# GASLA16
Trondheim, 12–14.5.2022

## Day 1 Thursday 12.5.

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:15–9:00</td>
<td>Registration</td>
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<tr>
<td>9:00–9:15</td>
<td>Opening and Welcome</td>
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<tr>
<td>9:15–9:45</td>
<td><strong>Session 1</strong></td>
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<tr>
<td>9:15–9:45</td>
<td><strong>Exploring factors modelling L3 developmental trajectories: Japanese-English bilinguals acquiring Spanish</strong>&lt;br&gt;<strong>Eloi Puig Mayenco, Maki Kubota, Yuya Naganawa and Camila Merlo</strong></td>
</tr>
<tr>
<td>9:45–10.15</td>
<td><strong>Comprehension of temporal conjunctions in bilingual children: length of exposure wins over age of onset</strong>&lt;br&gt;<strong>Christos Makrodimitris and Petra Schulz</strong></td>
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<tr>
<td>10.15–10.45</td>
<td><strong>Late, very late, or never: Development of non-personal clitics in Bilingual Catalan</strong>&lt;br&gt;<strong>Silvia Perpiñan, Adriana Soto-Corominas and Scott Perry</strong></td>
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<tr>
<td>10.45–11.15</td>
<td>Coffee break</td>
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<tr>
<td>11.15–11.45</td>
<td><strong>Session 2</strong></td>
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<tr>
<td>11.15–11.45</td>
<td><strong>Apparent U-shaped learning in the acquisition of stress in Mongolian: Surface vs. underlying similarity</strong>&lt;br&gt;<strong>Öner Özçelik</strong></td>
</tr>
<tr>
<td>11.45–12.15</td>
<td><strong>Code-switching within the phonological word</strong>&lt;br&gt;<strong>Rodrigo Delgado, Jennifer Cabrelli and Luis López</strong></td>
</tr>
<tr>
<td>12.15–14.15</td>
<td>Lunch and poster session 1</td>
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<tr>
<td>14.15–14.45</td>
<td><strong>Session 3</strong></td>
</tr>
<tr>
<td>14.15–14.45</td>
<td><strong>The L2 acquisition of French interrogatives: Pragmatic inferences in clefted wh-questions</strong>&lt;br&gt;<strong>Online</strong>&lt;br&gt;<strong>Emilie Destruel and Bryan Donaldson</strong></td>
</tr>
<tr>
<td>14.45–15.15</td>
<td><strong>The grammar of experience and the acquisition of NPIs: Ever and any show different paths of acquisition in Chinese and Korean L2 speakers of English</strong>&lt;br&gt;<strong>Nino Grillo, Kook-Hee Gil, Heather Marsden, Nina Radkevich, Shayne Sloggett, George Tsoulas and Norman Yeo</strong></td>
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<tr>
<td>15.15–15.54</td>
<td><strong>Telicity or context? Exploring which cues learners use when acquiring the preterit and the imperfect in Spanish</strong>.&lt;br&gt;<strong>Laura Dominguez, Eloi Puig-Mayenco, Maria J. Arche and Roumyana Slabakova</strong></td>
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<tr>
<td>15.45–16.15</td>
<td>Coffee break</td>
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<tr>
<td>16.15–16.45</td>
<td><strong>Session 4</strong></td>
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<tr>
<td>16.15–16.45</td>
<td><strong>The effect of bilingualism on language development in autistic children</strong>&lt;br&gt;<strong>Philippe Prévost, Laurie Tuller, Christophe dos Santos, Sandrine Ferré, Rachael Zebib and Silvia Silleresi</strong></td>
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<tr>
<td>16.45–17.15</td>
<td><strong>Rhetorical question comprehension in German-Italian bilingual children: comparing majority and minority language</strong>&lt;br&gt;<strong>Miriam Geiss, Maria Francesca Ferin, Theodoros Marinis and Tanja Kupisch</strong></td>
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<tr>
<td>16.45–17.15</td>
<td><strong>Bidialectal exposure modulates neural signatures to conflicting grammatical properties: Norway as a natural laboratory</strong>&lt;br&gt;<strong>Maki Kubota, Jorge González Alonso, Alicia Luque, Isabel Nadine Jensen, Yanina Prystauka, Sergio Miguel Pereira Soares, Merete Anderssen, Øystein Vangsnæs and Jason Rothman</strong></td>
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<td>17.15</td>
<td>Short break</td>
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<td>18.00–19.00</td>
<td>Keynote presentation</td>
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<td>18.00–19.00</td>
<td><strong>Phonology in Multilingual Grammars: Representational Complexity and Linguistic Interfaces</strong>&lt;br&gt;<strong>John Archibald</strong></td>
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<td>Time</td>
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<tr>
<td>9.00–10.00</td>
<td>Keynote</td>
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<td>10–10.30</td>
<td>Coffee break</td>
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<td>10.30–11.00</td>
<td>Session 5</td>
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<td>12.00–14.00</td>
<td>Lunch and</td>
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<td>poster session 2</td>
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<td>14.45–15.00</td>
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<td>15.00–15.30</td>
<td>Coffee break</td>
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<td>15.30–16.00</td>
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<td>18.15–19.00</td>
<td>Business</td>
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<td>19.30</td>
<td>meeting</td>
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Day 3, Saturday 14.5.

<table>
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<tr>
<td>9.00–10.00</td>
<td>Keynote presentation&lt;br&gt;<strong>What the Acquisition of Japanese Contributes to Generative Approaches to SLA</strong>&lt;br&gt;Makiko Hirakawa</td>
</tr>
<tr>
<td>10–10.30</td>
<td>Coffee break</td>
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<tr>
<td>10.30–11.00</td>
<td>Session 8&lt;br&gt;<strong>Gender and number agreement in Italian as a heritage language: A self-paced reading study</strong>&lt;br&gt;Grazia Di Pisa, Theodoros Marinis and Jason Rothman</td>
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<td><strong>Internal and external interfaces in L2 acquisition of Italian word order variation</strong>&lt;br&gt;Caterina Tasinato and Emanuela Sanfelici</td>
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<td>11.20–12.00</td>
<td><strong>Revisiting plurality in SLA: evidence from comprehension and production</strong>&lt;br&gt;Tania Ionin, Amy Atiles, Sea Hee Choi, Chae Eun Lee and Mien-Jen Wu</td>
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<td><strong>Crosslinguistic influence in L3 acquisition: Evidence from artificial language learning</strong>&lt;br&gt;Natalia Mitrofanova, Evelina Leivada and Marit Westergaard</td>
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<tr>
<td>12.45–13.15</td>
<td><strong>Cross-linguistic influence in L3 and L2 German</strong>&lt;br&gt;Nadine Kolb, Gustavo Guajardo and Katharina Bernstein</td>
</tr>
<tr>
<td>13.15</td>
<td>Lunch</td>
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<tr>
<td>15.00</td>
<td>Touristic tour of the city</td>
</tr>
</tbody>
</table>
Poster session day 1

**Intonation of polar questions in German-dominant heritage speakers of Italian.** Svenja Schmid and Miriam Geiss

**Sensitivity to event structure in passives supports deep processing in L1 and L2.** Katrina Geraghty, Nino Grillo and Shayne Sloggett

**Top-down or bottom-up: Parsing strategies in L2 English and Russian.** Marina Sokolova and Roumyana Slabakova

**L1-L2 linguistic distance predicts relativiser preferences in L2 English: implications for theories of transfer.** Theodora Alexopoulou, Ianthi Tsimpili and Xiaobin Chen

**When L1 transfer persists: Resetting features with CLLD in Romanian and Italian.** Liz Smeets

**Conversational implicature for definite plurals in L2 English.** Jacee Cho, Eleanor Sand and Leksi Walker Scarr

**Can Italian si causative and venire passives prime English passives in late learners?** Ilaria Venagli, Michaela Mae Vann, Giulia Bencini and Virginia V. Valian

**Conventional (wh-) expressions and the development of L2 syntax: A longitudinal corpus-based study.** Thomas Hammond

**Cross-linguistic influence in the processing of possessive pronouns in L2 Norwegian.** Brechje van Osch, Merete Anderssen and Ludovica Serratrice

**Re-examination of the interpretation of L2 Japanese reflexives by Chinese L1 learners: Empathy, logophoricity, and the blocking effect.** Mari Umeda, Makiko Hirakawa, Kazunori Suzuki, Michiko Fukuda, Kazue Takeda, John Matthews and Neal Snape

**Online subject pronoun comprehension in L2 Italian: Evidence from Croatian speakers.** Tihana Kraš and Paola Medved

**Second language acquisition of English plurals by Chinese ESL speakers.** Yi Liu and Kook-Hee Gil

**Cross-linguistic influence in early adult third language acquisition: Acquisition of Norwegian morphosyntax by L1 Spanish L2 English speakers.** Augusto Espindola
Poster session day 2

Aspectual backgrounding facilitates Condition C violation in L1 and L2 comprehension, Ioannis Iliopoulos and Claudia Felser

There isn't difficulty with the meaning of existential constructions in L2 English, Tania Ionin and Chung-Yu Chen

On the processing of filler gap dependencies in L2 Italian: A self-paced reading study, Pamela Franciotti and Gita Martohardjono

The role of L1 on the L2 development and processing of Arabic grammatical gender, Kholoud Al-Thubaiti

Article accuracy in learner English: The effect of specificity in interaction with other factors, Kateryna Derkach and Theodora Alexopoulou

L1 transfer effects on L2 attachment preferences for Ambiguous Relative Clauses: L1 Japanese L2 English speakers, Amy Atiles

Sensitivity to silently structured intervener: From L2 learners’ sluicing interpretation, Atushi Miura

Knowledge of the constraint against complements in nominal ellipsis in L2 English, Joyce Bruhn de Garavito

A bottom-up approach to the Feature Reassembly Hypothesis: Acquisition of the Present Perfect by Arabic learners of English, Gadah Almishwat and Cécile de Cat

Relative clauses in child heritage speakers of Turkish in the United States, Aylin Coskun Kunduz and Silvina Montrul

Heritage language and child second language development in refugee contexts: An empirical study on Syrian Arabic and German, Nadine Kolb

Exploring the effect of linguistic similarity in third language acquisition, Isabel Nadine Jensen and Marit Westergaard

Cognitive, linguistic and social skills of Russian heritage children in Cyprus, Sviatlana Karpava
Online posters

The following posters will be available online at the start of the conference. The posters will be accessible here.

Testing the Interpretability Hypothesis: evidence from the L2 processing of relative clauses by Persian and French learners of L2 English. Ehsan Solaimani, Florence Myles, and Laurel Lawyer

L2 acquisition of count syntax in English by Japanese and Spanish speakers. Neal Snape, Mari Umeda, and Hironobu Hosoi

Does priming lead to learning? It depends on what you mean by learning. Yanxin Alice Zhu and Theres Grüter

Branching Directionality may Contribute to Bilingual Children’s Understanding of Recursive Structures in English: Evidence from Recursive Adjectives and Possessives. Usha Lakshmanan, Deborah Foucault, and Tom Roeper

Proficiency-related variation of syntactic complexity in L2 Chinese. Jingyao Liu

Selection and Reassembly of an Uninterpretable Feature in L2 Acquisition of Wh-questions. Takayuki Kimura and Shigenori Wakabayashi
Research in the generative tradition has deepened our understanding of the nature of multilingual language acquisition and grammars. Undeniably, the majority of this work has been done in the morphosyntactic domain while phonological research in GenSLA has been under-represented.

I will present data which demonstrate that multilingual phonology is generative, learned (not noticed), and hierarchical (not shallow; likely recursive). I will show how complex representational models can account for diverse phenomena from the perception of illusory vowels, to universal constraints on the formation of L2 allomorphs, to L2 English infixing, to heritage learning of tone sandhi. I will also touch on the morphological and syntactic interfaces to show how such constructs as Match Theory and Contiguity Theory explain and constrain multilingual grammars.

I will ponder why phonology has been under-represented, and discuss future directions in the field which suggest models which can unify our understanding of the acquisition of both phonology and morphosyntax. In Dresher’s words, “phonology takes substance from outside FLN and converts it to objects that can be manipulated by the linguistic computational system.”

Finally, I will comment on the role that L2/L3 phonology can play in broader societal concerns related to social justice.
What the Acquisition of Japanese Contributes to Generative Approaches to SLA

Makiko Hirakawa
Chuo University

Developments in generative linguistic theory have stimulated empirical studies not only on Indo-European languages but also typologically diverse languages such as Japanese. Even though the number of studies on Japanese as a target language is notably smaller compared to, for example, L1 Japanese leaners of L2 English, their findings provide us new and interesting insights into how interlanguage grammars develop on the basis of L2 input and/or L1 transfer, as well as how L2 knowledge can be explained in terms of feature-based analyses. This talk will draw on data from a range of studies on L2 Japanese, including a focus on acquisition, interpretation, and processing of what learners see or hear in the input (e.g., reflexives) and what they DO NOT see or hear (e.g., null arguments). Data from learners with typologically similar and dissimilar L1s will be examined in light of current theories such as the Interface Hypothesis and the Interpretability Hypothesis.
Prediction in second language processing and learning

Edith Kaan
University of Florida

There is ample evidence that language users can predict upcoming information while reading or listening. However, studies have also shown quite some variation within and between groups and individuals as to what is predicted during sentence processing, the timing of predictions, and the extent to which information is predicted. These non-systematic findings have led to some controversy as to the ubiquity and importance of predictive processing.

In this talk I will advocate a direction of research in which the utility of prediction is central: language users aim to achieve maximal processing efficiency. Depending on experience, task demands and subjective goals, the optimal solution may be to not predict, or to rely on different information to predict. In this way, differences in predictive processing can be accounted for within and across individuals, and between populations.

I will start this talk with an historical overview of research on predictive processing in native language comprehension. I then turn to prediction in second language processing and learning. I will illustrate how the notion of utility can account for observations in the literature, and discuss the current challenges.
Multilingualism, linguistic diversity and English in India: linguistic and cognitive skills in disadvantaged primary school children

Ianthi Tsimpli
University of Cambridge

Children who learn through the medium of a language which is not the same as their home languages have different levels of learning outcomes than those children whose home and school languages are the same (Romaine, 2013). In a linguistically highly diverse country, like India, millions of children are at a disadvantage in this respect. Children from disadvantaged backgrounds are not familiar with English suggesting that state schools with English as the medium of instruction (EMI) creates more inequalities.

In this study, we examine the development of literacy and narrative abilities in English and Hindi of over 500 children attending primary schools with EMI or regional language. Findings from narrative production reveal a significant gap between regional languages and English which can partly be explained by the amount of English input children are presented with. Focusing on syntactic, lexical and macrostructure properties of the Hindi and English narratives produced by the children, I will discuss the role of language proficiency and multilingualism on performance. Multilingualism and linguistic diversity seem to have a positive effect on non-verbal cognitive skills.
L1-L2 syntactic distance predicts relativiser preferences in L2 English: implications for theories of transfer
Theodora Alexopoulou\textsuperscript{1,2}, Xiaobin Chen\textsuperscript{2} and Ianni Tsimpli\textsuperscript{3}
University of Cambridge\textsuperscript{1,3} and University of Tübingen\textsuperscript{2}

Does the linguistic distance between L1 and second language (L2) affect the acquisition of specific structures in L2? To answer this question we consider the acquisition of English relative clauses (RCs) by learners from 6 typologically diverse L1s: Japanese, Chinese, German, Brazilian Portuguese, Russian and (Saudi) Arabic. We adopt a generative perspective to measuring linguistic distance on the basis of syntactic parameters and compare the effect of general distance (general LD) based on broad typological properties or macro-parameters, with domain distance (domain LD), capturing variation specific to RCs on the basis of meso and micro-parameters. We investigate the use of relativisers that, who and which to consider how linguistic distance might interact with the inherent learn-ability properties of each relativiser.

We consider feature learnability in the light of the Interpretability Hypothesis which predicts a general preference for wh-phrases over that by L2 learners, a prediction going against the strong preference for that in native English. We discuss the implications of our findings for SLA theories of transfer. **Syntactic distance measurement** We divide the sum of identities (i) between L1 and L2 regarding features of parametric variation by the total of relevant features (Longobardi & Guardiano, 2009). Following Roberts (2019) we distinguish between macro, meso and micro-parameters. LD calculations are shown in Tables 2&3. We also hypothesise that the relativiser that will be harder to acquire than who and which, because of the absence of lexicalised (PF interpretable) features (Tsimpli & Dimitrakopoulou, 2007). **Data** RCs were extracted from EFCAMDAT, a corpus of EFL writings (Geertzen et al., 2013) using AutoSubClause (Chen et al., 2020). **Analysis** We analysed 2,439 RCs introduced by that, which or who from B1 CEFR, intermediate levels and calculated relativiser preferences as a wh/that ratio. **Results** LD predicts the rate of avoidance of the relativiser that as captured by the ratio of wh/that-RCs (coefficients: 0.48 for general LD and 0.80 for domain LD). **Discussion** General distance effects: Japanese and Chinese lack agreement in their L1 which leads to dropped arguments; as a result, the gap in a that-RC is not a cue to a filler-gap dependency and does not trigger a predicative interpretation for that. For Germans and Russians the gap is a cue to the filler gap dependency, triggering a predicative interpretation of that. Preference for morphologically rich relativisers: learners with a featurally rich L1 morpho-logical paradigm, like Germans and Arabs, prefer to overtly mark features in their L2, opt-ing for wh-phrases over that. Wh-phrases as main predicative operator: though infrequent and marked in native English (Grafmüller et al., 2018), wh-phrases emerge as the preferred relativiser for learners, confirming the Interpretability Hypothesis. **Implications for theories of transfer** The results support the Full Transfer hypothesis (Schwartz & Sprouse, 1996). Learners apply L1 (macro)-parametric settings to interpret crucial cues like the RC-internal gap, irrespective of L1-L2 similarity. There is potentially evidence for some feature re-assembly regarding relativisers (Lardiere, 1998). However, it appears restricted to languages like Russian which share key macro-parametric settings with English. It is less clear that Japanese and Chinese learners are able to re-set the Person and Wh macro-parameters. Rather, where their L1 facilitates their learning, it is primarily through the corresponding (L1-triggered) LF representations. Under this view, the lexicalisation of the key operator features becomes crucial for mapping to LF representations, explaining why feature interpretability is crucial.
Table 1: Wh/that ratio of RCs produced at Levels 9–12 mapped to domain distance rank. Japanese learners strongly prefer *wh*-phrases while Brazilians prefer *that*.

