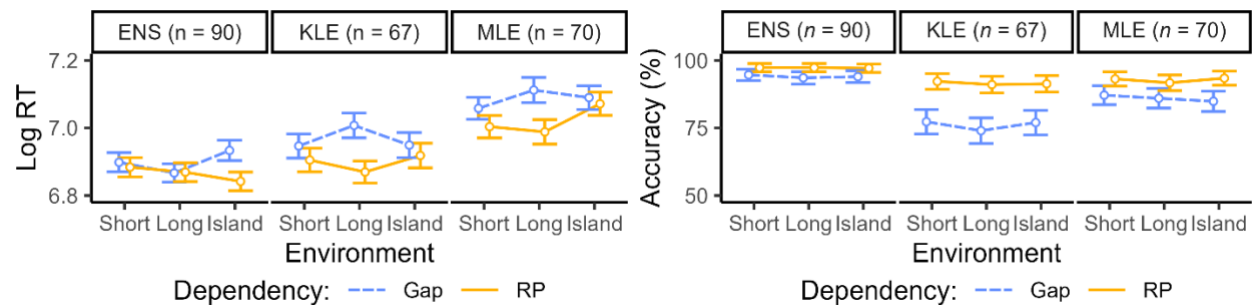
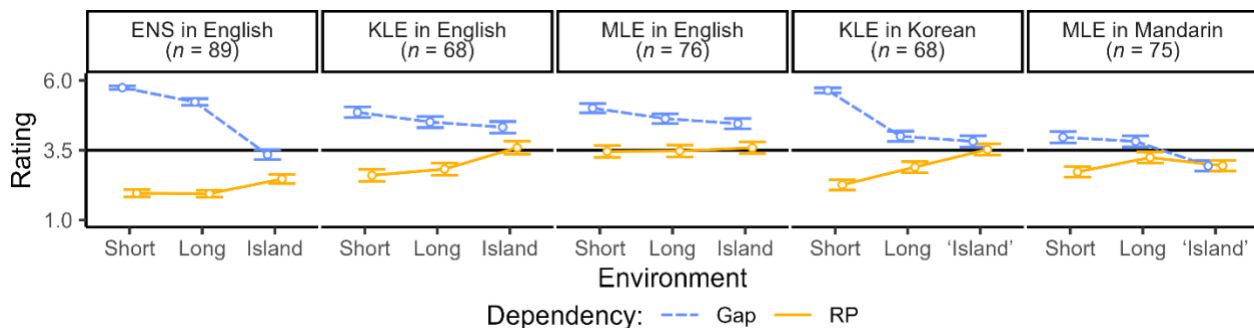
Table 1. Critical Conditions in the Self-Paced Reading Task (highlighting indicates critical region)

Environment	Example Stimuli in the Gap and RP Conditions
Short	I think Mary knows the man that these detectives arrested {__/*him} at the beginning of the week.
Long	Mary knows the man that I think these detectives arrested {__/*him} at the beginning of the week.
Island	Mary knows the man that I wonder which detectives arrested {*__/*him} at the beginning of the week.

Note. The SPRT preceded the English AJT (which in turn preceded the Korean/Mandarin AJT).

Table 2. Participant Background Information (prior to exclusions; values are means and ranges)

Group	Age at testing	Age of English onset	English C-test score (%)
ENS ($n = 90$)	26.98 (18–71)	—	85.48 (52–98)
KLE ($n = 69$)	26.29 (18–41)	9.35 (8–15)	58.58 (14–90)
MLE ($n = 76$)	28.14 (18–45)	9.71 (8–14)	57.71 (14–98)

**Figure 1.** Mean reading times at the critical region in the self-paced reading task. Error bars are 95% confidence intervals.**Figure 2.** Mean comprehension-question accuracy in the self-paced reading task. Error bars are 95% confidence intervals.**Figure 3.** Mean ratings in the acceptability judgment tasks. Error bars are 95% confidence intervals; the horizontal line marks the midpoint of the rating scale.

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WIFI INSTRUCTIONS

Visitors to campus who do not have a University of Illinois NetID can still use the campus wi-fi by connecting to the IllinoisNet_Guest network from Technology Services:

Connect your device to the Wi-Fi network “IllinoisNet_Guest”

A browser window should automatically open/ If this does not happen, open your web browser and navigate to <http://illinois.edu>.