<table>
<thead>
<tr>
<th>General-Features (Macro-meso par)</th>
<th>Eng</th>
<th>Jp</th>
<th>Cn</th>
<th>Ru</th>
<th>De</th>
<th>BrP</th>
<th>Ar</th>
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<tr>
<td>1. Head Dir</td>
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<td>2. Person-AGR</td>
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<td>+</td>
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<td>2a. Null Subject</td>
<td>–</td>
<td>NA</td>
<td>NA</td>
<td>+</td>
<td>–</td>
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<td>+</td>
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<td>2b. Strong D</td>
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<td>NA</td>
<td>NA</td>
<td>–</td>
<td>+</td>
<td>+</td>
<td>+</td>
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<td>2c. Classifier</td>
<td>NA</td>
<td>+</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>+</td>
<td>+</td>
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<td>2d. Def D</td>
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<td>NA</td>
<td>NA</td>
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<td>+</td>
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<td>+</td>
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<td>3. Wh-move</td>
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<td>+</td>
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<td>+</td>
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<td>4. Tense Event</td>
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<td>4a T-head</td>
<td>+</td>
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<td>NA</td>
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<td>4b V-to-T</td>
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<td>2/8</td>
<td>2/6</td>
<td>8/10</td>
<td>8/9</td>
<td>7/10</td>
<td>7/10</td>
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General-LD (GLD) | 1 | 0.25 | 0.333 | 0.8 | 0.888 | 0.7 | 0.7 |

Weighted-sum | 10/10 | 2/9 | 2/7 | 8/9.5 | 8/8.5 | 7/9.5 | 7/9.5 |

Weighted-GLD | 1 | 0.222 | 0.285 | 0.842 | 0.942 | 0.736 | 0.736 |

Table 2: General linguistic distance from L2 English

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<tr>
<th>Domain-RC Features</th>
<th>Eng</th>
<th>Jp</th>
<th>Cn</th>
<th>Ru</th>
<th>De</th>
<th>BrP</th>
<th>Ar</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Particle-nominalisor</td>
<td>–</td>
<td>+</td>
<td>+</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>2. +C</td>
<td>+</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
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<tr>
<td>3. Post-nominal RC</td>
<td>+</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>4. Wh-move</td>
<td>+</td>
<td>NA</td>
<td>NA</td>
<td>–</td>
<td>+</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>5. Relative Pronoun</td>
<td>+</td>
<td>NA</td>
<td>NA</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>5ai. +D pronoun</td>
<td>–</td>
<td>NA</td>
<td>NA</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>NA</td>
</tr>
<tr>
<td>5b. Comp (e.g that)</td>
<td>+</td>
<td>NA</td>
<td>NA</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>5bi. +Def Comp</td>
<td>–</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>–</td>
<td>+</td>
</tr>
<tr>
<td>5bii. Comp/Op drop</td>
<td>+</td>
<td>NA</td>
<td>NA</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>6. V-head-Dir</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><em>i</em>-sum</td>
<td>10/10</td>
<td>0/4</td>
<td>2/5</td>
<td>7/9</td>
<td>5/9</td>
<td>9/10</td>
<td>5/9</td>
</tr>
</tbody>
</table>

Domain LD (DLD) | 1 | 0 | 0.4 | 0.77 | 0.55 | 0.9 | 0.55 |


Weighted DLD | 1 | 0 | 0.47 | 0.853 | 0.60 | 0.978 | 0.625 |

Table 3: Domain linguistic distance from L2 English
The role of L1 on the L2 development and processing of Arabic grammatical gender

Kholoud A. Al-Thubaiti

Umm Al-Qura University, KSA

Research in second language (L2) morphology shows conflicting evidence on the L2 development and processing of grammatical gender. In one account, poor L2 performance is predicted when gender features are absent in the (first language) L1 grammar (Hawkins & Franceschina, 2004). However, researchers have debated the role of L1 as a factor (e.g., White et al, 2004). In the nominal domain, English-speaking learners of L2 Spanish (Sagarra & Herschensohn, 2013) and L2 German (Hopp, 2013) showed target-like gender agreement between nouns and adjectives/determiners at intermediate and advanced proficiency levels. As research findings are predominately drawn from studies on L2 European languages, this study investigates gender agreement within the verbal domain in L2 Modern Standard Arabic (MSA) by L1 English-speaking monolinguals and other L1s (Europeans, Filipinos, Africans, and Indians).

Nouns in MSA show two grammatical genders (masculine and feminine). While the masculine noun form is morphologically unmarked (1a), the feminine gender on nouns is often overtly marked by the suffix (-ah) (1b). In verbal constructions, the verb should show gender agreement with the subject noun whether in pre-verbal or postverbal positions. With imperfective verb forms, the prefix (ta-) is realized on the verb with feminine 3rd person singular nouns (1b).

This study was conducted with 94 L1 Arabic controls, and 59 L2 Arabic learners (27 L1 English-speaking monolinguals and 32 L1 (Europeans, Filipinos, Africans, and Indians)). The L2ers were recruited from different language programs in Saudi Arabia and abroad. Testing for L1 effects, the L2ers were grouped based on the absence or presence of gender in their L1s (39 [-gender] and 20 [+gender]). Based on self-reported proficiency levels, there were 12 advanced, 27 intermediates, and 20 novices.

Using Gorilla experiment builder, an online grammaticality judgment task was designed to measure accuracy and reaction time (RT) to 64 sentences exemplifying gender (dis)agreement between verbs and subject nouns in postverbal position, as in (1). The participants were asked to judge each sentence as accurately/quickly as possible by pressing one of three options (possible, impossible, not sure). The stimuli were constructed in 4 minimal pairs crossing 3 factors: gender (masculine vs. feminine), noun class (human vs. animal), and agreement (matched vs. mismatched). There were 16 multiple lexicalizations for subject nouns (all 3rd person singular) and another 16 for imperfective verbs. The 64 stimuli were distributed in 4 lists, yielding 16 target items per list (8 matched agreements and 8 mismatched agreements), along with 32 fillers per list.

Unlike the L1 Arabic controls, the L2ers from [+/- gender] L1 groups gave significantly less accurate judgments on the mismatched gender agreements compared to the matched ones. However, regardless of L1, the L2ers with increased proficiency levels showed increased comparable accuracy on (mis)matched paired conditions. Like the L1 controls, the performance of L2ers from [+/- gender] L1 groups was significantly affected by noun class but not by gender. While they performed alike on masculine and feminine paired conditions, they gave higher accuracy and shorter RTs on human nouns than animals, where both correspond to biological sex. Taken together, these results suggest that Arabic grammatical gender in the verbal domain is acquirable by adult L2ers with increased proficiency even when gender features are absent in L1.
Examples

a. ya-ktubu  al-muʕallim  ذًا  as-sabura
   3SM-write.IPFV the-teacher.SM on the-board

b. ta-ktubu  al-muʕallim-ah  ذًا  as-sabura
   3SF-write.IPFV the-teacher-SF on the-board

‘The teacher writes/is writing on the blackboard’

References


A bottom-up approach to the Feature Reassembly Hypothesis: Acquisition of the Present Perfect by Arabic learners of English

Gadah Almishwat and Cécile De Cat
University of Leeds

According to the Feature Reassembly Hypothesis (FRH) (Lardiere, 2012) L2 learners have to create new mappings of formal features (interpretation) onto forms (morphemes) and identify the conditioning environments in which these morphemes can appear. Mapping differences between L1 and L2 predict what will be transferred, and what will be challenging to remap. In English, the interpretive features mapped onto the present perfect are: [predicate boundedness] and [current relevance]. Current relevance can be instantiated through four semantic features: resultative, experiential, continuative, recent past (Depraetere, 1998). Arabic grammaticalizes current relevance through the morpheme Qad (O’Brien, 2003), but it is unclear whether perfectivity is grammaticalized in Arabic: some argue that it features a temporal distinction (past vs present; ElSadek, 2016), others an aspectual distinction (perfect vs imperfect; Ryding, 2005). This makes it very difficult to identify clear transfer predictions for the acquisition of the present perfect by Arabic learners of English (Farina, 2017). Here, we adopt a bottom-up approach to determine empirically how the features associated with the English present perfect are mapped in Arabic. This leads to clear predictions for the FRH, which we then test.

Study 1 was a norming study investigating the relevant feature mapping in L1 English. In an online forced-choice judgement task, 70 native speakers of English had to choose a verb form (present perfect, simple past, present, or future) to fill the blank in a sentence preceded by a one-sentence context. In a 4 x 2 x 2 design, we manipulated (i) boundedness of the predicate (definite vs indefinite adverbial), (ii) the type of current relevance supported by the context (resultative, experiential, continuative, recent past), (iii) the telicity of the predicate (telic vs atelic), and current relevance of the adverb (Current, neutral, not current) — see examples (Table 1). There were 12 items per condition (16 conditions), distributed across 4 lists and 48 distractors (i.e., 50% of items in each list). Mixed-effect modelling analysis revealed that in English, the present perfect is associated with unbounded predicates and with current relevance contexts, but not with the telicity of the predicate. This is consistent with the theoretical literature.

Study 2 was an Arabic version of Study 1, with 217 Arabic native speakers. Instead of the present perfect, the choice of verb form included Qad. The results of study 2 show that in Arabic, unbounded predicates are encoded as Past or Present depending on the telicity of the predicate as following:

- **continuative + telic** —> present
- **continuative + atelic** —> past

- Experiential, resultative, or recent past **perfect + telic** —> past
- Experiential, resultative, or recent past **perfect + atelic** —> present

Study 3 tested the FRH predictions on Arabic learners of English with different levels of proficiency (as determined by a cloze test). The results from study 3 in Figure (3) illustrate that there is influence of L1 Arabic on the L2 acquisition of English present perfect by Arabic learners of English, which is argued to be mainly due to the difference between Arabic and English in the way to express the contexts of the present perfect. The results also showed that L1 Arabic transfer was modulated by L2 English proficiency level of the participants.

As can be seen in Figure 3, the participants of the **advanced and high intermediate groups** of English proficiency tended to use the Pr. perfect form in many cases especially with telic predicates in the
continuative and Recent. Past present perfect contexts. However, they allowed some non-target like responses in other cases such as in:

\[
\text{[ateic] [+ recent. Past]} \rightarrow \text{present.}
\]

The results from Study2 showed probability of negative transfer from L1 Arabic, where the participants, especially those participants of \textit{low level of L2 English proficiency}, tended to over-use Present only in all cases especially in the following context:

\[
\text{[telic] [+ continuative]} \rightarrow \text{present}
\]

\[
\text{[telic] [+ recent. Past]} \rightarrow \text{present.}
\]

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{fig1.png}
\caption{Feature mapping in English (Study1) \hspace{1cm} Feature mapping in Arabic (Study2)}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{fig2.png}
\caption{The results of Study3 (Forced-choice task)}
\end{figure}

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|}
\hline
continuative & Atelic & state & \textit{+PP} \\
\hline
continuative & Atelic & state & \textit{-PP} \\
\hline
experiential  & Telic   & achievement & \textit{+PP} \\
\hline
experiential  & Telic   & achievement & \textit{-PP} \\
\hline
\end{tabular}
\caption{Examples illustrated the design:}
\end{table}
Ambiguous relative clause (RC) resolution is a commonly used structure for testing whether first language (L1) preferences transfer to a second language (L2), because languages typically fall into two opposing groups. Speakers of high attachment (HA) languages like Spanish or Japanese (Cuetos & Mitchell, 1988; Ono, 2019; Yamada et al., 2017) are known to prefer brother as the antecedent for who is outside in the example sentence The principal spoke to [NP1 the brother of [NP2 the teacher [RC who is outside]]]. Speakers from low attachment (LA) languages like English, on the other hand, have been found to prefer the teacher. Japanese and English are a particularly interesting pair because the two have opposite RC attachment preferences and opposite head directionality, Japanese being head-final and English head-initial. Two small studies have investigated L1-Japanese L2-English speaker preferences in English RCs and both found HA preferences with temporally ambiguous items in online tasks, which suggests L1 transfer (Nakano & Wang, 2011; Otaka, 2018). Neither study tested L2 attachment preferences in globally ambiguous items, however. This is a worthwhile question to explore as testing these items would allow us to determine whether L1 transfer effects endure when L2ers are faced with a purely preferential task.

Methodology: 29 L1-English native speakers (NSs) and 22 L1-Japanese L2-English speakers (see Table 1) took a forced-choice comprehension task. Eighteen target items (3 conditions with 6 items per condition) were distributed across counter-balanced lists using a Latin-square design. All items consisted of a context sentence, a target sentence which included a RC, and a comprehension question asking participants to choose the antecedent of the RC (see Table 2 for sample token set). The RCs either forced a HA interpretation, LA interpretation, or were ambiguous. The context sentence was the same for all items in a token set and the comprehension question was based on the target sentence’s RC. Each list also included 78 fillers for a total of 96 items.

Results: Both groups strongly prefer the higher NP when the RC is HA-biased and lower NP when it is LA-biased (see Figure 1). Because these items were designed to force a HA and LA preference, respectively, this difference confirms that the participants on average were comprehending the content of the relative clauses correctly. The groups diverge in their antecedent preference of the ambiguous condition, however, with L2ers preferring the high NP (70.08%) more than NSs (44.91%). A mixed logistics regression model found a main effect of condition (p<0.001) and a main effect of L1 (p<0.01), but no interaction between the two. L2 proficiency (see Figure 2) also failed to demonstrate an interaction when run as a factor in a second model.

While descriptive statistics show an L1 transfer effect of Japanese HA preferences onto L2 English ambiguous RCs, this interaction was statistically insignificant. Rather, L2ers were significantly more likely to prefer the higher noun in all conditions compared to NSs. Furthermore, this preference was not affected by L2 proficiency. The results of this study suggest that L1-Japanese L2-English speakers continue to rely on their L1 attachment preferences when forced to make an offline binary choice between high and low NPs. A repeated study with a larger L2 sample size is necessary to assess the effects of individual differences.
Table 1: Example Token Set

<table>
<thead>
<tr>
<th>Condition</th>
<th>High NP1</th>
<th>Low NP2</th>
<th>RC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forced High</td>
<td>the grandfather of</td>
<td>the student</td>
<td>who manages the local bank.</td>
</tr>
<tr>
<td>Forced Low</td>
<td></td>
<td></td>
<td>who is failing mathematics.</td>
</tr>
<tr>
<td>Ambiguous</td>
<td></td>
<td></td>
<td>who always looks tired.</td>
</tr>
</tbody>
</table>

Comprehension Question:
Who manages the local bank? // Who is failing mathematics? // Who always looks tired?

Table 2: Participant Background

<table>
<thead>
<tr>
<th></th>
<th>Age (years)</th>
<th>Age of Acquisition (years)</th>
<th>Residence in English Country (years)</th>
<th>Proficiency Score (out of 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Range</td>
<td>Mean (SD)</td>
<td>Range</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>L2 (n=22)</td>
<td>21-59</td>
<td>34.32 (9.79)</td>
<td>5-14</td>
<td>11.64 (2.32)</td>
</tr>
<tr>
<td>NS (n=29)</td>
<td>19-60</td>
<td>36.66 (10.6)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

References


The Role of Linguistic Input in Modelling L1 Grammatical Attrition

Lewis Baker
University of Southampton, UK

Grammatical attrition refers here to the restructuring of L1 grammatical representations due to a significant and prolonged change in a speaker’s Primary Linguistic Data (PLD) in adulthood, typically due to migration to an L2 speaking environment. This study seeks to contribute to the theoretical modelling of this phenomenon by testing a recent and hitherto untested generative model of grammatical attrition: The Attrition via Acquisition Model (Hicks and Domínguez, 2020a, 2020b)

In the model, the possibility of attrition is determined by the availability of intake (defined as processed input) and the potential for Feature Reassembly (FR) (Lardiere, 2009) of a previously acquired L1 structure. Two broad predictions follow from the model’s assumptions. Firstly, attrition is facilitated in linguistic environments in which the L2 is more similar to the L1. Secondly, attrition is in principle only possible for an L1 structure which has an analogous/equivalent L2 form which nonetheless differs in its respective functional feature specifications. In attrition contexts there is the potential for the L1 feature specifications of such structures to be re-assembled to match those of the corresponding L2 structure. To develop the predictive power of the model, this study also investigates the hypothesis – based on discussions within Hicks and Domínguez (2020b) – that attrition is further facilitated for L1 structures which would need to undergo less complex FR to match the corresponding L2 structure due to greater overlap in the relevant L1-L2 feature specifications.

To investigate the role of intake in attrition, this study uses the same L1 grammar exposed to three L2s of varying similarity to the L1. There are three groups of L1 German late-sequential bilingual speakers of either Dutch, English or Spanish. Participants have over 15 years of residence, starting in adulthood, in either the Netherlands, UK or Spain. To investigate the role of FR, two grammatical structures are investigated per language. The structures differ in the relative complexity of FR required for them to attrite. In each language pair, property a) is predicted to be more likely to attrite than property b) (See table overleaf).

These properties are tested by means of bimodal Acceptability Judgement Tasks (AJTs). There is one AJT per language pairing which tests both properties. Each AJT has a German version and an equivalent version in the corresponding L2. Potential attriters complete both the L1 and L2 versions of the relevant AJT, which allows further investigation of the relationship between L2 acquisition and L1 attrition. As well as a native German control group, this study also uses three L2 control groups consisting of native speakers of Dutch, English or Spanish. All controls complete the AJTs version(s) for their respective L1s only. Comparison of the attriters’ German AJT results to both the L1 and relevant L2 control group results allows us to confirm statistically not only whether the attriters’ L1 grammars diverge significantly from L1 grammars, but also whether they are now converging on L2 patterns for the properties in question. There will be 20-30 participants per group. Potential attriters’ AJT results will be compared statistically both within and across language groups to investigate the role of intake and FR in attrition. Data collected so far indicates potential attrition in the form of optionality between the L1 and L2 on certain test conditions for some individual participants, though not for the groups on average.
Experimental Design and Predictions:

<table>
<thead>
<tr>
<th>L1</th>
<th>L2 (Speaker’s current PLD)</th>
<th>Grammatical Property and Relative Complexity of Feature Reassembly</th>
<th>Likelihood of Attrition for Individual Property</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard German (Germany)</strong></td>
<td>L2: Dutch (Netherlands)</td>
<td>a) Gender Agreement on Determiners</td>
<td>More Likely</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Less complex FR</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) Anaphoric Binding</td>
<td>Less Likely</td>
</tr>
<tr>
<td></td>
<td></td>
<td>More complex FR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>L2: English (UK)</td>
<td>a) Anaphoric Binding</td>
<td>More Likely</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Less complex FR</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) Main Clause Verb Position</td>
<td>Less Likely</td>
</tr>
<tr>
<td></td>
<td></td>
<td>More complex FR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>L2: Spanish (Spain)</td>
<td>a) Gender Agreement on Adjectives</td>
<td>More Likely</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Less complex FR</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) Negation</td>
<td>Less Likely</td>
</tr>
<tr>
<td></td>
<td></td>
<td>More complex FR</td>
<td></td>
</tr>
</tbody>
</table>

References:


Knowledge of the constraint against complements in nominal ellipsis in L2 English
Joyce Bruhn de Garavito
The University of Western Ontario

Within the Full Transfer/Full Access (Schwartz & Sprouse, 1994) framework, convergence on the target language is always possible but not guaranteed. In particular, surface similarities between the input received and the L1 may lead to misanalysis from which it may be difficult to recover if there is not sufficient positive evidence to do so (see Hulk and Müller 2000 for similar but transitory effects in early bilingualism). The present paper will examine this possibility by testing knowledge of noun drop in L2 English L1 Spanish.

In both English and Spanish noun drop is fairly frequent. As the examples in (1) show, the two languages overlap to a great extent, with one salient difference: in Spanish the noun is completely absent while in English it is replaced by the pro-form one. In both languages the omitted noun must be recovered from an antecedent and in both there must be contrastive focus on the remnant, that is, the pragmatics is identical. There is, however, one particular situation in which the two languages diverge and which shows that the surface similarities may be more apparent than real: the case of complements and adjuncts of deverbal nouns. As we see in (2), the two languages behave differently: English does not accept noun drop with complements but does with adjuncts, while Spanish does not accept adjuncts introduced by any preposition when a definite article is in the remnant. However, complements, typically introduced by de, are grammatical. According to Raposo (2002; see also Llombart-Huesca, 2002), the constraint in English is due to the fact that the pro-noun one lacks semantic content and therefore cannot assign theta roles. In Spanish, however, the full noun is present but unpronounced, so complements are acceptable. However, prepositions are excluded when the definite article is in the remnant but are acceptable with other determiners. In other words, as a comparison of the examples in (3) shows, it is the requirements of definite articles in Spanish that exclude prepositions, and not the complement/adjunct distinction.

The question addressed in this paper is whether Spanish L1 learners of English L2 are able to acquire the restriction against complements in English while allowing adjuncts, which could be interpreted as L2 speakers’ understanding that beneath the surface similarities there are important structural differences between the two languages. Simple surface transfer would predict rejection of prepositions with a definite determiner but general acceptance of complements.

We report on an empirical study involving a group of Spanish L1 learners of L2 English (n=20) who placed at a high intermediate level on parts of the Michigan test (English L1 control group n=26). Participants completed a production task in which they answered some question related to pictures, an appropriateness task which tested knowledge of the pragmatic factors involved in nominal ellipsis, and a grammaticality judgement task on a scale from 1-5. Results of the production task showed learners had no problem with the obligatory presence of the pro-noun one in English (Figure 1 next page) or with noun ellipsis in general. They also performed at ceiling on the pragmatic constraints. However, they differed significantly from the control group in their rejection of remnants made up of complement phrases (see Figure 2 next page), while at the same time accepting adjuncts (ungrammatical in Spanish). I will discuss the role of ambiguity in the input in relation to these results.

---

1 English L1 controls did not fully reject complements either.
I like the two T-shirts but I prefer the green one.

Me gustan las dos camisetas pero prefiero la verde.

*The destruction of Rome was as cruel as the one of Carthage. (Raposo 2002)

La destrucción de Roma fue tan cruel como la de Cartago.

*The belief in ghosts is more common than the one in goblins.

La creencia en fantasmas es más común que la en duendes.

The examination in French is easier than the one in English.

El examen en francés es más fácil que el/este/uno en inglés.

The reading about Chomsky is easier than the one about Jackendoff.

La lectura sobre Chomsky es más fácil que la/vuna/Vaquella sobre Jackendoff.

References


This study examines second language (L2) acquisition of referring expressions (bare plurals and definite plurals, e.g., Americans vs. the Americans) at the semantics-pragmatics interface. The two forms of referring expressions for a group of individuals, bare plurals and definite plurals (e.g., Americans love cars vs. the Americans love cars), have a subtle pragmatic meaning difference. Definite plurals, relative to bare plurals, refer to typical members of a group of individuals and carry an implied meaning that the speaker is emphasizing their nonmember of the relevant group. Following the (neo-)Gricean theory of alternatives and the notion of markedness (Levinson, 2000; Katzir, 2007), use of marked definite plurals (a structurally more complex and infrequent form) instead of unmarked bare plurals implicates that the speaker is not a member of the relevant group. This makes the definite plural pragmatically infelicitous in (2a) in Table 1 because the context does not support the speaker’s non-membership of the group (see Acton’s (2019) corpus study on this phenomenon). While pragmatic inference computation mechanisms are arguably universal, implicature comprehension for definite plurals can present difficulty for L1-Chinese L2-English speakers because Chinese lacks definite plurals; that is, English and Chinese implicational scales for referring expressions do not fully overlap.

Method: The current experiment was created in a 2x2 factorial design by manipulating Speaker membership (inclusive vs. exclusive) and NP type (definite plural vs. bare plural). A contextualized sentence judgment task (32 experimental stimuli/tokens + 40 fillers + 8 controls targeting unacceptable bare plurals) was used to collect data from native English speakers (n=40) and advanced-level L1-Chinese L2-English speakers (n=24). Table 1 illustrates a sample token set. Using a 7-point Likert scale, participants were asked to judge whether the target sentence is a natural way to complete the last sentence in the passage (1= “unnatural” and 7 = “natural”).

Results & Conclusions: To account for scale biases, Likert scale ratings were transformed into standardized z-scores. Tables 2 and 3 show native and L2 speakers’ mean ratings in four conditions. A linear mixed-effects regression analysis was conducted on z-transformed scores with Speaker membership (inclusive vs. exclusive) and NP type (bare vs. definite) as fixed factors and Subject and Item as random factors. Results indicated that native speakers rated the unmarked bare plurals higher than the marked definite plurals regardless of speaker membership (t=11.35, p <.0001). More importantly, there was a significant difference in rating for definite plurals between the two contexts in the right direction (t=2.7, p=.03). That is, definite plurals were rated higher in the speaker-exclusive context than in the speaker-inclusive context. As for L2 speakers, there were no observed main or interaction effects (all /t/ < 1.5, p > .05) and both bare and definite plurals were rated highly in both contexts. These findings indicate that L2 speakers know that both bare and definite plurals can be used to refer to a group of individuals. However, they do not appear to compute implicatures for definite plurals in contexts where bare plurals are pragmatically acceptable. In conclusion, our data showed that SI comprehension can present difficulty for L2 speakers if L1 and L2 implicational scales do not fully overlap. This finding has implications not only for L2 SI but for L2 acquisition of referring expressions as well.
Table 1. Sample token set

<table>
<thead>
<tr>
<th>Condition (speaker membership x NP type)</th>
<th>Context / passage</th>
<th>Target sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaker inclusive, Bare plural</td>
<td>John is from Chicago. His family has five cars. When his friend from Korea asked why his family has so many cars, John said:</td>
<td>“Americans like cars”</td>
</tr>
<tr>
<td>Speaker exclusive, Bare plural</td>
<td>Minsoo is from Korea. When he went to the US to study, he noticed that almost every American has a car. He called his sister in Korea and said:</td>
<td>“Americans like cars”</td>
</tr>
<tr>
<td>Speaker inclusive, Definite plural</td>
<td>John is from Chicago. His family has five cars. When his friend from Korea asked why his family has so many cars, John said:</td>
<td>“# The Americans like cars”</td>
</tr>
<tr>
<td>Speaker exclusive, Definite plural</td>
<td>Minsoo is from Korea. When he went to the US to study, he noticed that almost every American has a car. He called his sister in Korea and said:</td>
<td>“The Americans like cars”</td>
</tr>
</tbody>
</table>

Table 2. Native speakers’ mean AJT ratings

<table>
<thead>
<tr>
<th>Speakers membership x NP type</th>
<th>Mean rating</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>inclusive, bare</td>
<td>4.98</td>
<td>1.23</td>
</tr>
<tr>
<td>exclusive, bare</td>
<td>5.11</td>
<td>0.94</td>
</tr>
<tr>
<td>inclusive, definite</td>
<td>3.93</td>
<td>1.33</td>
</tr>
<tr>
<td>exclusive, definite</td>
<td>4.25</td>
<td>1.18</td>
</tr>
</tbody>
</table>

Table 3 L2 speakers’ mean AJT ratings

<table>
<thead>
<tr>
<th>Speakers membership x NP type</th>
<th>Mean rating</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>inclusive, bare</td>
<td>4.92</td>
<td>1.25</td>
</tr>
<tr>
<td>exclusive, bare</td>
<td>4.78</td>
<td>1.23</td>
</tr>
<tr>
<td>inclusive, definite</td>
<td>4.57</td>
<td>1.39</td>
</tr>
<tr>
<td>exclusive, definite</td>
<td>4.56</td>
<td>1.62</td>
</tr>
</tbody>
</table>

Note: The target test category (infelicitous use of the definite plural form) is in grey.

References
Long-distance dependencies, particularly relative clauses (RCs) are vulnerable in heritage grammars (Montrul, 2008; O’Grady, Lee & Choo, 2000). However, research on how this vulnerability manifests itself in child heritage speakers (HSs) has been inconclusive: Some suggest native-like comprehension as opposed to non-native-like production of RCs by child HSs (Jia & Paradis, 2016), while others have shown non-target-like comprehension in the heritage language (Kidd, Chan & Chiu, 2015).

In Turkish, RCs are prenominal, and the embedded verb is marked with the suffix -(y)An in subject RCs (SRCs) and -DIK in object RCs (ORCs), as shown in (1) and (2), respectively. ORCs also require genitive-possessive agreement morphology. Turkish-speaking children do not master RCs until age 6 and show subject-object asymmetry in comprehension and production (Slobin, 1986). Turkish child HSs in Europe in contact with various languages such as English, Dutch, German and French replace RCs with simple juxtaposition and show no developmental increase, but they show a SRC advantage in production like monolinguals (Bayram, 2013).

In this study, we present a more comprehensive analysis of knowledge of RCs in child Turkish HSs in the U.S. and consider the predictions of the following accounts: the Linear Distance Hypothesis (LDH), the Structural Distance Hypothesis (SDH) and O’Grady’s (2011) emergentist account. These accounts predict a SRC advantage for English RCs. For Turkish RCs, the LDH and the SDH predict an ORC and a SRC advantage, respectively, while the emergentist account predicts at best a weak or no SRC advantage.

Thirty-two child Turkish HSs (ages 6–15) and 48 monolingual Turkish children (ages 3–15) completed a picture-sentence matching task (PSMT) and a sentence repetition task (SrepT). The child HSs were tested in Turkish and in English. We investigated whether child Turkish HSs: i) comprehend and produce Turkish RCs to the same extent as monolinguals, ii) show the same processing patterns as them (i.e., subject-object asymmetry), and iii) display different performance depending on their age and experience with Turkish. Analysis (binomial logistic regression models) of the data indicated that like Turkish child HSs in Europe, Turkish child HSs in the U.S. showed i) lower accuracy rates as compared to monolinguals in both tasks, ii) better performance in English than in Turkish with increasing age, iii) better comprehension than production of Turkish RCs, and iv) replacement of complex RCs with simple juxtaposition. The findings further revealed a SRC advantage in both groups in the comprehension task, as predicted by the SDH (Figure 1). However, no such advantage was revealed in the production task (Figure 2), in line with O’Grady’s emergentist account. We take these findings to suggest that the comprehension and particularly the production of Turkish RCs are vulnerable to incomplete acquisition in child HSs of Turkish in the U.S., although the strength of this explanation must be corroborated by a study of child and adult HSs. These findings also point out the need for a more comprehensive account on RC acquisition that could capture the discrepancy in findings between comprehension and production in this study.

2 3SG: Third person singular; ACC: Accusative marker; GEN: Genitive marker; ORC: Object relativizer; POSS: Possessive marker; SRC: Subject relativizer
Figures 1 & 2. Accuracy percentages of both groups in Turkish SRCs and ORCs in the PSM & SrepT

Note. HL= Heritage language; MON = Monolinguals; ORC = Object relative clause; SRC = Subject relative clause

References


The population of interest in this paper are heritage speakers of Spanish in Chicago. These bilinguals are known for being prolific code-switchers, which can be defined as “the apparent merge of two grammatical systems in one discourse” (González-Vilbazo & López, 2012, 36). Consider the example in (1). These bilinguals also code-switch within the determiner phrase (DP). In this paper we focus solely on the DP where the determiner is in English and the noun is in Spanish (e.g., ‘the mesa’).

We follow López’s (2020) analysis for ‘the mesa’, shown in (2). In (2), we can see that the root is an index (e.g., \(^\sqrt{145}\)) and this root is selected by a little \(n\) with a [+fem] feature. This little \(n\) is what we are calling a “Spanish little \(n\)”. This is in opposition to an “English little \(n\)”, which is a plain \(n\) with no gender feature (e.g., (3)). According to López, the Spanish word ‘mesa’ is necessarily a complex noun, composed of a root \(^\sqrt{145}\) and the \(n\)[+fem]. The English noun ‘table’, on the other hand, is not a complex noun. López further assumes the \(n\)[+fem] to be the head of the word that decides which externalization system is going to be used—in this case being the Spanish externalization system because of the presence of the “Spanish” \(n\). Furthermore, López (2020) assumes that “the determiner and the categorizing head are units of the same phonological word and a phonological word must be sent to the externalization systems in one fell swoop” (p.98). Therefore, the entire DP ‘the mesa’ must be pronounced as [da mesa] (i.e., Spanish phonetics) and not [ða mesa] (i.e., English phonetics).

In this paper we also assume that ‘the mesa’ comprises one phonological word, while an intervening adjective (i.e., ‘the green mesa’) would break up ‘the mesa’ creating two phonological words—‘the green’ and ‘mesa’ (Ito & Mester, 2009; Costa & Caramazza, 2002; Aronoff and Srirhar, 1983). According to López’s analysis, because the ‘green mesa’ is two phonological words, two possible pronunciations are possible—‘the green’ should have English phonetics and ‘mesa’ Spanish phonetics.

We seek to provide evidence for these claims by asking: Does the presence of a nominalizing head with a gender feature have an effect on the phonetics of the entire DP? That is, will a DP that has a nominalizing head with a gender feature be pronounced all with Spanish phonetics?

We tested 23 heritage speakers of Spanish in Chicago. The task consisted of a Director-Matcher task, in which the participants produced the following DPs: (i) English determiner + Spanish noun (’the mesa’); (ii) English determiner + English noun (’the table’); (iii) Spanish determiner and Spanish noun (’la mesa’); and (iv) English determiner + English adjective + Spanish noun (’the green mesa’). We then measured the quality of the vowel sound in the determiner (i.e., the /e/ in ‘the’) and compared that to the same speaker’s /e/ in an all-English DP (e.g., ‘the table’) and /a/ in a Spanish DP (e.g., ’la mesa’). We used the sounds in the English and Spanish monolingual DPs as controls. We assume that the /e/ sound in the determiner in the code-switched DP (’the mesa’) differs from the English schwa, [ə], that would be found in the English DP (’the table’), and is similar to the [a] in the Spanish DP (’la mesa’). The results, however, showed that the /e/ in the determiner was unlike to both their Spanish [a] and their English [a]. Thus, one could conclude that code-switching affects the phonetic shape of proximate or adjacent words. On the other hand, the phonetic constraint described above is not in effect in complex nouns of the type English D + English Adjective + Spanish N (’the green mesa’). We measured the /e/ sound in the determiner in ‘the green mesa’ and, once again, compared that sound to their Spanish [a] and their English [a]. Our results show that the /e/ in ‘the green mesa’ was pronounced like a [ə], which shows there is a boundary to how far the code-switching influence can go.

This puzzling state of affairs is accounted for by means of an analysis that makes use of (i) an understanding of the phonological word as the domain in which phonetic segments can be affected
by imminent code-switching and (ii) the novel hypothesis that the morpheme that takes care of categorizing a phrase (little n, little a) also plays a role in defining the phonetic shape of the phrase.

(1) I thought *que solo me iba comer 3 tacos* but I ate *como 6*.
   ‘I thought that I would only eat 3 tacos but I ended up eating like 6’

(2)

![Diagram](image.png)

(3)

![Diagram](image.png)


Article Accuracy in Learner English: The Effect of Specificity in Interaction with Other Factors
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University of Cambridge

We present a learner corpus-based study of the use of English articles (“a/the/Ø”) by learners with four typologically distinct first language (L1) backgrounds (with articles, [+art], and without articles, [-art]) exploring the impact of several semantic and morphosyntactic factors. We find the key challenge is at the syntax-semantics interface (necessity of “a” with non-specific nouns) and much less at the syntax-discourse interface (definite/indefinite distinction).

Article accuracy is generally lower in learners with [-art] L1s (Murakami & Alexopoulou, 2016; Öksüz et al., 2021). Ionin et al. (2004) postulated a semantic Article Choice Parameter predicting that [-art] L1 learners will be uncertain whether articles in English mark definiteness or specificity3 and, thus, exhibit a pattern of overusing “the” with specific indefinite and overusing “a” with non-specific definite noun phrases (NPs). This Fluctuation Hypothesis was confirmed in some replication studies (García Mayo, 2009; Hawkins et al., 2006); however Ionin et al. (2008) observed the effect of specificity only in indefinite NPs. Other studies did not find the effect of specificity on article accuracy (Hua & Lee, 2005; White, 2003).

Moreover, “the” is likely acquired before the indefinite article possibly due to the featural complexity of the latter, which includes number and count/mass distinction features (Lardière, 2004). Learners with [-art] L1s also tend to omit articles with a premodified NPs, suggesting they may be interpreting articles as modifiers rather than determiners (Trenkic, 2007).

We use a corpus of learner writing, English First Cambridge Open Database (EFCAMDAT), and statistical modelling to assess the relative importance of these factors. We manually coded 5772 NPs from 660 randomly selected scripts by [+art] L1-German and L1-Brazilian-Portuguese learners and [-art] L1-Chinese and L1-Russian learners for (i) target article (“a/the/Ø”), (ii) article error type (omission, substitution, overgeneralisation), (iii) specificity of the NP, (iv) number of the head noun and whether it is count/mass, (v) premodification of the head noun.

We confirm the lower overall accuracy of [-art] L1 learners and the higher overall accuracy for “the” vs. “a”. However, our data do not demonstrate fluctuation between “the” and “a” (Fluctuation Hypothesis). Learners mostly struggle with the specific/non-specific distinction in interaction with number and the count/mass distinction in indefinites. Thus, we find increased omission of “a” with non-specific singular NPs (example 1) and increased overuse of “a” with specific mass NPs (example 2). Additionally, the omission of “a” (with singular count NPs) is significantly higher in non-specific contexts only when there is no modifier, while overusing “a” (with mass NPs) is more likely with premodified than non-premodified indefinite nouns. We conclude that learners seem to associate “a” with specific and Ø with non-specific contexts, while prenominal modifier presence plays into this effect by potentially allowing an interpretation of the noun as an individual and making it seem even more specific.

3 Ionin et al. define specificity as speaker’s intent to refer to an item with a noteworthy property.
Examples

(1) I have many dreams and they are partly different. [...] I'd make [a] career in my business and have a fulfilled and balanced live.

(2) [...] they noticed that one servant's face was covered with a [Ø] red paint.

References


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4 The examples are taken from our corpus study. The original spelling and grammar are kept. Nominals of interest are italicised. Article corrections are given in square brackets. Overused articles are struck through.
The L2 Acquisition of French interrogatives: Pragmatic inferences in clefted wh-questions

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University of Iowa / UC Santa Cruz

The French interrogative system remains a topic of interest in research on both first (L1) and second (L2) language acquisition of French (Zwanziger, 2008). Its complexity is widely recognized and has been identified as a potential challenge for L2 learners (Donaldson, 2016). It is especially true for those learners whose native language repertoire of interrogatives is less extensive than that of French, like English, thus limiting the possibilities of direct positive L1 transfer. This paper aims to expand the understanding of the L2 acquisition of French interrogatives by focusing on clefted wh-questions (4) and more particularly on how L2 learners of French understand two specific pragmatic properties conveyed by these interrogative forms: the existential and the exhaustive inferences.

While the English system mainly forms partial interrogatives by fronting the wh-word to the beginning of the sentence, as in (1), the French system allows for several variants, including forms where the wh-word is fronted as in (2), remains in its canonical position as in (3), or is found as the pivot of a cleft structure as in (4). This latter variant is the main interest of this paper because it is largely absent in prior L2 literature yet commonly used in spoken French. Functionally, this clefted interrogative is pragmatically marked compared to the canonical counterpart. Indeed, it carries two inferences that are not lexically encoded as part of the assertion (Hamlaoui, 2011): First, an existential presupposition whereby the questioner takes it for granted that there is an x such that x performed the action of the predicate, and second, an exhaustive inference under which the questioner assumes that the responder will list the entirety of the individuals for whom the predicate holds and that no other individual performed the action of the predicate. However, while the former inference is noted to be quite robust, the strength of the exhaustive inference has been shown to vary across the two languages, being more prone to cancellation in French than in English (Destruel & DeVeaugh-Geiss, 2018).