As a guest or visitor, click the link at the bottom of the page and you can self-register an account. This account will be valid until 4am the next day, after which you will be prompted to create a new account.

After a brief moment the system should then inform you that you have been given Internet access. Visitors should choose **Click Here for Wi-Fi Access**. Keep in mind that any visitor accounts created in this way are only valid until 4am the following day, after which you will need to repeat this process.

Still having issues? Please contact one of our volunteers at the Registration Desk or contact the Help Desk at consult@illinois.edu or 217-244-7000.

If you have never connected to IllinoisNet_Guest before and need help configuring your device, Technology Services has a guide to getting started with the guest wi-fi network at Illinois: <https://tinyurl.com/2e76seyh>

LOCAL GUIDE

Lunch:

The largest concentration of inexpensive lunch restaurants is on Green Street, west of the Illini Union. Local favorites include Murphy's Pub for burgers, Zorba's for gyros, and you can find quick and easy sandwich chains here as well (Subway, Jimmy John's, Potbelly). Other lunch possibilities include the mall-style food court in the basement of the Illini Union and a number of nearby restaurants located on Goodwin Avenue and Gregory Street, such as Basil Thai, Kofusion, J Gumbo's, and Rosati's Pizza, east of the Literatures, Cultures & Linguistics Building (LCLB).

Coffee:

The regional chain Espresso Royale dominates the campus coffee business here, and the nearest locations can be found on 6th Street and E Daniel Street, or Goodwin Avenue and Oregon Street. Starbucks has a location in the courtyard in the Illini Union, and a number of other nearby locations. Additional nearby coffee shops include Caffe Paradisso, BrewLab Coffee, Dunkin' Donuts and Caffe Bene.

Dinner:

If you are looking to “live large” and experience the best that CU has to offer, there are several nice restaurants in the downtown Champaign triangle. Big Grove Tavern has tasty farm-to-table treats, and Seven Saints offers some interesting sliders and cocktails. Black Dog Smoke is a locally-renowned BBQ joint, with locations in Urbana and Champaign.

Conference dinner at Silvercreek restaurant:

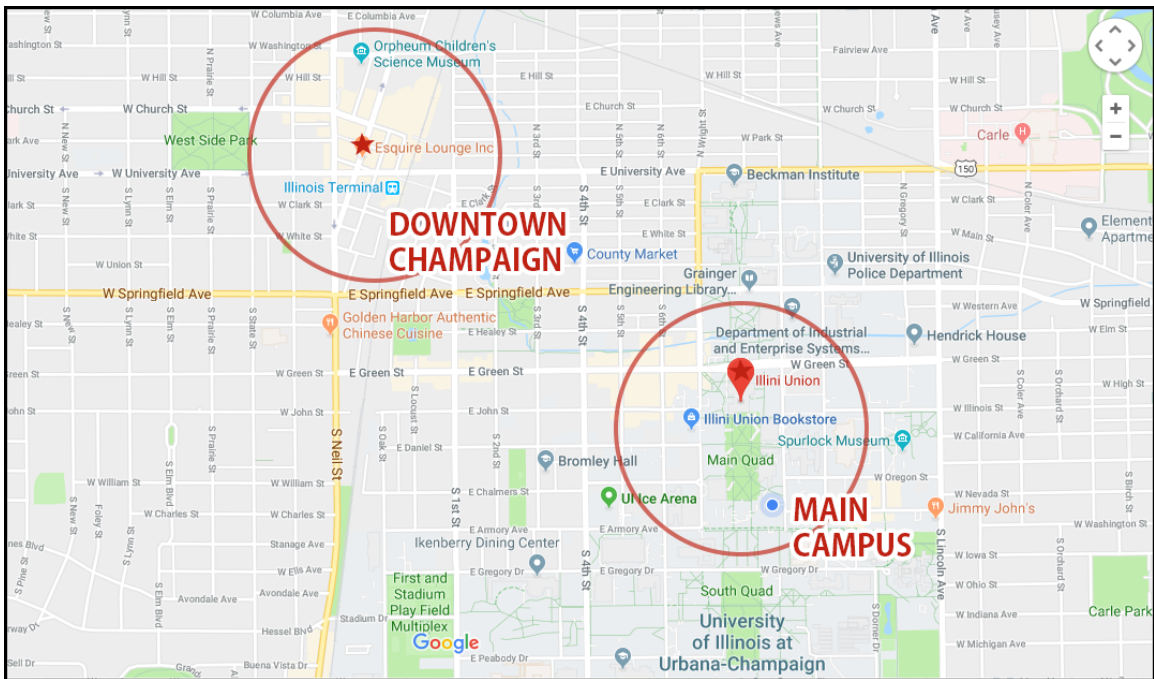
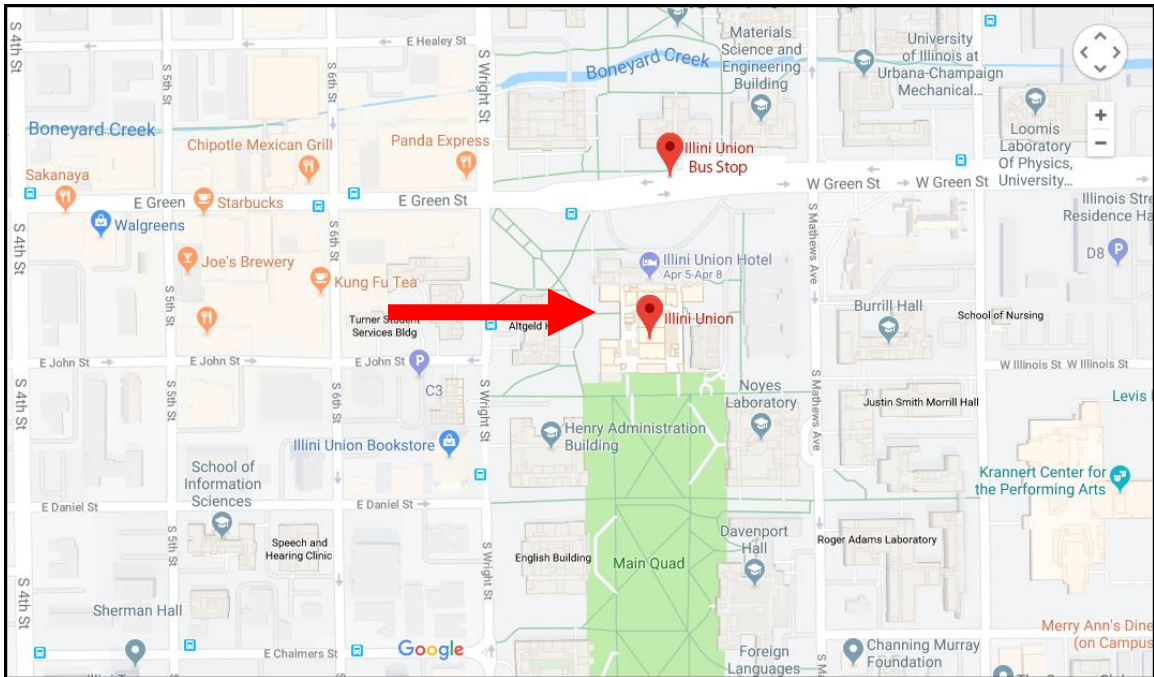
Our conference dinner, which will be held on Friday, May 3rd from 6:30 to 8:30pm, is located in charming downtown Urbana, east of main campus. Silvercreek boasts casual fine dining using only the freshest ingredients from local farmers and right from their own garden. From Levis Faculty Center, Silvercreek is easily accessible via a 5-minute drive or a 10-minute bus-ride on the MTD with the 5 E Green bus.

Public transportation:

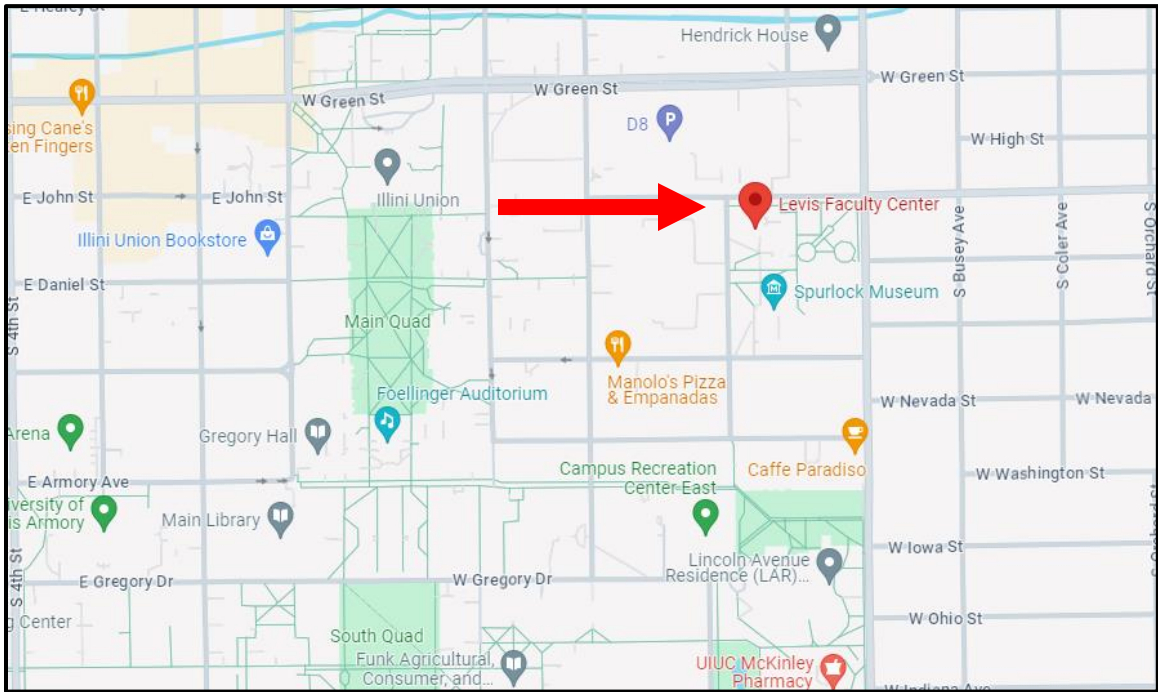
Within Urbana-Champaign, MTD operates the bus system. Fare is \$1 per ride, including any transfers. Download the app Token Transit from Google Play or App Store to electronically purchase and use your ticket.

MAPS

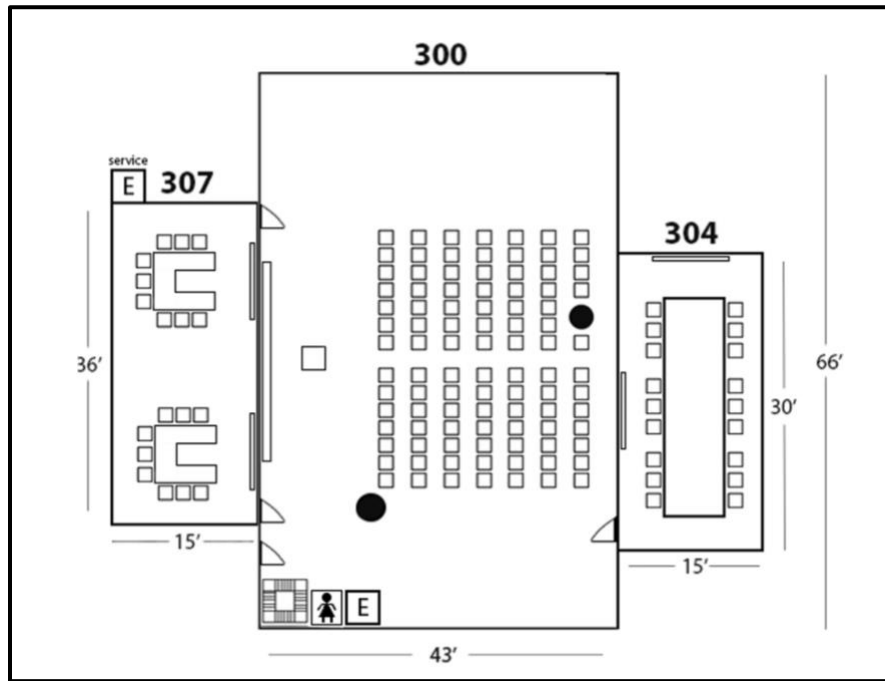
Illini Union



Levis Faculty Center



Levis Faculty Center, Third Floor



Conference talks: rm 300
Poster Presentations: rm 210

WHO TO ASK?

At GASLA-17, conference attendees wear black lanyards, while volunteers wear orange lanyards. If you have any questions or need assistance during the conference, ask one of our volunteers with an orange lanyard!



Conference attendees



Volunteers

GASLA

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