Given this short backdrop, we examined whether L2 learners converge towards the native norm for these two properties, which occur at the syntax-discourse interface and may therefore be vulnerable to incomplete acquisition, following the Interface Hypothesis (Sorace, 2011). We tested a total of 48 participants in two rating tasks (within-subject design with 24 native speakers and 24 L2 learners). In the first task, participants had to rate the naturalness of two types of answers to subject questions (5), i.e., either negative answers (e.g., personne ‘no one’) or answers that mentioned an individual, which was always provided in the form of a definite noun phrase (6). Negative answers were predicted to be rated poorly with clefted interrogatives compared to canonical forms, given the existential presupposition clefts carry. In the second task, participants rated the naturalness of a question (clefted vs. canonical) given a pictorial context (exhaustive vs. non-exhaustive) and an answer (mentioned all or mentioned some individuals). Clefted questions were predicted to be more natural when the answer and pictorial context supported the exhaustive inference.

Overall, our results suggest that L2 learners at the intermediate level acquire the existential presupposition before the exhaustive inference. Advanced learners do not display such a difference – their results are on par with French natives’ inferential pattern for both properties, challenging the predictions made by the Interface Hypothesis. We discuss our findings in light of L2 acquisition theories, and contribute more generally to the debate on the integration of external interfaces in advanced adult L2 grammars.
(1) **Who** went to the supermarket?        (2) **Qu’est-ce qu’il a fait?**  *(fronted wh-)*
What is it that he has done?

(3) Il a fait **quoi?**  *(canonical wh-)* ‘What did he do?’
                                                            ‘What did he do?’
His has done what?
(4) C’est **quoi qu’il a fait?**  *(clefted wh-)*
‘What did he do?’
                                                            ‘What did he do?’
It is what that he has done?

(5) C’est **qui a cuisiné la tarte aux pommes?**
                                                            ‘Who baked the apple pie?’
‘Who baked the apple pie?’

(6) La femme/ #Personne.
                                                            ‘The woman/ #no one.’
‘The woman/ #no one.’

References


Gender and Number Agreement in Italian as a Heritage Language: A Self-Paced Reading Study  
Grazia Di Pisa¹, Jason Rothman²,³, Theodoros Marinis¹¹University of Konstanz, Department of Linguistics ²UiT The Arctic University of Norway, Department of Language and Culture ³Universidad Antonio De Nebrija, Centro de Ciencia Cognitiva

Grammatical gender (hereafter gender) – especially in systems (like Romance languages) that typically have a relatively transparent system – is acquired early by monolingual children (e.g., Kupisch, Müller & Cantone, 2002). Yet gender shows variability in (some) heritage speaker bilinguals (HSs). In a HS context, it is vulnerable for low proficiency speakers generally and especially when the majority language lacks gender (e.g., Polinsky, 2008). Conversely, gender seems to be on target when acquired in HS individuals with high proficiency, especially when the majority language has gender (e.g., Bianchi, 2013). Herein, we examined sources of potential morphological variability in Italian HSs living in Germany (a language pairing where both have gender, albeit with important differences), with a focus on morphological markedness (masculine as the default) and task type (explicit vs. implicit knowledge).

Fifty-four adult Italian HSs living in Germany and forty native speakers of Italian living in Italy participated in two experiments. Experiment 1 examined gender agreement in an offline grammaticality judgement task (GJT) involving sentences with grammatical and ungrammatical noun-adjective sequences with masculine (unmarked) and feminine (marked) nouns in the singular (unmarked) and plural (marked). Gender violations were realised on the adjective. This probed for HSs’ potential overreliance on unmarked forms or “defaults” (masculine/singular). Experiment 2 examined the same conditions in an online self-paced reading (SPR) task (tapping more implicit knowledge) to address how HSs process gender agreement violations. In addition, to address possible relationships between gender agreement, language exposure/use and language proficiency, all participants filled a detailed language and social background questionnaire adapted from Lloyd-Smith, Einfeldt and Kupisch (2019) as well as the Language and Social Background Questionnaire (LSBQ) (Anderson et al., 2018) and to gauge proficiency, participants completed the DIALANG vocabulary test (Alderson, 2005).

In both tasks, controls performed at ceiling and showed faster reading times (RTs) compared to HSs (see Figures 1 and 2). In the GJT, HSs showed high accuracy and were more sensitive in detecting violations realised on marked adjectives; they showed an effect of markedness for gender (more accurate with masculine vs. feminine) and for number (more accurate with singular vs. plural). In the SPR, both groups showed sensitivity to violations realised on marked vs. unmarked adjectives but only in the masculine (longer RTs in the critical region ‘antica’ in Figure 2). Moreover, proficiency in Italian was significant for HSs in the GJT, but not in the SPR.

Notwithstanding, HSs’ performance on both offline and online comprehension was qualitatively similar to that of the Italian controls, suggesting that these HSs of Italian process gender in a native-like manner, albeit modulated differentially by markedness and proficiency at the individual level.
Figure 1. Mean accuracy (%) for grammaticality judgement task

Figure 2. Raw RTs (ms) for self-paced reading task

References


Some recent literature has shown that near-native speakers (NNs) of a null subject language over-use/over-accept overt subject pronouns (OSPs), even if their L1 is also a null subject language (Bini 1993; Margaza & Bel 2006; Lozano 2006 a. o.). Various explanations have been proposed in the relevant literature, ranging from NNs’ difficulties in computing topicality (Sorace 2011) to over-explicitness (Ryan 2015; Lozano 2016), to cross-linguistic influence (the latter, modulo micro-differences between the two null subject languages of these speakers, see Filiaci et al. 2014). Analyzing the productions of NNs of Italian with L1 Greek, in comparison to the productions of two groups of native speakers (Greek Natives and Italian Natives), Di Domenico, Baroncini & Capotorti (2020) have shown that over-use of OSPs occurs in the absence of relevant micro-differences in the distribution of OSPs in the two null subject languages investigated and is not due to general difficulties in computing topicality. The distribution of OSPs in Greek-Italian NNs (significantly higher than in native speakers in topic continuity and in contexts with two active referents) suggested what we call the Decreased Activation Hypothesis (DAH): NNs experience a higher sensitivity to the presence of additional topic distinction unclear. In this situation, OSPs are the sufficiently explicit (not over-explicit) device to employ.

In the present work, as a first step to extend the validity of the DAH beyond Greek-Italian NNs, we analyze the productions in Italian of a group of 12 NNs with L1 Serbo-Croatian (mean age 33; mean NN score 9.12), comparing them to the productions of 15 native speakers of Italian (mean age 28) and 15 NNs of Italian with L1 Greek (mean age 32; mean NN score 8.89). Participants had to watch a short movie and tell the story. Productions were recorded and transcribed. We excluded sentences in which a new referent or referring to the narrator/interviewer. In the resulting corpora (Italian natives: 495 ss.; Greek NNs: 370 ss.; Serbo-Croatian NNs: 344 ss.) we counted the occurrences of four kinds of expressions without lexical restriction). We then analyzed OSPs in terms of topicality and number/kind of active referents.

Results show that:

1) Greek NNs and SC NNs significantly over-produce OSPs with respect to Italian natives (p=.005), and do not significantly differ from each other (Figure 1).

2) Greek NNs and SC NNs overuse OSPs in topic continuity (p=.05) with respect to Italian natives (pace Kraš 2008) (Figure 2).

3) Greek NNs and SC NNs over-use OSPs almost exclusively in contexts with two active referents (2r) (Figure 3).

4) Greek NNs and SC NNs differ in the specific 2r contexts in which they over-use OSPs: while Greek NNs over-use OSPs when there are two active referents which differ for gender and/or number, SC NNs over-use OSPs in 2r contexts in which the two referents differ for humanness/animacy (Figure 3).

While the last result possibly reflects (use rather than grammar) differences in the speakers’ L1s, the first three results support the validity of the DAH to explain the productions not only of Greek NNs, but also of SC NNs.
References:


Telicity or context? Exploring which cues learners use when acquiring the preterit and the imperfect in Spanish

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University of Southampton1, King’s College London2, University of Greenwich3, Norwegian University of Science and Technology4

Context. Cues are crucial in investigating the different/similar ways in which native (NS)/non-native (NNS) speakers approach anticipation, a top-down mechanism that generates expectations about what speakers guess they will encounter next based on past information (Borovsky et al., 2012; Federmeier, 2007; Misyak et al., 2010). NS use an array of cues to generate predictions in this anticipatory process (e.g., Arai & Keller, 2013; Bicknell et al. 2010). Whereas some evidence suggests that L2 learners are also capable of using cues to make predictions in an L2 (Keating 2009; Mitsugi 2021; Jackson & Dussias 2009), whether they exploit the same cues and in the same fashion as NS remains unknown (Kaan & Grüter 2021). Morphosyntactic anticipation has been found to play a key role in L2 learning (Kaan 2014; Kaan & Grüter, in press), as it can lead to processing breakdown even at high levels of proficiency (e.g., Grüter, et al., 2007, 2012); in contrast, less is known about how learners apply contextual information in on-line L2 comprehension to predict upcoming information.

Rationale. In this study we examine the role that contextual and lexical-semantic cues (i.e. telicity) play when Spanish NSs as well as upper-intermediate L2 speakers generate predictions about the use of preterite (pret) in one-time, perfective events (e.g. John arrived last week/ Juan llegó la semana pasada) and the imperfect (imp) in habitual contexts (e.g. John used to play tennis as a child/Juan jugaba al tenis cuando era pequeño). Contextual cues are explicitly taught in Spanish classes when describing the use of the preterit and the imperfect. This study provides a new source of evidence to elucidate whether learners rely on these specific cues when making aspectual choices in Spanish, since the imperfect in particular has been found to be persistently problematic to acquire.

Procedure. Two groups of participants (Group A: NS of Spanish, N=21; Group B: NNS of Spanish, N=28) took part in a self-paced reading task (SPR, Just et al., 1982) and fill-in-the-blank written production task. Both tasks had 3 conditions and 2 levels in each condition (see Table 1), where we manipulated context (one-time vs. habitual event), the lexical semantics (LS) of the verb phrase (atelic vs. telic) and the verbal ending (VE) (imperfect and preterit) (see Table 2 for examples). For the SPR, a battery of linear mixed effects logistic regressions explored the effect of Context (One-time vs. Habitual) and congruency (Incongruency-LS vs. Incongruency-VE) on the residual RTs to establish whether contextual cues are used to predict aspectual interpretations in Spanish.

Results showed that NS are significantly slower in condition 3A in region SO1 (see Fig. 1), indicating that in one-time past contexts, NSs expect a verb with preterit morphology, irrespective of whether the verb phrase is telic or atelic. In contrast, NS do not have the opposite expectations when presented with habitual contexts, where the imperfect is likely to be preferred (see Fig. 1). NNS do not show expectations with either habitual or one-time event contexts (see Fig. 2), although proficiency effects suggest that the more advanced speakers do rely on contextual cues to interpret one-time events. For the production task, a battery of generalized linear mixed effects logistic regressions was run to explore whether context and/or telicity are used to produce aspectual verb endings in Spanish. Results indicate effects of context in one-time events only, as telicity overrides contextual cues for both NS and NNS in habitual contexts (see Fig. 3).

Discussion. The SPR results indicate that NSs rely on contextual cues to predict the use of the preterit, but not the imperfect, irrespective of telicity. Offline results show a similar effect for both NS and NNS. The combined findings suggest that, based on prior experience, learners at this proficiency level have established a reliable relation between available cues and what they signal, even if they are yet to incorporate this knowledge into their processing strategies. The fact that in the offline task, like NS, NNS ignore contextual cues but rely on lexico-semantic ones in the conditions with imperfect suggests that instructed learners have sophisticated knowledge of the imperfect beyond simplistic context-form frequencies and correlations.
GASLA16
Trondheim, 12–14.5.2022

Table 1. Conditions in the two tasks

<table>
<thead>
<tr>
<th>Condition</th>
<th>Level</th>
<th>Context</th>
<th>Lexico-Semantics (LS)</th>
<th>Verbal Ending (VE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Congruent</td>
<td>A</td>
<td>One-time event</td>
<td>telic</td>
<td>Preterit</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Habitual</td>
<td>atelic</td>
<td>Imperfect</td>
</tr>
<tr>
<td>2 Incongruent LS</td>
<td>A</td>
<td>One-time event</td>
<td>atelic</td>
<td>Preterit</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Habitual</td>
<td>telic</td>
<td>Imperfect</td>
</tr>
<tr>
<td>3 Incongruent VE</td>
<td>A</td>
<td>One-time event</td>
<td>telic</td>
<td>Imperfect</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Habitual</td>
<td>atelic</td>
<td>Preterit</td>
</tr>
</tbody>
</table>

Table 2. Example items for each condition and each level for the SPR

<table>
<thead>
<tr>
<th>Condition</th>
<th>Level</th>
<th>Example Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congruent</td>
<td>A</td>
<td>La semana pasada Marta encontró un billete en la plaza mayor. Last week Marta <em>find_telic_pret</em> a note in the main square.</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Cuando era pequeño Marcos jugaba al fútbol con sus mejores amigos. *When he was young Marcos <em>play_atelic_imp</em> football with his best friends.</td>
</tr>
<tr>
<td>Incongruent LS</td>
<td>A</td>
<td>La semana pasada Marcos jugó al fútbol con sus mejores amigos. *Last week Marcos <em>play_atelic_pret</em> football with his best friends.</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Cuando era pequeña Marta encontraba un billete en la plaza mayor. *When she was young Marta <em>find_telic_imp</em> a note in the main square.</td>
</tr>
<tr>
<td>Incongruent VE</td>
<td>A</td>
<td>La semana pasada Marta encontraba un billete en la plaza mayor. *Last week Marta <em>find_telic_imp</em> a note in the main square.</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Cuando era pequeño Marcos jugó al fútbol con sus mejores amigos. *When he was young Marcos <em>play_atelic_pret</em> football with his best friends.</td>
</tr>
</tbody>
</table>

Fig 1. Effects plot (Native speaker data)
Fig 2. Effects plot (L2 learner data)

*Both plots display the statistical outcome of the three-way interaction (Congruency*Context*Region) explored in the two statistical models.**

Fig 3. Proportion of verbal ending used in congruent and incongruent conditions for both NS and NNS in the production task.
It is well established that similarities between languages facilitate L2 acquisition, whereas absence of a grammatical category with a similar function in the L1 may delay acquisition, and the need to ‘unlearn’ certain structures or ‘re-assemble’ features makes acquisition even more challenging (Slabakova 2009, Lardiere 2009, Westergaard 2003). At the same time, it is not always straightforward to establish what qualifies as ‘similar’ and ‘different’ across languages, and hence determine the degree of abstraction at which cross-linguistic influence may operate. The current study investigates whether and to what extent L1 Russian and L1 Norwegian learners transfer semantic representations from their L1 into their developing L2 representations of two verbal forms in English: Past Progressive and Simple Past.

**Background.** In Russian, verbs in the perfective aspect in the past tense uniformly evoke completed event representations, while verbs in the imperfective aspect in the past tense are uniformly associated with ongoing events (see Fig. 1 from Minor et al., 2020a, submitted). At the same time, previous studies have established that L1 English speakers uniformly associate representations of ongoing events with verbs appearing in the Past Progressive but have no preference for either a completed or an ongoing event representation when presented with the Simple Past (Fig. 2 from Minor et al., 2020b, submitted).

**Method.** We adapted the English version of the eye-tracking experiment from Minor et al. (2020 a,b) and added the Russian and Norwegian tasks with the same set of visual stimuli and predicates/events (ex. a-b). We use web-based eye-tracking, a novel methodology that is well-suited for remote testing during the pandemics. The results of web-based eye-tracking tasks were shown to be comparable to infra-red eye-tracking (see Vos et al., 2021, Minor et al., submitted), but require more participants. Data is collected with 40 L1 Russian and 40 L1 Norwegian participants (university students acquiring English as L2). All participants are tested in L2 English and in their L1 (with a break between the sessions). The participants also complete a background questionnaire and a proficiency task. **Predictions.** We predict that L1 Russian speakers will transfer the semantic opposition between completed and ongoing events to their L2 English representations, associating Past Progressive forms with the imperfective aspect in Russian, and the Simple Past forms with the perfective aspect. L1 Norwegian participants lack a grammaticalized opposition between completed and ongoing events in the past. We also predict that they will not show a preference for the completed event in the Simple Past condition. **Pilot.** The prediction has been corroborated by the results of a small-scale pilot study with L1 Russian L2 English speakers (n=6; advanced proficiency level): the participants showed a strong preference for the ongoing event in the Past Progressive condition, as well as a preference for the completed event in the Simple Past condition (Fig 3).

**Examples:**

\[(a)\] Babuška *vjazala* novyj sviter
Bestermor *holdt på å strikke* en ny genser
‘Grandma was knitting a new jumper.’

\[(b)\] Babuška *svjazala* novyj sviter
Bestemor  * strikket* en ny genser
‘Grandma knitted a new jumper.’

An experimental trial included an audio preamble which located the narrative in the past (e.g. *It was a rainy day*), followed by a sentence-picture matching task where the participants were presented with a pair of pictures on a screen: one representing an Ongoing Event (OE), i.e. an action in progress, and one representing a Completed Event (CE), see examples (a-b) from the Russian, Norwegian and English tasks. Each experiment included 24 fillers and 24 test trials (12 perfective and 12 imperfective) involving verbs/event types and visual stimuli, which were identical across the three languages. Eye-movements were recorded.
Figures:

Fig. 1. **L1 Russian data.** Proportions of looks to the Completed vs Ongoing Event picture in 50 ms time bins starting from the verb onset in the Imperfective and Perfective conditions. Vertical blue lines represent the average verb offset.

Fig. 2. **L1 English data.** Proportions of looks to the Completed vs Ongoing Event picture in 50 ms time bins starting from the verb onset in the Progressive and Simple Past conditions. Vertical blue lines represent the average verb offset.

Fig. 3. **L2 English data (L1 Russian).** Proportions of looks to the Completed vs Ongoing Event picture in 50 ms time bins starting from the verb onset in the Progressive and Simple Past conditions.

References:


Cross-linguistic influence in adult third language acquisition: Acquisition of Norwegian morphosyntax by L1 Spanish L2 English speakers
Augusto Espindola
The Arctic University of Norway (UiT)

Abstract
Research on third language acquisition as an independent area has gained an increasing interest over the last decades. Formal approaches to third language acquisition based on empirical data from a variety of language combinations have emerged, and within this domain, the source and extent of cross-linguistic influence is without exaggeration the core area of investigation. Despite a substantial body of research on cross-linguistic influence in third language acquisition (especially, at early stages), the question pertaining to the source and nature of cross-linguistic influence is still hotly debated. In the morphosyntax domain, five main competing hypotheses have emerged, composed by holistic basis models - the L1 Privilege Model (Hermas, 2014), the L2 Status Factor (Bardel & Falk, 2007), and the Typological Primacy Model (Rothman, 2015), and by property-by-property basis models - the Cumulative Enhancement Model (Flynn et al., 2004), and the Linguistic Proximity Model (Westergaard et al., 2017). The main goal of the ongoing present MA thesis project is to test these hypotheses in the context of early adult acquisition of third language Norwegian by first language Spanish/second language English speakers. The investigation addresses the following research questions: Which of the previously acquired languages is the source of cross-linguistic influence in adult third language acquisition at early stages? Is the cross-linguistic influence of a holistic or property-by-property nature? The methodology employed is based on the subtracted language groups experimental design (Westergaard et al., forthcoming) and addresses the acquisition of four morphosyntactic properties: (i) post-nominal possessives gender agreement, (ii) number concord on definite articles, (iii) adjective placement, and (iv) subject pronoun expression. The properties are tested by means of two quantitative instruments, a grammaticality judgment task and a closed-ended questionnaire designed to investigate participants’ perception of both holistic and property-by-property similarities between their first, second and third languages (Ben Abbes, 2020). The data analysis is currently ongoing and will be completed in advance of the conference.

Key words: Multilingualism; Third language acquisition; Cross-linguistic influence; holistic transfer; property-by-property transfer.

References


Asturian is a minority language, spoken in northwestern Spain. As a Romance language, it shares many similar characteristics with other languages of the region, such as Portuguese, Spanish, and Galician; however, it exhibits a unique agreement pattern with mass nouns (D’Andrés, 1994; Fernández-Ordóñez, 2006, 2007). Additionally, Asturian exhibits a highly productive use of enclitics except in the case of negation and subordinate clauses (d’Andrés 2002, Barnes 2016). Studies indicate that enclitic pronouns are frequently found in the Spanish of the region among bilingual Asturian-Spanish speakers, as they are part of the Asturian-Spanish bilingual variety called ‘amestáu’ (described as a contact variety of Spanish that is “full of Asturianisms”, Barnes 2016); mass noun agreement, on the other hand, seems to be much less salient among Spanish-Asturian bilingual speakers (d’Andrés 2002), though its presence can still be found in the Spanish of the region (Fernández-Ordóñez, 2006, 2007).

The current study examines these phenomena from a Multiple Grammars (Amaral & Roeper, 2014) and Feature Reassembly (Lardiere, 2009) perspective. The Feature Reassembly Hypothesis maintains that differences between two languages can be explained through the configuration of features. Multiple Grammars asserts that speakers have a single linguistic repertoire for their languages and that interference from one language into another is more likely to occur when a feature is highly productive and syntactic constraints between the two languages coincide. Therefore, it is expected that among bilingual speakers certain features from one language will surface in their other language as they navigate different communicative contexts, as is the case with the presence of Asturian features in Spanish.

The current experiment explores the perceived naturalness of certain Asturian/amestáu features inserted in otherwise Spanish-sounding sentences. Sentences examined four conditions: asturian mass noun agreement, standard Spanish nominal agreement, asturian enclitic use, standard Spanish proclitic use. Bilingual Asturian/Spanish speakers and native Spanish speakers (who do not speak Asturian) rated sentences based on how natural-sounding they were on a scale of 1-5. These sentences were pre-recorded by a bilingual speaker of both languages and presented aurally through an online survey platform (see Examples 1 and 2).

Not all structures are perceived equally by either participant group (see Figure 1). Results indicated high ‘naturalness’ rates for enclitic pronouns for both speaker groups, with a 4.37 average rating for Asturian speakers and a 4.2 rating for non-Asturian speakers. Mass noun gender marking, however, was rated as less natural by both groups (3.11 rating for Asturian speakers, 2.26 for non-Asturian speakers). Additionally, Spanish sentences with no Asturian traits were perceived as more natural for non-Asturian speakers especially in the case of examples with proclitic pronouns (4.38 naturalness for Spanish speakers vs. 3.53 for bilinguals).

We argue that the lower ratings for the Asturian agreement feature are related to its similarity to Spanish masculine forms, meaning that following standard Spanish agreement norms, the presented sentences are interpreted as a violation of agreement restrictions. However, the non-Asturian speakers in this study are from this region, suggesting that perhaps contact with this form has allowed them to posit a rule for enclitic pronouns, which allows this form to be interpreted as ‘natural’ sounding, even if the speakers do not use this rule themselves.
Example 1. Sentence containing mass noun agreement.
La hierba huele bien cuando está recién segado
The grass smell good when it’s recently mowed
‘The grass smells good when it’s been recently mowed’

Example 2. Sentence containing an enclitic pronoun.
Maréome, así que prefiero no salir en barco
Get sick so I prefer not to go on a boat
‘I get seasick, so I prefer not to go on a boat’

Figure 1. Perceived naturalness of Asturian vs. Spanish gender-marking and pronoun placement per speaker group.

References
Background. Native speakers (NSs) and non-native speakers (NNSs) have been found to experience garden-path effects when reading a temporarily structurally ambiguous sentence [1, 2]. The extent to which NNSs differ from NSs in their use of various types of linguistic information for structural reanalysis remains a topic of debate [3, 4]. Verb bias as a type of fine-grained lexical information has been demonstrated to influence reanalysis difficulty in both NSs and NNSs [5, 6]. When reading a sentence with a DO (direct object) - biased verb and a sentence with SC (sentential complement) - biased verb, both NSs and NNSs were slow to read the disambiguating regions compared to similar regions in the unambiguous control sentences [5, 7]. This suggests that NSs and NNSs are sensitive to verb bias information for ambiguity resolution.

The current investigation, however, addresses the influence from a verb pertaining to its structural properties rather than to its lexical properties on L2 ambiguity resolution. According to the structural change theory [8], reanalysis is particularly challenging when it involves a major rearrangement of thematic structure. For example, sentences like (1) involve NP/S ambiguities since they can take either a NP or a sentence (S) as the complement; sentences like (2) involve NP/Z ambiguities since they can take either a NP as the complement or no (Zero) complement. This theory predicts that NP/Z reanalysis should be more difficult than NP/S reanalysis because NP/Z reanalysis relative to NP/S reanalysis requires the NP following the verb to be moved out of its thematic domain. Sturt et al. [9] experimentally confirmed this prediction among NSs. This study aims to examine whether NNSs are sensitive to this structural property, thus directly testing this theory in NNSs.

Method. NSs (24 English native speakers) and NNSs (65 Chinese learners of English) read English sentences segment by segment in a self-paced reading (SPR) task with a 2 (Complement type: NP/S vs. NP/Z) * 2 (Ambiguity: ambiguous vs. unambiguous) design. We use sentences as in (1) & (2) for the “ambiguous” condition. For the “unambiguous” condition, sentences like (3) are created from (1) by adding a complementizer, that, following the verb, and sentences like (4) from (2) by adding a comma following the verb. Sentences were checked for their plausibility by a sample of participants who participated in the SPR task. For the SPR, reading times (RTs) from the critical region – region 3 were analyzed with linear mixed-effects models.

Results and Discussion. Plausibility ratings did not significantly differ across conditions and language groups – ruling out this potential confound. Visualization for all regions and region 3 only were provided in Figure 1 and Figure 2 respectively. For the region 3, there were main effects of ambiguity ($\beta=-0.227$, $SE=0.068$, $p<.01$) and complement type ($\beta=0.124$, $SE=0.054$, $p=.023$), indicating that this region was read reliably faster for unambiguous sentences than for ambiguous ones, and that this region was read reliably faster for the NP/S condition than for the NP/Z condition. A marginal interaction between ‘Ambiguity’ and ‘Complement type’ ($\beta=-0.150$, $SE=0.087$, $p=.087$) demonstrated that region 3 in the NP/S condition was read more quickly than that with the NP/Z condition for ambiguous sentences ($\beta=-0.158$, $SE=0.042$, $p<.001$). These results held across language groups. For the NNS group, language proficiency overall modulated RTs, but did not modulate the effects of ‘Ambiguity’ and ‘Complement type’. Taken together, the conclusion is that NNSs like NSs are sensitive to the verb information associated with structural change during syntactic ambiguity resolution.
Figure 1. Mean RTs by condition. Error bars indicate standard error of the participant.

Figure 2. Mean RTs by condition for region 3. Error bars indicate standard error of the participant.

Example stimuli:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Example sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambiguous-NP/S</td>
<td>(1). The Australian woman / saw the famous doctor / had been drinking / quite a lot.</td>
</tr>
<tr>
<td>Ambiguous-NP/Z</td>
<td>(2). Before the woman / visited the famous doctor / had been drinking / quite a lot.</td>
</tr>
<tr>
<td>Unambiguous-NP/S</td>
<td>(3). The Australian woman saw that the famous doctor had been drinking quite a lot.</td>
</tr>
<tr>
<td>Unambiguous-NP/Z</td>
<td>(4). Before the woman visited, the famous doctor had been drinking quite a lot.</td>
</tr>
</tbody>
</table>

Are non-native speakers sensitive to microvariation in anaphora resolution?
The case of Italian and Spanish learners of European Portuguese

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*Universidade Nova de Lisboa & #Universidade do Porto

Recent studies indicate that there is microvariation in anaphora resolution in null subject Romance languages (NSRL) like Italian, Spanish and European Portuguese (EP) (e.g. Filiaci et al., 2014; Torregrossa et al., 2020). For instance, Madeira et al. (2021) and Fiéis et al. (2021) found that, in these three languages, anaphora resolution preferences in intrasentential Main – Subordinate contexts are similar only in the case of overt pronominal subjects and when antecedents are animate: here overt subjects tend to retrieve the object antecedent. When the object is inanimate, the overt subject tends to recover the subject antecedent in Italian and Spanish, whereas in EP the preference for the object antecedent is maintained. These languages also differ in the interpretation of null subjects: EP has a strong bias towards the subject antecedent, regardless of animacy, while Italian and Spanish show no clear preference.

Sensitivity to microvariation is still understudied, as most studies assume that NSRL behave alike in anaphora resolution. The research conducted to date, which has mostly considered contexts with animate antecedents, has generally found that learners display persistent optionality regarding overt but not null subjects (e.g. Sorace, 2016). This has been disputed by some studies which found no problems in the resolution of pronominal subjects at advanced levels (e.g. Rothman, 2009). Thus, further research is needed.

To examine whether learners are sensitive to microvariation in anaphora resolution, the present study investigates the interpretation of subject pronouns in L2 EP by Italian and Spanish native speakers. The following questions are addressed: are Italian and Spanish learners of L2 EP sensitive to L1-L2 differences regarding the role of animacy in overt subject resolution?; are these learners sensitive to L1-L2 differences regarding the strength of the subject antecedent bias in null subject resolution?

Participants were 25 adult EP native speakers, 69 Italian native speakers (25 upper-intermediate, 25 advanced and 19 near-native learners), and 50 Spanish native speakers (20 upper-intermediate, 20 advanced and 10 near-native learners). Two multiple-choice tasks (speeded/untimed) were used to elicit interpretation preferences in intrasentential Main – Subordinate contexts. The tasks had a 2x2 design crossing the following variables: animacy of the matrix object (animate vs. inanimate) and type of embedded pronominal subject (overt vs. null) (6 items*4 conditions+24 fillers).

In the interpretation of overt subjects in the animate condition, all learner groups exhibit a target-like preference for the object antecedent in both tasks and across levels. In the interpretation of overt subjects in the inanimate condition, on the other hand, the only groups that have a target-like preference for the object antecedent are the near-native groups and the advanced L1 Spanish – L2 EP group. This target-like preference is observed in the untimed task, but not in the speeded task, where these groups exhibit optionality. In the interpretation of null subjects, intermediate learner groups display optionality in both tasks. Advanced and near-native learners have a target-like preference for the subject antecedent in the untimed task, but they also show optionality in the speeded task.

Our results indicate that learners become sensitive to microvariation in anaphora resolution at highly advanced proficiency levels (as seen in the untimed task). However, their performance remains permanently unstable in the areas where the L1 and the L2 differ (as seen in the speeded task). Given that near natives’ problems are only found in the speeded task, they are likely to be caused by processing inefficiencies and not by representational deficits. Overall our findings challenge the ideas that only overt subjects are persistently problematic and that the L1 plays a minor role in anaphora resolution.
Appendix

<table>
<thead>
<tr>
<th>Animate object</th>
<th>Null subject</th>
<th>Overt subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>O porteiro viu o professor quando [-] caiu das escadas.</td>
<td>O porteiro viu o professor quando ele caiu das escadas.</td>
<td></td>
</tr>
<tr>
<td>The doorman saw the teacher when [-] fell from the stairs.</td>
<td>The doorman saw the teacher when he fell from the stairs.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inanimate object</th>
<th>Null subject</th>
<th>Overt subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>O menino viu o brinquedo quando [-] caiu da cadeira.</td>
<td>O menino viu o brinquedo quando ele caiu da cadeira.</td>
<td></td>
</tr>
<tr>
<td>The boy saw the toy when [-] fell from the chair.</td>
<td>The boy saw the toy when he/it fell from the chair.</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Sample test sentences

Example of test item: Overt subject + animate object

O porteiro viu o professor quando ele caiu das escadas.
The doorman saw the teacher when he fell from the stairs.

____________________ caiu das escadas.
____________________ fell from the stairs.

o porteiro, o professor, nem o porteiro nem o professor (options presented randomly)
the doorman, the teacher. M.SG, neither the doorman nor the teacher

References


This study addresses two issues in the L2 processing of filler-gap constructions: (i) the well-attested subject/object asymmetry in relative clauses (RCs) and (ii) the facilitation of object RC comprehension when there is a mismatch of number features in the relevant NPs. With regard to (i), early L2 research attested a subject advantage in production (e.g., Gass, 1979 among others) but not in comprehension (Izumi, 2003); and online studies attested an asymmetry in bilingual populations (e.g., Juffs & Rodriguez, 2014; Stern et al., 2019). With regard to (ii), the facilitation driven by mismatched morphosyntactic features in configurations containing two NPs has been widely investigated in studies on L1 development showing a facilitation effect in comprehension (e.g., Adani et al., 2010; Contemori & Marinis, 2013; Cilibrasi et al., 2019). Furthermore, while L1 German-L2 English learners have been shown to use a number feature mismatch to start reanalysis of incorrect initial predictions of English which-questions (Hopp, 2017), no facilitation effect was found for L1 Chinese-L2 English learners in a self-paced reading experiment testing subject/object RCs (Xia et al., 2020).

The study aims to investigate the subject/object asymmetry and the facilitation effect in two self-paced reading experiments administered on PCibex to a group of L2 learners of Italian at different levels of proficiency and to a group of Italian native controls. A first experiment aims to test the RC processing asymmetry and a second experiment investigates facilitation effects driven by a manipulation of morphosyntactic features (Table 1). Reading Times (RTs) is measured at each multiple-word region of interest (ROI) and accuracy is measured through true/false comprehension statements to critical stimuli.

Preliminary data was collected for Experiment 1 from L1 English-L2 learners of Italian (N = 14; Mean Age= 22.3; SD=4.08; 10 intermediate, 4 advanced) and a control group (N = 7; Mean Age= 23; SD=3.02). Results suggest an overall difference in RTs between learners and NS controls, the former showing longer RTs across ROIs compared to the latter. A slight subject advantage in processing RCs appears in the advanced learners evidenced by the shorter RTs in Region 4 and Region 5 of subject over object RCs (Table 2), a result that aligns with the NS group. The asymmetry was not observed in the intermediate group who had comparable RTs in both conditions. The reverse pattern is seen in the accuracy data: while the advanced learners and control group reached comparable accuracy across conditions, an offline RC asymmetry is seen in the intermediate group showing better comprehension of subject compared to object RCs (Fig. 1). Although preliminary, the results suggest that the RC asymmetry is modulated by proficiency and generally reflect, for the L2 learners, patterns that have been observed in the literature for adult native speakers. This in turn can shed light on the broader question of whether processing principles are fundamentally similar or different in L1 and L2 processing. Data collection is currently ongoing, and we expect to have results for both experiments at the GASLAXVI conference.
Rhetorical question comprehension in German-Italian bilingual children: comparing majority and minority language

Miriam Geiss¹, Maria F. Ferin¹, Theodoros Marinis¹,² & Tanja Kupisch¹,³
¹University of Konstanz, ²University of Reading, ³UiT The Arctic University of Norway

Rhetorical questions (RhQs), e.g., “Who likes paying taxes?”, do not request information, unlike information-seeking questions (ISQs). Rather, they are used to signal the speakers attitude or belief towards the answer (Biezma & Rawlins 2017), which is taken to be in the Common Ground (Caponigro & Sprouse 2007) shared by Speaker and Addressee.

In German and Italian, wh-RhQs can be disambiguated from ISQs by prosody. In Italian, RhQs are characterized by a longer duration and a smaller pitch excursion (Sorianello 2018, 2019). Italian RhQs tend to end with a low boundary tone (L%), while ISQs end high (H%) or rising (LH%). The particle ma ‘but’ or clitic right dislocation can be used as additional lexical-syntactic cues (Ferin in prep). German RhQs can be marked by a longer duration, a breathy voice quality and a late nuclear pitch accent (L*+H, Braun et al. 2019). In German, both RhQs and ISQs end in a low boundary tone (L-%). Discourse particles such as denn or schon can serve as additional cues (Meibauer 1986; Thurmair 2013).

In order to understand RhQs, children need know these (para)linguistic cues signaling that the question’s intended meaning is rhetorical, i.e., non-literal. The ability to interpret utterances where literal and intended meaning are discrepant (e.g., irony and sarcasm, which are similar in some respects to RhQs) is still under development in primary-school-aged children (Capelli et al. 1990; Glenwright et al. 2014). To our knowledge, no study has investigated RhQ comprehension comparing the two languages of bilingual children.

The present study investigated RhQ comprehension of 80 Italian-German bilingual children (age 6 - 9 years) living in Germany. We addressed the following questions: 1. Can bilingual children of different age groups understand RhQs in German and Italian? 2. Is there a difference between the two languages?

Children were tested in a forced-choice comprehension task in both languages. We used wh-questions of the structure ‘Who eats melon?’ and manipulated them prosodically and syntactically (see Tables 1 and 2). An additional perception task ensured that the children perceived the prosodic contours as different. Our results (Figure 1) show that, in both languages, children can interpret RhQs when they are presented with an overt lexical marker (rhet. cue) and a typical RhQ prosody, but they have more difficulties when relying only on prosody (neut., ambig. cue) (GE: χ²=76.9, df=2, p<.001; IT: χ²=17.82, df=2, p<.001). Comprehension improved over age (GE: χ²=8.85, df=3, p<.05; IT: χ²=18.20, df=6, p<.01) and in Italian, a higher exposure to Italian led to a higher accuracy (β=-0.11, SE=.56, z=-1.97, p<.05). Children were better at identifying RhQs in German than in Italian (β=1.06, SE=.17, z=6.11, p<.0001).

Overall, our results show that bilingual children already at age 6 are able to understand RhQs (at least to some extent) and that they are better in identifying RhQs in German, suggesting that the children learned the cues in German, their majority language, earlier than in Italian, the minority language. Irrespective of age, the combination of prosodic and strong syntactic cues facilitated RhQ comprehension in both languages, potentially because the strong syntactic markers are more salient and more frequent in the input.
<table>
<thead>
<tr>
<th>Prosodic cue</th>
<th>ISQs</th>
<th>RhQs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pitch accent: H+!H*</td>
<td>Pitch accent: L*+H</td>
</tr>
<tr>
<td></td>
<td>Modal voice quality</td>
<td>Breathy voice quality</td>
</tr>
<tr>
<td></td>
<td>Shorter duration</td>
<td>Longer duration</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Syntactic cue</th>
<th>ISQs</th>
<th>RhQs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Neutral (no cue)</td>
<td>Neutral (no cue)</td>
</tr>
<tr>
<td></td>
<td>Ambiguous (denn)</td>
<td>Ambiguous (denn)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rhetorical (denn schon)</td>
</tr>
</tbody>
</table>

Table 1. Cues for German stimuli.

<table>
<thead>
<tr>
<th>Prosodic cue</th>
<th>ISQs</th>
<th>RhQs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Edge tone: LH%</td>
<td>Edge tone: L%</td>
</tr>
<tr>
<td></td>
<td>Shorter duration</td>
<td>Longer duration</td>
</tr>
<tr>
<td></td>
<td>Greater pitch excursion</td>
<td>Smaller pitch excursion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Syntactic cue</th>
<th>ISQs</th>
<th>RhQs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Neutral (no cue)</td>
<td>Neutral (no cue)</td>
</tr>
<tr>
<td></td>
<td>Ambiguous (CLRD)</td>
<td>Ambiguous (CLRD)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rhetorical (ma + CLRD)</td>
</tr>
</tbody>
</table>

Table 2. Cues for Italian stimuli. CLRD = clitic right dislocation of the object.

[Image of graphs showing response accuracy in RhQ condition for different age groups and syntactic cues (neutral, ambiguous, rhetorical).]

Figure 1. Response accuracy in RhQ condition of the German and Italian Comprehension Task per age group, divided by syntactic cue (neutral, ambiguous, rhetorical).

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Sensitivity to event structure in passives supports deep processing in L1 and L2
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University of York

Background: Current theories of both L1 and L2 processing implicate “good enough” processing strategies [1–4]. Evidence favouring this view in L1 processing comes from studies of passives which show that comprehenders reliably misinterpret these structures due to their complexity and the application of fast, but shallow, heuristics such as the “agent-first” strategy [2]. Recent work on L1 processing, however, suggests that the picture is more nuanced: passives may actually be easier to process, but more difficult to remember [5–7]. Meanwhile, this issue has been understudied in L2 processing, despite the suggestion that L2-comprehenders may show a greater reliance on such shallow processing heuristics [3, 4].

Passives & Event Structure: [5, 6] argued that the previous literature overlooked the interaction of passivization and event structure. Passivized eventive predicates reliably signal the intended verbal interpretation. Passivized stative predicates, on the other hand, are initially compatible with an adjectival interpretation, and must be coerced into a state resulting from a preceding event [8, 9]. In line with this account, [5, 6] found that stative passives were more complex than stative actives. No such distinction was observed for eventive sentences. We present evidence that L2 learners are capable of recruiting similarly nuanced processing mechanisms in understanding passives. We do not find evidence that passives are more difficult to process than actives, inconsistent with a good-enough account. We also show that German L2-learners of English display the same interaction of event structure and passivization found with L1-English speakers, inconsistent with a shallow processing account.

Experiment: L1 German, L2 speakers of English (n=25) and a control L1 English group (n=21) read sentences with both eventive and stative predicates in the active and passive voice, as in Table 1, in a maze-task format [10, 11]. A variant of self-paced reading, the maze task involves a choice between two words at each point in the sentence, only one of which represents a licit continuation. Participants must choose the correct word to move forward, and the trial terminates if the incorrect word is selected. Unlike traditional SPR experiments, the maze task compels comprehenders to process input incrementally, meaning that reading times offer a more accurate measure of online sentence processing. Comprehension questions targeting thematic roles followed each sentence to measure offline processing, as good enough or shallow processing accounts predict that participants will frequently fail to correctly assign thematic roles following non-canonical passive sentences.

Results: Online results show that participants experienced selective difficulty with stative passives relative to eventive passives, and that eventive passives are read faster than eventive actives. A significant interaction between syntax and predicate type was observed in reading time data at the main verb (β = -49, z = 2.65) and in comprehension accuracy (β =0.39, z = 3.64). That is, participants took longer to read stative passives and responded to comprehension questions following stative passives with lower accuracy. Whilst L1 German comprehenders read the sentences overall more slowly than the L1 English group, we did not find evidence that native language interacted with the effect of syntax, or predicate type.

Conclusion: The study adds to previous results showing that the L1-processing of passives is not inherently more complex than actives but is modulated by predicate semantics. Additionally, we found no evidence of a difference between L1 and L2 English speakers, with both populations showing a nuanced effect of the interaction of event structure and passivization. We suggest that this finding indicates deep processing even in L2. Regardless, these findings seem problematic for good-enough and shallow processing accounts.
Table 1: Example of experiment stimuli.

<table>
<thead>
<tr>
<th>Predicate</th>
<th>Syntax</th>
<th>Sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eventive</td>
<td>Active</td>
<td>The caterer paid the creative and competent chef in the afternoon.</td>
</tr>
<tr>
<td></td>
<td>Passive</td>
<td>The caterer was paid by the creative and competent chef in the afternoon.</td>
</tr>
<tr>
<td>Static</td>
<td>Active</td>
<td>The caterer admired the creative and competent chef since the banquet.</td>
</tr>
<tr>
<td></td>
<td>Passive</td>
<td>The caterer was admired by the creative and competent chef since the banquet.</td>
</tr>
</tbody>
</table>

Table 2: Estimates for models taking predicate (eventive=-1, stative=1), syntax (active=1, passive=-1), L1 (English=-1, German=1), and their interactions as fixed effects. Random slopes and intercepts were included for subjects and items. Shading indicates significance.

References:
The grammar of experience and the acquisition of NPIs: Ever and Any show different paths of acquisition in Chinese and Korean L2 speakers of English

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¹University of York, ²University of Sheffield

We tested the effect of independent properties of L1 grammar on L2 acquisition of the Negative Polarity Item (NPI) ever. We show the acquisition path of ever is influenced by the different properties of experiential constructions in a learner’s L1.

**Background** The surface forms used to express holding (or not) an experience vary greatly across languages. English exploits the aspectual system, the so-called Experiential Perfect, to refer to prior experiences; a reading which can be enforced using the polarity sensitive universal quantifier ever. Chinese (a.o.) also exploits the aspectual system to express experientials, displaying dedicated morphological marking with guo. One difference between English and Chinese is that ever in English is an NPI while guo is not. Korean (a.o), on the other hand, realises experience using a complex DP in an existential construction. This variation raises interesting problems for L2 learnability and suggests a potential interaction of the experiential marking system of L1 and the acquisition of NPIs in L2. Using the Feature Reassembly Hypothesis (Lardiere 2009) as the L2 model for our predictions, we assume that L1-Chinese learners of L2-English will map L2 ever to L1 guo. This yields an interlanguage lexeme that must go through feature reassembly to accommodate the polarity sensitivity of ever. The mapping process leads us to predict that the Chinese group would interpret ever as an experiential marker (akin to guo), leading to acceptance of ever in unlicensed positive polarity. In contrast, high proficiency L1-Chinese speakers learn to discriminate between uses of any, but generally accept all instances of ever. Their low proficiency counterparts, on the other hand, uniformly reject ever in all cases. We suggest that high proficiency Chinese speakers are mapping the experiential marker guo onto English ever, thus failing to treat it as an NPI. This phenomenon has also been observed in Singapore English, an English based creole with Chinese substrate influence.

**Experiment** To test this hypothesis we conducted a speeded acceptability judgment task manipulating Grammaticality (+gram, −gram) and NPI type (ever vs any) (Table 1). 155 L2 speakers of English (72 Chinese/83 Korean) participated in the experiment. To minimize the adoption of task specific judgement strategies, sentences were presented in a self-paced reading paradigm, thus preventing rereading. Participants were instructed to read at their own natural pace and provide an acceptability judgment as quickly as possible (and within 3 seconds) at the end of the sentence. Target and filler items contained the same proportion of grammatical and ungrammatical sentences. Participants’ English proficiency was measured using the 60 point Quick Placement Test (QPT, 2001), and ranged from beginner to advanced (Fig.1 left). There was no significant difference in proficiency between language groups (p>.5).

**Results and Discussion** We found strong evidence of a three-way interaction of grammaticality, NPI, and proficiency for both L1-Chinese and L1-Korean participants (Fig.2 left). However, inspection of model predictions shows that this interaction takes different shapes for the two groups (Fig.2 right). For L1-Korean speakers, higher proficiency led to better discrimination between grammatical and ungrammatical uses of both NPIs, with greater success overall for any than for ever. In contrast, high proficiency L1-Chinese speakers learn to discriminate between uses of any, but generally accept all instances of ever. Their low proficiency counterparts, on the other hand, uniformly reject ever in all cases. We suggest that high proficiency Chinese speakers are mapping the experiential marker guo onto English ever, thus failing to treat it as an NPI. This phenomenon has also been observed in Singapore English, an English based creole with Chinese substrate influence. In Korean, on the other hand, the periphrastic experiential does not offer any L1 morpheme that might straightforwardly map to ever, so the Korean speakers’ acquisition of ever proceeds without L1 influence.
GASLA16  
Trondheim, 12–14.5.2022

(1)  a. John hasn’t ever been to Norway.  
    b. *John has ever been to Norway.

(2)  a. Wo mei qu-guo Mosike.  
    I neg go-exp.perf Moscow  
    ‘I have never been to Moscow.’  
    b. Wo qu-guo Mosike.  
    I go-exp.perf Moscow  
    ‘I have been to Moscow (before).’

(3)  Na-nun [baek horangi-lul po-n] cek-l eps-ta  
I top white tigera-cc see-adn experience-nom not.exist-de  
(lit.) ‘There doesn’t exist an experience of me seeing white tiger’  
‘I have never seen a white tiger’

(4)  a. Have you ever seen a white tiger?  
    b. (Yes, I) ever (see a white tiger).

<table>
<thead>
<tr>
<th>licensed</th>
<th>unlicensed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ever John hasn’t ever eaten apricots</td>
<td>John has ever eaten apricots</td>
</tr>
<tr>
<td>any John hasn’t eaten any apricots</td>
<td>John has eaten any apricots</td>
</tr>
</tbody>
</table>

Table 2: Example of experimental stimuli

Figure 2: Distributions of correct responses on the Oxford Quick Placement test (left); Mean by-subject “acceptable” responses and standard errors (right).

Figure 3: Judgments were modeled using bayesian mixed effects logistic regression, taking grammaticality (+gram=0.5, -gram=-0.5), NPI (any=0.5, ever=-0.5)), centred English proficiency, and all interactions as fixed effects. Random slopes and intercepts were included for subjects and items. We take 95% credible intervals not containing 0 as strong evidence of an effect’s direction. Posterior estimates and 95% CIs are shown left. Model predictions for the grammaticality×NPI×proficiency interaction shown right.
Q-operations in Yes-No Questions in English-Cantonese bilinguals’ L3 Mandarin Grammars

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¹University College Cork, ²Shanghai Jiao Tong University/University of Cambridge

Recent work on L3 acquisition does not only focus on the selection of source languages for transfer but also pays more attention to details of transfer such as what exactly is transferred and how is the transferred grammar mapped onto a new language (cf. Schwartz & Sprouse, 2021). Our paper will report on an empirical study investigating L3 acquisition of Q-operations in Mandarin yes-no questions by English-Cantonese bilinguals, with an aim to explore the mechanism of L3 morpho-syntactic acquisition with both online and offline data.

Unlike English, Mandarin and Cantonese use either a [+Q] sentence-final particle (SFP) or an A-not-A to form yes-no questions. Moreover, in the two languages, an A-not-A yes-no question can be followed by an SFP which expresses speech act information, such as the Mandarin tone-softening SFP a, but not by a [+Q] SFP such as the Mandarin SFP ma for an economy reason (Huang et al., 2009), as illustrated in (1). The present study employed a Cross-Modal Priming Task (CMPT) and an Acceptability Judgement Task (AJT) to elicit L2 and L3 learners’ knowledge of Q-operations and semantic constraints on Mandarin yes-no questions involving A-not-A and SFPs (a and ma). A total of 174 people participated in this study, including 28 Mandarin native speakers as a control group. There are three types of learners: L1 English-L2 Cantonese-L3 Mandarin (E-C-M) learners; L1 Cantonese-L2 English-L3 Mandarin (C-E-M) learners; and L1 English-L2 Mandarin (E-M) learners. Learners of each type were further divided into two proficiency groups (high and low).

The results show that the L3 groups pattern together and behave differently from the L2 groups at both low and high proficiency levels (see Figure 1 and Table 1). The L3 beginners accept incorrect A-not-A questions with ma as well as correct ones with a in the AJT and show a similar pattern when processing the two types of sentences in the CMPT. The L2 beginners, however, show indeterminacy on both types in the AJT but spend longer time processing a than ma in the CMPT. Although L3 high proficiency groups cannot firmly reject A-not-A questions with ma in the AJT, they are able to make a distinction between correct A-not-A questions with a and incorrect ones with ma. They also show a native-like pattern in the CMPT, processing ma and a differently. L2 advanced learners correctly reject the ma sentences in the AJT but process ma and a in a similar way in the CMPT.

L3 beginner groups’ native-like performance on A-not-A questions with a in the AJT indicates that the equivalent SFP of a in Cantonese (i.e., aa3) facilitates the acquisition of this type of sentences, which suggests that transfer is from the typologically closer or structurally more similar language. However, the L3 beginners’ acceptance of the ungrammatical ma sentences and lack of sensitivity to the interaction between A-not-A [+Q] and ma [+Q] indicate that the knowledge of the semantic constraint on Q-operations is not transferred from Cantonese at the initial stages. This implies that only part of, rather than the totality of, the Cantonese grammar is transferred into their L3 Mandarin, which is not in line with the prediction of a wholesale transfer in Rothman’s Typological Primacy Model (Rothman, 2011, 2015). An account will be provided for the findings on the basis of language contact, arguing that the Cantonese SFP maa3 (the counterpart of the Mandarin SFP ma) is a loan word originally from Mandarin, which shares similar phonological and orthographic forms but not all the morpho-syntactic features. At the high proficiency level, L3 groups outperformed their L2 counterpart in the CMPT, which also shows that their knowledge of Cantonese helps their L3 processing of the SFPs. The contrast of L2 results between the AJT and CMPT suggests that for L2 learners who do not have any previous knowledge of SFPs, implicit knowledge of the SFPs comes in after relevant explicit knowledge is acquired.

Intended meaning: “Will XiaoWang go to school tomorrow?”

   XiaoWang tomorrow go-not-go school SFP
   “Will XiaoWang go to school tomorrow?”

**Figure 1.** Mean RTs (in ms) for Type 1 (*A-not-A + ma) and Type 2 (A-not-A + a) in the CMPT

<table>
<thead>
<tr>
<th>Groups</th>
<th>C-E-M Low</th>
<th>E-C-M Low</th>
<th>E-M Low</th>
<th>C-E-M High</th>
<th>E-C-M High</th>
<th>E-M High</th>
<th>NS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 3</td>
<td>3.08</td>
<td>3.13</td>
<td>2.31</td>
<td>2.28</td>
<td>2.70</td>
<td>1.57</td>
<td>1.51</td>
</tr>
<tr>
<td>*A-not-A + ma</td>
<td>(1.06)</td>
<td>(0.95)</td>
<td>(1.17)</td>
<td>(1.21)</td>
<td>(1.19)</td>
<td>(0.96)</td>
<td>(0.74)</td>
</tr>
<tr>
<td></td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>Type 4</td>
<td>3.33</td>
<td>3.01</td>
<td>2.73</td>
<td>3.57</td>
<td>3.26</td>
<td>3.18</td>
<td>3.85</td>
</tr>
<tr>
<td>A-not-A + a</td>
<td>(0.78)</td>
<td>(0.93)</td>
<td>(0.82)</td>
<td>(0.81)</td>
<td>(1.00)</td>
<td>(0.92)</td>
<td>(0.60)</td>
</tr>
</tbody>
</table>

**Note:** Significance levels ** = .01, *** = .001

**Table 1.** Mean scores for Type 1 (*A-not-A + ma) and Type 2 (A-not-A + a) in the AJT

**References:**
From production short-cuts to syntactic development? Analysing the production of fixed expressions with the development of the L2 computational component

Thomas Hammond
The University of Sheffield

Usage-based models of second language acquisition (SLA) posit that general cognitive abilities allow learners to acquire an L2 through the analysis of prototypical and functional formulaic language (FL) derived from their early input (e.g. Ellis, 2012). Generative theories of SLA place less importance on a learner’s early L2 input and usage, and maintain that the implicit abstract L2 computational system is a language-specific mechanism and therefore develops independently of learners’ exposure to or use of prototypical FL (e.g. Krashen and Scarcella 1978). This study combines these traditionally opposed views of L2 development as an alternative way of investigating the impact of prototypical FL on the development of L2 syntax. Specifically, it seeks to examine whether L2ers who produce input-derived prototypical FL frequently at early stages of acquisition have better acquired the computational properties of the FL at later stages of L2 development than those learners who fail to demonstrate early and frequent FL use.

The data used for this analysis are spoken transcripts of Spanish child classroom-learners of L2 English, who participated in naturalistic L2 interview tasks at early ages (10 & 12) and later ages (16 & 17). A learner’s accuracy of an L2 computational property is measured via a learner’s accurate production of an L2 surface form that is assumed to be a product of a given computational property. Accurate L2 surface forms are measured as a relative percentage out of L1, code-switched and inaccurate L2 productions in all contexts where an L2 computational property is required to appear in an L2 surface form. The analysis of four representative beginner EFL textbooks (both global and local) derived 4 functional formulaic phrases that were presented most frequently in the first half of all spoken tasks. These were the four ‘conventional expressions’ (CEs) what’s/is your name, how old are you, where are you from and where do you live. The computational properties assumed behind the derivation of the CEs and the reliable L2 surface structures that evidence the manifestation of these properties are listed in Figure (1) (following Radford 2004).

The analysis of all transcripts shows that all learners produce the CEs over multiple periods of data collection. For all learners, when the CEs are produced for the first time, they are done so fluently in absence of any other surface structure evidence of the CEs’ related computational properties. At these beginner stages, the CEs are analysed as recalls from learners’ phonological memory, rather than products of online generation through computational procedures. Pearson product-moment correlation coefficients show a strong correlation between earlier age of first CE production ($r = -0.590$) and higher frequency of CE productions at the early ages (10 & 12) ($r = -0.577$) with learners’ L2 accuracy of the CEs’ related computational properties in the transcripts of the later ages (16 & 17). Relevant scatterplots can be seen in Figures (2) and (3). An independent-samples t-test also reported a significant difference in L2 computational accuracy for those learners who produced the CEs at early ages ($M = 61.2\%, SD = 24.8\%$) and those who produced them for the first time at the later ages ($M = 22.3\%, SD = 14.2\%$; $t (7) = 2.95, p < 0.05$).

The results suggest that, as well as bootstrapping beginner learners into L2 production, the more frequent and earlier practice of FL can increase the likelihood, or quicker the acquisition of, the FL’s underlying computational procedures (see also Paradis 2004). If the increased and earlier production of FL is dependent on a learner’s general working memory (WM) abilities, this places WM capacity as a general cognitive apparatus that can indirectly impact the development of the L2 language-specific computational mechanism.
Figure 1: Computational properties of CEs and reliable surface structure evidence for their manifestation

<table>
<thead>
<tr>
<th>Reliable Surface Structure Evidence</th>
<th>t-c movement</th>
<th>a-movement</th>
</tr>
</thead>
<tbody>
<tr>
<td>wh-movement</td>
<td>inversion of the subject and (auxiliary) verb</td>
<td>via negation</td>
</tr>
<tr>
<td>wh-words occupying a clause initial position in root interrogatives</td>
<td></td>
<td>via question formation</td>
</tr>
<tr>
<td>relative clauses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>interrogative complement clauses/intercalated relative clauses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>overt subjects with corresponding finite verbal inflection (TNS, NUM, AGR), not including i-save</td>
<td></td>
<td></td>
</tr>
<tr>
<td>overt subjects with modal auxiliary verbs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>overt subjects with dummy auxiliary do/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>overt subjects with wh-movement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>overt subjects with T-C movement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>overt subjects with `infinitival to'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 2: Learners’ earliness of CE production with (mean) L2 accuracy of related computational properties at later ages

Figure 3: Learners’ frequency of CE production at the early ages with (mean) L2 accuracy of related computational properties at later ages

Selected references
Inflectional morphology is known to be a stumbling block for adult second language learners (L2ers) (Slabakova 2008). According to the Morphological Congruency Hypothesis (MCH, Jiang 2007), an incongruent morpheme (one which exists in the learners' L2 but not in their L1) presents a particular challenge: even if learners can succeed with an incongruent morpheme offline, they cannot automatically activate it in a time-pressured task. In contrast, on the Feature Reassembly Hypothesis (FRH, Lardiere 2009), learners can succeed in reassembling features on a novel morpheme; the FRH does not make predictions about offline vs. online performance, but we assume that successful reassembly should lead to target-like performance across task types.

Unlike English, Mandarin plural marking is optional, and allowed only with [+human] nouns (Iljic 1994; Li 1999). Consistent with the MCH, Jiang et al. (2017) found that L1-Mandarin L2ers of English did not detect a mismatch between a singular NP and a plural-object picture online. However, that study did not consider how these L2ers might interpret plural NPs. Our first objective is to examine whether L1-Mandarin L2ers can use the presence vs. absence of plural -s as a cue to NP interpretation; the FRH, but not the MCH, predicts the possibility of success. Our second objective is to examine production of plural marking in L2-English, given that prior studies have focused almost entirely on comprehension or processing (Jiang 2007; Choi & Ionin 2021). Under the FRH, successful reassembly should lead to target performance in production as well as comprehension, barring performance difficulties in production (cf. Prevost & White 2000).

**Methodology**: Participants completed written production and comprehension tasks, counterbalanced for order of presentation and administered via PCIbex (Zehr & Schwarz 2018). In each task, the items were distributed across six lists using a Latin-square design; each list in each task contained 36 target items (6 conditions, 6 items per condition) plus 36 fillers. In the production task, each item consisted of a picture + sentence prompt; participants typed the final (missing) word into a textbox. For the target items, the missing word was always plural, as in (1), paired with Figure1; there were six different prompt types, as in (1a-f), to examine whether L2ers would succeed more after explicitly plural prompts (numerals or quantifiers) than after a neutral cue (the definite article, (1c)). In the comprehension task target items, singular object vs. plural object pictures (Figures2a-b) were each presented with one of the three sentences in (2). The participants selected either TRUE or FALSE as quickly as possible, to indicate whether the sentence matched the picture. Both responses and RTs were recorded. Data collection is ongoing; results have been analyzed for 25 English native speakers (NSs) and 32 L1-Mandarin L2ers; all L2ers were studying in the U.S. and scored as intermediate to advanced on a proficiency test.

**Production results** (Table1). Both groups had very high accuracy, though L2ers supplied plural -s less after the than after numeral or quantifier prompts. Comprehension results (Fig. 3-6). Both groups were near-ceiling with matching picture-sentence pairs, and with several (2c). L2ers were much more accepting than NSs of number mismatches with both singulars ((2a)-Fig.2b) and plurals ((2b)-Fig.2a), but still distinguished between matches and mismatches. Both groups had significant PictureXForm interactions for response type (Table2), but there were no significant effects for RTs. In sum, while L2ers overrelied on lexical cues to plurality such as several, they did exhibit sensitivity to presence vs. absence of -s in comprehension, and successfully supplied -s in production; at least for high-proficiency learners, a new morpheme can be integrated into the grammar, consistent with FRH. The RT data are inconclusive at present. There are trends in the data for greater slowdowns with definite singulars with plural pictures, and definite plurals with singular pictures, for FALSE more than for TRUE responses, suggesting that participants slow down when detecting a number mismatch.
(1) Production task items: prompts for the picture in Figure 1 [target: pumpkins]:
   - The bat is above [one of the continuations in (a) through (f) below]
     a. several...
     b. three...
     c. the orange...
     d. several of the...
     e. three of the...
     f. some of the...

(2) Sentences presented with Figures 2a-b:
   - a. defsg: The cat is below the butterfly. TRUE with Figure2a, odd/false with Figure2b
   - b. defpl: The cat is below the butterflies. odd/false with Figure2a, TRUE with Figure2b
   - c. several: The cat is below several butterflies. FALSE with Fig.2a, TRUE with Fig.2b

Fig.1: production picture   Figs. 2a (left) & 2b (right): Table 1: Production task results
   singular vs. plural comprehension pictures %correct plural suppliance

<table>
<thead>
<tr>
<th>prompts (see (1))</th>
<th>NSs</th>
<th>L2ers</th>
</tr>
</thead>
<tbody>
<tr>
<td>several</td>
<td>100%</td>
<td>96%</td>
</tr>
<tr>
<td>NUMERAL</td>
<td>100%</td>
<td>96%</td>
</tr>
<tr>
<td>the ADJ</td>
<td>96%</td>
<td>86%</td>
</tr>
<tr>
<td>several of the</td>
<td>99%</td>
<td>94%</td>
</tr>
<tr>
<td>NUMERAL of the</td>
<td>100%</td>
<td>93%</td>
</tr>
<tr>
<td>some of the</td>
<td>100%</td>
<td>93%</td>
</tr>
</tbody>
</table>

There isn’t difficulty with the meaning of existential constructions in L2-English

Tania Ionin1 & Chung-yu Chen2

University of Illinois at Urbana-Champaign1 and National Chengchi University2

L2-English learners from article-less L1s have difficulty with English articles (e.g., Robertson 2000, Ionin et al. 2004, Trenkic 2008), yet can acquire syntactic reflexes of articles. The existential there-construction allows a (and weak quantifiers/numerals) but disallows the (and strong quantifiers), in both affirmative (1a) and negative (1b) variants (Milsark 1977). L2-English learners from article-less L1s (Chinese - King et al. 2006, Drury et al. 2009; Turkish and Russian - White et al. 2012) are found to be target-like on the definiteness restriction on existentials despite L1/L2 differences.

We take this one step further, and ask whether learners are sensitive to the relationship between type of indefinite and its ability to occur in there-constructions vs. in subject position of copular sentences (2-3). When the context clearly establishes existential interpretation (no specific cats are presupposed to exist, so the sentence either asserts (2) or denies (3) existence of a cat), there-constructions are preferred to copular sentences, and a is preferred to one, especially with negation: one implies that quantity is relevant, as opposed to existence alone.

The Mandarin Chinese existential you-construction is also subject to definiteness restrictions (Huang 1987, Li 1996). Mandarin has no a/one distinction: yi ‘one’ is freely used in affirmative existentials (4a), but is marginal in negative existentials (4b), where a bare noun is preferred. L1-Mandarin L2-English learners need to learn that a, unlike one, is freely allowed in both affirmative and negative existentials.

We tested 21 English NSs and 40 L1-Mandarin L2-English learners of intermediate-to-advanced proficiency via an acceptability judgment task that presented contexts like (2)-(3), six tokens per context, each followed by six different target sentences: there-sentences and copular sentences, each with a/one/one of the as the target indefinite, see (2a-b,3a-b); the partitive one of the was included as a control, since it’s not good in existentials in either Mandarin or English. Participants rated each sentence on a 1-to-5 scale. The test included control items with a presuppositional meaning of the indefinite (which makes partitives felicitous), and unrelated fillers.

The results, in Figures 1-2, show very similar patterns in the two groups, which were further confirmed by statistical analyses (mixed effects models for ordinal data). Both groups rated a above one and above partitives, with especially large differences in negative contexts. Both groups rated there-constructions above copular constructions, for a in both contexts, and for one in negative contexts only.

We see that learners can acquire fine-grained differences between existential and copular constructions, and between indefinite types. While some of the success is traceable to L1-transfer, performance on a vs. one is not. Despite lack of indefinite articles in Mandarin, learners correctly assign to a the semantics of an existential non-numeral determiner: unlike one, a is not used to indicate quantity, but solely to assert existence. The native-like judgments of a vs. one suggest that learners have a representation of a in their grammars, and that article omission in this population (e.g., Robertson 2000) is a performance and not a competence problem (cf. Prevost & White 2000).

(1) a. There is a/#the student at the door.
b. There isn’t a/#the student at the door.
(2) Affirmative existential context: Mary heard meowing outside, and went to explore what was happening. She looked in the garden, and then told her husband:
   a. There is a cat/?one cat/#one of the cats in the garden. [there-sentence]
b. A cat/?one cat/?one of the cats is in the garden. [copular sentence]
(3) Negative existential context: Mary heard meowing outside, and went to explore. But when she checked the garden, she didn’t see anything, so she told her husband:
a. There isn't a cat/#one cat/#one of the cats in the garden. 
   [there-sentence]

b. ?A cat/#one cat/#one of the cats isn't in the garden.
   [copular sentence]

(4) a. Huáyuán lǐ yǒu yī-zhī māo.
   garden inside have one-CL cat

b. ?Huáyuán lǐ méi yǒu yī-zhī māo.
   garden inside NEG have one-CL cat

Figure 1. Affirmative existential contexts (mean ratings on a 1-to-5 scale)
Figure 1a: NS results  Figure 1b: L2er results

Figure 2. Negative existential contexts (mean ratings on a 1-to-5 scale)
Figure 2a: NS results  Figure 2b: L2er results

subject = indefinite in subject position (2a,3a); there = indefinite in there-construction (2b,3b)
X-axis: form of the indefinite, with a, one, or part=partitive (one of the)

Aspectual backgrounding facilitates Condition C violation in L1 and L2 comprehension
Ioannis Iliopoulos & Claudia Felser
University of Potsdam, Potsdam Research Institute for Multilingualism

Binding Condition C prohibits coreference between a referential expression and a pronoun that c-commands it (Chomsky, 1981). L1 and L2 speakers have demonstrated comparable sensitivity to this constraint in previous research on cataphoric pronoun resolution (Drummer & Felser, 2018). Condition C has been shown to be violable, however. Aspectual backgrounding as in (1b), for example, increases the likelihood of a c-commanding pronoun being interpreted as coreferential with a referential expression (here, the proper name Billy) relative to (1a) (Harris & Bates, 2002).

(1) a. He threatened to leave when Billy noticed that the computer had died.
b. He was threatening to leave when Billy noticed that the computer had died.

Note that for backgrounding to affect pronoun interpretation, comprehenders must be able to integrate grammatical and non-grammatical information, computing a discourse-pragmatic representation that reflects a grammatical cue's backgrounding function. L2 speakers have been hypothesized to have difficulty integrating grammatical and discourse-level information (e.g. Sorace, 2011). Here we examine whether aspectual backgrounding affects bilingual speakers' interpretation of cataphoric pronouns in the same way in their L1 (German) and the L2 (English). We created one questionnaire for each language with twenty experimental (+/− backgrounding) item pairs, with either progressive aspect or past perfect used as backgrounding devices (Table 1), plus 40 filler items. Note that unlike in English, progressive aspect is not grammaticalized in German but can be signaled explicitly by the am+infinitive 'pseudoprogressive' construction.

61 L1 German/L2 English speakers (mean age: 24.8, SD: 7.5) with similar self-reported proficiency level and acquisition histories completed two antecedent evaluation questionnaires, one in English and one in German. Participants were asked to decide for each stimulus sentence whether the pronoun it contained could possibly refer to the proper name mentioned in the sentence (e.g. "Can she refer to Cindy?"). The German-speaking participants' knowledge of English aspectual distinctions was confirmed using a multiple-choice cloze test. We also administered the English version of the questionnaire to a comparison group of 61 L1 English speakers (mean age: 38.1 years, SD: 13.9) with no knowledge of German.

We analysed our data in R using the glmer()-function of the lme4-package, constructing two separate models for each backgrounding type. In our L1 English group, both kinds of aspectual backgrounding led to a significant increase in coreference readings (Table 2). The same pattern was observed in our L1 German data: Both progressive aspect and past perfect significantly increased the possibility of coreference (ps<.05). For the bilingual speakers we found a significant interaction of language and condition (p=.007). In L2 English, only the use of past perfect forms increased the possibility of coreference (p<.001) whilst progressive aspect did not (p=.6).

Our results show that the two backgrounding devices under investigation affect cataphoric pronoun interpretation similarly in L1 English and L1 German, and that Condition C is easily violable. The German speakers’ performance in L2 English mirrored neither their L1 performance nor the performance of our L1 English comparison group, however. While backgrounding via past perfect affected our German-speaking participants similarly in both languages, showing that discourse-level information affects both L1 and L2 comprehension, progressive marking only affected pronoun interpretation in their L1. This suggests that even if a grammatical distinction such as [+− progressive] has been acquired, L2 comprehenders are not necessarily sensitive to its impact on other aspects of sentence interpretation (compare also Roberts & Liszka, 2019). We suggest that the observed L1/L2 difference results from differences in the degree to which progressive aspect is grammaticalized in the two languages under investigation.
Table 1. Example stimuli, backgrounding conditions (ENG = English, GER = German)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Language</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>+/ past perfect</td>
<td>ENG</td>
<td>She had already climbed up / climbed up the tree when Cindy saw a giant squirrel.</td>
</tr>
<tr>
<td></td>
<td>GER</td>
<td>Er hatte schon lange am See geangelt / hat am See geangelt, als Georg sein Handy kontrollierte.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'He had been fishing at the lake for a long time / fished at the lake when Georg checked his mobile phone.'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>She was filling / filled a glass with wine when Amanda heard a loud noise in the back yard.</td>
</tr>
<tr>
<td></td>
<td>GER</td>
<td>Sie war gerade am Bügeln / bügelte, als Tina einen unerwarteten Anruf bekam.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'She was busy ironing/ironed when Tina received an unexpected phone call.'</td>
</tr>
<tr>
<td>+/-progressive</td>
<td>ENG</td>
<td>She was filling / filled a glass with wine when Amanda heard a loud noise in the back yard.</td>
</tr>
<tr>
<td></td>
<td>GER</td>
<td>Sie war gerade am Bügeln / bügelte, als Tina einen unerwarteten Anruf bekam.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>'She was busy ironing/ironed when Tina received an unexpected phone call.'</td>
</tr>
</tbody>
</table>

Table 2. Mean proportions of accepted coreference (Condition C violations) per language/group and condition

<table>
<thead>
<tr>
<th>Backgrounding</th>
<th>Condition</th>
<th>Language</th>
<th>Coreference</th>
</tr>
</thead>
<tbody>
<tr>
<td>+backgrounding</td>
<td>+past perfect</td>
<td>L1ENG</td>
<td>0.62</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L1GER</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L2ENG</td>
<td>0.72</td>
</tr>
<tr>
<td></td>
<td>+progressive</td>
<td>L1ENG</td>
<td>0.62</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L1GER</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L2ENG</td>
<td>0.71</td>
</tr>
<tr>
<td>-backgrounding</td>
<td>-past perfect</td>
<td>L1ENG</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L1GER</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L2ENG</td>
<td>0.53</td>
</tr>
<tr>
<td></td>
<td>-progressive</td>
<td>L1ENG</td>
<td>0.29</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L1GER</td>
<td>0.59</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L2ENG</td>
<td>0.70</td>
</tr>
</tbody>
</table>

References
Exploring the effect of linguistic similarity in third language acquisition

Isabel Nadine Jensen¹ and Marit Westergaard¹²
UiT the Arctic University of Norway¹ & the Norwegian University of Science and Technology²

We present an artificial language learning experiment that contributes to novel insight about the relative influence of linguistic similarity between pre-existing grammars and a third language (L3). Using an artificial language allows us to explore the very beginning of the acquisition process and to have full control over the stimuli. We isolated the effect of crosslinguistic influence from learning by testing a property that the learners had not been exposed to in the L3. Our participants were Norwegian–English sequential bilinguals (N = 120). They were randomly assigned to one of four different L3s (Inputs A–D). Importantly, the L3s differed in terms of morphosyntactic and lexical similarities to Norwegian and English, as follows:

Input A: Norwegian-based lexicon and neutral morphosyntax.
Input B: English-based lexicon and neutral morphosyntax.
Input C: Norwegian-based lexicon and English-based morphosyntax.
Input D: English-based lexicon and Norwegian-based morphosyntax.

The neutral morphosyntax in Inputs A/B refers to Subject-Verb-Object (SVO) word order (example 1), which is found in both Norwegian and English. Crucially, this cue does not contribute to the establishment of one of the previously acquired languages as more similar to the L3 than the other. In Input C, we also exposed the participants to do-support (example 2)—a feature that exists in English, but not in Norwegian. This means that the learners of input C were exposed to incongruent morphosyntactic and lexical cues, with the morphosyntax being more similar to English and the lexicon to Norwegian. In input D, the additional morphosyntactic cue to SVO word order was post-nominal possessives (example 3). Norwegian accepts both pre- and post-nominal possessives, but English only accepts pre-nominal possessives, i.e., there was a morphosyntactic mismatch between the L3 and English. Again, this shows incongruency between the lexical and morphosyntactic cues, as the former was based on English and the latter on Norwegian.

After exposure to the artificial L3, we collected forced-choice acceptability judgements of non-subject-initial declarative clauses that varied in verb placement (example 4). The word order in (4a) is shared with Norwegian and the word order in (4b) with English. Examining the participants’ acceptability judgements should reveal the preferred source of crosslinguistic influence and cannot be a result of learning. There were 18 sentence pairs in total: 12 fillers and six non-subject-initial declaratives.

The participants’ choices are shown in Figure 1. We fitted a binomial mixed-effects model to the data and found a significant main effect of lexical cues and an interaction between lexical cues and incongruency (Figures 2 and 3, respectively). This suggests that bilinguals are sensitive to these cues in the input after minimal exposure to the target language. The effect of lexical similarity was particularly strong. This may be attributed to the early access to information about (pseudo)cognates and similar sounds in a new language. The results support similarity-driven models of L3 acquisition that argue for linguistic similarity between the L3 input and pre-existing grammars as the main driving force behind crosslinguistic influence.
I eat oranges on Tuesdays.’

‘I do not like grapes.’

‘My name is Manene.’

On Monday I eat apples

Figure 1: Proportions of V2/V3 selections by lexical cues and congruency. The numbers within the figure show how many times V2 and V3 were selected.

Figures 2 and 3: Probability of V2 word order selections by lexical cues and congruency as predicted by the mixed-effects model.
Heritage language maintenance and development depend on family language policy, language dominance, frequency of use, linguistic distance and similarity between the minority and the majority languages or (dia)lects of the society (Montrul, 2016; Polinsky, 2015, 2018; Kupisch and Rothman, 2018), multi-directionality of cross-linguistic influence and accommodation (Rothman et al., 2019).

The present study investigates narrative skills of Russian heritage children in Cyprus, with the focus on macro-structure (story structure, structural complexity and internal states terms), micro-structure and grammaticality, i.e. the extent to which utterances follow the grammatical rules of a language. Grammaticality in narrative tasks can predict language development (Restrepo, 1998; Bedore et al., 2010). Narratives can measure cognitive, linguistic and social skills of bilingual and multilingual children in a less biased way than standardized assessments of language (Botting, 2002; Fiestas and Peña, 2004; Cleave et al., 2010; Thordardottir, 2011; Terry et al., 2013).

Narratives can help to identify linguistic, cognitive, semantic and social abilities, communicative competence and cultural awareness of a child (Schneider and Hayward, 2002; Leonard, 1998; McCabe, 1992; Liles, 1993; Hughes et al., 1997; Botting, 2002; Paradis et al., 2010). Narrative skills are essential for children’s success at school (Bishop and Edmundson, 1987; Bliss et al., 1998; McCabe, 1996; McCabe and Rollins, 1994; Westby, 1991). There is a relationship between oral language (experience with and exposure to discourse) and literacy (Westby, 2005; Snow, 2002). Cultural communities, language environment, home language use, parental attitudes towards bilingual and bi-cultural learning, the level of language proficiency are some of the factors that can affect the development of narrative abilities (Fiestas, 2004; Jia et al., 2011).

The participants of the study were 40 Russian–Cypriot Greek (CG) simultaneous bilingual children. Their age ranges from 4:0 to 6:0 (mean 5:2), and they attend kindergarten and primary CG schools, where the language of instruction is Greek. The LITMUS-MAIN, the multilingual assessment instrument for narratives (Gagarina et al., 2012, 2015) was used for data collection. Their language proficiency in Russian was measured by the Russian Proficiency Test for Multilingual Children (RPTMC) (Gagarina et al., 2010). Background information was collected using parental questionnaires and interviews. The narratives were recorded, transcribed and analyzed in terms of macro and micro-structure and grammaticality. Grammaticality percentages were calculated for each child.

The analysis of the data showed that Russian heritage children had errors in aspect and tense, case, gender and in subject-verb agreement. Some code-switching errors were revealed in the data as well as innovation forms of words (nouns and verbs). There was a deviant production in terms of words order, lexical stress, prepositions and prefixes. Overall, it was found that grammaticality is affected by the quantity and quality of input the child receives in the weaker (heritage) language, parents’ level of education and their willingness to use, maintain and transmit Russian to their children and to develop their literacy in L1 Russian. There is also a correlation between macro-, micro-structure and grammaticality.
Selection and Reassembly of an Uninterpretable Feature in
L2 Acquisition of Wh-questions
Takayuki Kimura1,2 & Shigenori Wakabayashi2
1 The University of Tokyo, 2 Chuo University

Introduction: It has been actively debated in the field on whether Selection and Reassembly of uninterpretable features (uFs) are possible or not (e.g., Tsimpli, 2003; Hawkins & Hattori, 2006; Lardiere, 2008, 2009). Focusing on wh-questions, this study explores whether L2ers can overcome problems with Feature Selection and Feature Reassembly.

Theoretical Background: In English, wh-phrases have a [uOp:] feature, which drives wh-movement. Wh-movement is sensitive to the strong/weak distinction of islands (see (1) and (2)), and the scope of a wh-phrase corresponds to its syntactic position (i.e., matrix CP), as in (3). In Japanese, it is Q-head that has the feature and moves to CP (Hagstrom, 1998; Cable, 2010). Wh-phrases are NPs that lack the feature and stay in-situ. Q-head movement is sensitive only to the embedded question island (cf. (1b) for the English counterpart). Moreover, Japanese can move wh-phrases via scrambling, where only strong islands are active, and the scope of a wh-phrase (matrix CP) can diverge from its syntactic position (embedded CP) (split scope, see (4) for the English counterpart). Thus, a configuration such as (4) can yield the wh-interrogative interpretation in Japanese. In contrast to these languages, Chinese entirely lacks movement due to the lack of the [uOp:] feature (Tsai, 1999). In Chinese, wh-phrases can be fronted via topicalization, which is sensitive to the strong/weak distinction of islands and split scope is permitted, just like wh-scrambling in Japanese. See Table 1 for summary of patterns. Thus, Japanese learners of English (JLEs) must overcome a problem with Feature Reassembly, and Chinese learners of English (CLEs) must overcome a problem with Feature Selection.

Experiments: We conducted an acceptability judgment task (AJT) an elicited production task (EPT) with 28 CLEs (14 intermediate and 14 advanced) and 29 JLEs (18 intermediate and 11 advanced), as well as 28 native speakers of English (NSEs). In the AJT, participants judged the acceptability for wh-questions with strong or weak island violations such as (1) and (2) (6 tokens*4 types) with corresponding grammatical Yes/No-Q types (6 tokens*4 types) and 24 fillers (72 items in total*2 lists). In the EPT, wh-scope was examined through elicitation of production of sentences such as (3) (6 target items with 22 fillers*2 lists).

Results and Discussion: Results shown in Table 2 and Figure 1 suggest that intermediate JLEs and CLEs transfer operations from their L1 syntax, namely, scrambling and topicalization, respectively (compare Table 1 (b), (c) and Figures (b), (d), and Table 2, respectively). In contrast, as advanced learners, both JLE and CLE groups showed much more target-like patterns in both tasks, suggesting that Feature Selection and Feature Reassembly are both possible in L2 acquisition, consistent with Lardiere (2008, 2009). Based on the results, we will further discuss how the uF was acquired with special reference to the role of Universal Grammar in the process of the acquisition of uFs.

Examples
(1) Weak Islands
   a. ??What do you believe [the claim that Bill saw t]?
   noun complement (NC)
   b. ??What do you wonder [whether Mary bought t]?
   embedded question (EQ)
(2) Strong Islands
   a. *What did you meet [the man who stole t]
   relative clause (RC)
   b. *What did you get angry [because Tom ate t]?
   adjunct (ADJ)
(3) *Who do you think [that Mr. Blue hates t]?*

matrix scope/wh-question

(4) *Do you think [who Mr. Blue hates t]?*

*split scope* (intended as (3))

Table 1. Patterns of behavior by operations

<table>
<thead>
<tr>
<th></th>
<th>NC</th>
<th>EQ</th>
<th>RC</th>
<th>ADJ</th>
<th><em>split scope</em></th>
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<tbody>
<tr>
<td>(a) wh-movement</td>
<td>??</td>
<td>??</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>(English pattern)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) wh-scrambling+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q-head movement</td>
<td>✓</td>
<td>*</td>
<td>*</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>(Japanese pattern)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) wh-topicalization</td>
<td>??</td>
<td>??</td>
<td>*</td>
<td>*</td>
<td>✓</td>
</tr>
<tr>
<td>(Chinese pattern)</td>
<td></td>
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</table>

Table 2. EPT results

<table>
<thead>
<tr>
<th></th>
<th>NSEs</th>
<th>CLEs (L)</th>
<th>CLEs (U)</th>
<th>JLEs (L)</th>
<th>JLEs (U)</th>
</tr>
</thead>
<tbody>
<tr>
<td>target-like (3)</td>
<td>95%</td>
<td>47%</td>
<td>71%</td>
<td>44%</td>
<td>86%</td>
</tr>
<tr>
<td><em>split scope</em> (4)</td>
<td>0%</td>
<td>14%</td>
<td>0%</td>
<td>24%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Heritage Language and Child Second Language Development in Refugee Contexts: An empirical study on Syrian Arabic and German

Nadine Kolb
UIT The Arctic University of Norway

In this ongoing study, we examine heritage language (HL) and child second language (cL2) development in the European refugee context. When examined as adults, HL bilinguals tend to show significant differences in their HL performance and competence from typical monolingual peers, and from one another (e.g., Rothman 2009, Rothman & Treffers-Daller 2014). Given the lack of studies, not enough is known about HL development in childhood and adolescence (e.g., Meisel 2011, Montrul 2012, Kupisch and Rothman 2016). Moreover, little is known about the role of continued development of the HL on the majority L2 in this same age range (e.g., Tsimpli 2014), and even less is known about HL continued development in refugee contexts.

This empirical study investigates linguistic and extra-linguistic variables affecting the development of HL Syrian Arabic and cL2 German in Germany with the goal of impacting education policy development.

The primary research objective is to understand the extent to which increased/reduced HL exposure leads to HL maintenance and its impact on the path of cL2 development. We investigate the following research questions:

RQ1. To what extent do experiential variables and HL support affect HL trajectories and outcomes?

RQ2. To what extent does HL support affect cL2 development?

We test the following hypotheses: (i) there is an inverse relationship between cL2 growth and continued growth in the HL (the sharper the growth of German – and shift in dominance – the steeper the decline in Syrian Arabic) (ii) the general trend in (i) can be attenuated by increased exposure, use and support for the HL, and (iii) heritage speakers who receive formal training in their HL will have a sharper growth trajectory, not only in the HL but also in the L2.

Data collection is still ongoing. Two groups of 6-to 12-year-old children (n=60) are included in this study. The two groups are Syrian Arabic heritage speakers with and without HL literacy. The division between children who do and do not receive education in the HL allows us to understand if support for the HL outside the home has, among other variables, an impact on the developmental trajectories of both HL and L2.

We investigate grammatical gender as it has been shown to be a vulnerable domain for heritage speakers, i.e., a decrease of target-likeness in the HL and/or protracting delays or lingering difficulties with gender marking in the L2. The following three experiments are used: Peabody Picture Vocabulary Test for density of vocabulary, an eye-tracking experiment on grammatical gender to test comprehension and subsequent use of gender for predictive processing, and the Quantifying Bilingual Experience Questionnaire (Q-BEx) (DeCat et al. 2021) to collect information on experiential variables pertaining to Syrian Arabic and German exposure/use which are used as regressors in our modelling of the results.

For Europe, supporting refugee youth can have significant impact towards the goal of integrating this population into their newly adopted countries. Our hypothesis is that support for continued development in the HL will improve L2 development with knock-on effects for the academic achievement of refugees.
References:
This longitudinal study investigates early stages of third language acquisition (L3A). At present, most L3A research focuses on cross-linguistic influence (CLI), i.e., whether properties are transferred based on linguistic proximity (e.g., Westergaard et al. 2017), typological primacy (e.g., Rothman 2015) or further factors. In our study, while also investigating CLI at initial stages, we focus on L3 development. Our research questions are (i) whether morphosyntactic properties are transferred wholesale or property-by-property, (ii) which factors lead to CLI at an early stage, and (iii) which factors determine CLI in L3 development. The L3 German learners (N=45) who participated after 28, 94 and 146 German lessons at school are 15-17-year-old L1 Norwegian speakers with high proficiency in L2 English. Furthermore, we are currently collecting data from L2 German learners who are matched based on age at testing, length of exposure, and proficiency in German. We compare L3 German to L2 German learners, which allows us to assess whether CLI obtains from one language or both. The L2 German comparison group is restricted to native speakers of English because native speakers of Norwegian typically acquire L2 English before acquiring German and are thus not L2 but L3 learners. We conducted an acceptability judgment task (AJT) with five conditions, two of which are structurally similar to Norwegian (adverb placement in subject-initial declaratives, V2 in non-subject initial declaratives), one to English (obligatory articles in generic contexts that allow article omission in Norwegian), one to both English and Norwegian (prenominal placement of possessive determiners, while postnominal placement is also possible in Norwegian), and one to none of the two languages (object-verb word order) (see Figure 1). We included six ungrammatical and six grammatical items per condition. A mini-AJT with the five conditions was conducted in L2 English.

In L3 German, we found a significant main effect of test time, grammaticality and condition (see Figure 2). At early stages, we found a high degree of individual variation. The early-stage data suggests that CLI occurs property-by-property and that structural similarity is a determining factor rather than lexical similarity, order of acquisition or language dominance. Accuracy is increasing significantly over time for three conditions: Possessive condition with facilitation from L1 AND L2, object-verb condition with non-facilitation from L1 AND L2, adverb condition with non-facilitation from the L2 and facilitation from the L1.

The conditions vary with regards to frequency, complexity and markedness. The increase in the object-verb condition can be explained by learning and overcoming non-facilitation from both languages due to high frequency and salience of this word order. For the possessive condition, non-facilitation from L1 Norwegian is overcome early as there is also facilitation from Norwegian (and English). For the adverb placement condition, non-facilitation from L2 English is overcome early as it may have been weakly acquired in L2 English (mean accuracy: V-Adv: 88.8%, X-V-S: 92.4%, DetN: 97.1%, PossN: 97.8%, OV: 96.4%), which is in line with Westergaard (2003), who found that this word order is acquired late in L2 English by L1 Norwegian speakers.
References

<table>
<thead>
<tr>
<th>Condition</th>
<th>Norwegian</th>
<th>English</th>
<th>German</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverb Placement</td>
<td>V-Adv (-V2)</td>
<td>Adv-V (+V2)</td>
<td>V-Adv (-V2)</td>
</tr>
<tr>
<td></td>
<td>Lisa tegner aldri bilder</td>
<td>Lisa never draws pictures.</td>
<td>Lisa malt nie Bilder.</td>
</tr>
<tr>
<td>Non-subject-initial Declaratives</td>
<td>XVS (+V2)</td>
<td>XSV (-V2)</td>
<td>XVS (+V2)</td>
</tr>
<tr>
<td>Det. Use In Generic Contexts</td>
<td>Det N</td>
<td>Det N</td>
<td>Det N</td>
</tr>
<tr>
<td></td>
<td>Jeg har hus.</td>
<td>I have a house.</td>
<td>Ich habe ein Haus.</td>
</tr>
<tr>
<td>Possessive Det. Placement</td>
<td>Post- and prenominal</td>
<td>Prenominal</td>
<td>Prenominal</td>
</tr>
<tr>
<td></td>
<td>Glasset mitt er grønt.</td>
<td>My glass is green.</td>
<td>Mein Glas ist grün.</td>
</tr>
<tr>
<td>Object-Verb (OV)</td>
<td>VO</td>
<td>VO</td>
<td>OV</td>
</tr>
<tr>
<td></td>
<td>Marie har bakt brodet.</td>
<td>Mary (has) baked the bread.</td>
<td>Marie hat das Brot gebakten.</td>
</tr>
</tbody>
</table>

**Figure 1:** Overview of the 5 conditions

**Figure 2:** L3 German - Overall means by test time and grammaticality
Languages vary when extracting determiner phrases (DPs) from prepositional phrases (PPs) (Law, 2006; Salles, 1995), known as preposition stranding or p-stranding. English allows it (1), but in Spanish the preposition is traditionally pied-piped with the DP (2). Law (2006) argues that the (un)availability is “related to the independent grammatical property of [the determiner] incorporating into [the preposition]” (p. 633), or D-to-P incorporation. Languages like Spanish are subject to a syntax-morphology-interface condition where “elements that undergo suppletive rules must form a syntactic unit X0” (Law, 2006, p. 647), which ends up preventing the extraction of a DP from a PP. For heritage speakers (HSs) of Spanish this incorporation is not always present, and the language of the preposition dictates whether p-stranding is available or both monolingually and in intrasentential code-switching (CS) (3-4) (Koronkiewicz, 2021). Simultaneous HSs are more likely than sequential HSs to accept Spanish p-stranding (via English-like non-incorporation), while English prepositions can be stranded monolingually or in CS for both groups. What is unclear is how second language (L2) bilingual grammars accommodate p-stranding in mixed utterances. As such, this study investigates the p-stranding of L1-English L2-Spanish bilinguals in four language conditions: Spanish, English, Spanish-to-English CS, and English-to-Spanish CS.

Adopting a generative approach to CS (Grimstad et al., 2018; MacSwan, 1999), the current study assumes constraints are due to the interaction of the two grammars in question, specifically when there is a mismatching of features. If p-stranding is not syntactically parallel in monolingual Spanish and English for L2 bilinguals (i.e., like sequential HSs), it should only be accepted with Spanish-to-English switches (i.e., a Spanish verb with an English preposition). Or, if the L2 bilinguals have not acquired Spanish D-to-P incorporation, they should accept p-stranding across the board (i.e., like simultaneous HSs).

Participants completed a written acceptability judgment task with a 7-point Likert scale. The task included CS stimuli (n=16) with p-stranding, with comparison monolingual equivalents for Spanish (n=8) and English (n=8) in subsequent blocks. The individuals were all US L1-English L2-Spanish speakers who started learning Spanish at adolescence (M=12.03), divided into three proficiency groups (Montrol & Slabakova, 2003): advanced (n=21), intermediate (n=23), and low (n=18). HSs of Spanish served as a comparison, including simultaneous HSs (n=13) and sequential HSs (n=11).

As shown in Figure 1, all groups exhibit the crosslinguistic asymmetry, but the simultaneous HSs are most accepting of p-stranding in Spanish (as expected), suggesting that they do not have Spanish D-to-P incorporation. The advanced L2 bilinguals pattern identically with the sequential HSs, suggesting both groups have D-to-P incorporation in Spanish, as the language of the preposition dictates the availability of p-stranding in monolingual and switched sentences. There is no difference between the intermediate and low L2 bilinguals, and their ratings to not mirror either of the HS groups. Rather, they diverge in that they are much less likely to reject p-stranding in English-to-Spanish switches, even though they show a restriction against it in Spanish alone. This suggests that although they may have acquired D-to-P incorporation in Spanish, that knowledge has not been fully extended to language mixing. A two-way ANOVA was conducted to investigate the effect of bilingual type and language(s) on z-score, and an interaction was found, $F(12,1339)=2.791$, $p<.001$. Importantly, post hoc analysis confirmed that there were no differences between the advanced L2 group and simultaneous HSs ($p>.05$), nor between the intermediate and low L2 groups ($p>.05$).

This study presents data that L1-English L2-Spanish bilinguals behave like sequential HS with regard to p-stranding, likely due to both groups having avoided crosslinguistic influence during the formative years, unlike simultaneous HSs whose Spanish grammar shows English influence. Crucially,
the finding is mitigated by proficiency, as L2 bilinguals at intermediate/low levels have only solidified D-to-P incorporation in monolingual Spanish, but not in language mixing.

(1) Zoey doesn’t know what classmate Josh is studying with.

(2) a. *? Francisca no sabe qué compañero de clase Octavio está estudiando con. ‘Francisca doesn’t know what classmate Octavio is studying with.’
   b. Francisca no sabe con qué compañero de clase Octavio está estudiando. ‘Francisca doesn’t know with which classmate Octavio is studying.’

(3) *Francisca no sabe qué compañero de clase Josh is studying with. ‘Francisca doesn’t know what classmate Josh is studying with.’

(4) Zoey doesn’t know what classmate Octavio está estudiando con. ‘Zoey doesn’t know what classmate Octavio is studying with.’

Figure 1. Average z-score by bilingual group and language condition

<table>
<thead>
<tr>
<th>Z-score</th>
<th>Advance L2 Spanish</th>
<th>Intermediate L2 Spanish</th>
<th>Low L2 Spanish</th>
<th>Sequential Heritage</th>
<th>Simultaneous Heritage</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG</td>
<td>0.192</td>
<td>0.459</td>
<td>0.454</td>
<td>0.387</td>
<td>0.372</td>
</tr>
<tr>
<td>SPAN</td>
<td>-1.021</td>
<td>-0.639</td>
<td>-0.739</td>
<td>-1.200</td>
<td>-0.415</td>
</tr>
<tr>
<td>CS EN-to-SP</td>
<td>-0.686</td>
<td>-0.057</td>
<td>0.049</td>
<td>-0.784</td>
<td>-0.326</td>
</tr>
<tr>
<td>CS SP-to-EN</td>
<td>0.229</td>
<td>0.399</td>
<td>0.420</td>
<td>0.273</td>
<td>0.243</td>
</tr>
</tbody>
</table>

References
Online subject pronoun comprehension in L2 Italian: Evidence from Croatian speakers

Tiha Krasa and Paola Medved

1University of Rijeka, 2Social Welfare Centre Gospić

It is controversial whether adult L2 learners below native-like proficiency levels are capable of target-like processing of L2 grammar. In this self-paced reading study, we explore whether highly proficient adult L2 learners whose L1 is Croatian converge with native speakers in their online comprehension of null and overt subject pronouns in Italian. We base our predictions on the Position of Antecedent Strategy (PAS), according to which the null pronoun is biased towards the subject antecedent and the overt pronoun towards a non-subject antecedent in intra-sentential contexts in Italian (Carminati, 2002). Croatian null and overt subject pronouns seem to exhibit the same antecedent biases as the Italian ones (Kraš, 2008).

Two groups of native speakers (n=48) and L2 learners (n=44) took part in two experiments in which they read 36 complex bi-clausal sentences with null or overt pronouns in the subordinate clause introduced by the adverbial quando (‘when’). The pronoun matched either the subject or the object of the main clause, depending on its gender. In one experiment the subordinate clause preceded the main clause giving rise to backward anaphora (e.g. Quando lei/lui/Ø è entrata/o in ufficio dopo pranzo, Adriana ha salutato Roberto con un grande sorriso, ‘When she/he/Ø entered[fem/masc] the office after lunch, Adriana greeted Roberto with a big smile’) and in the other it followed the main clause giving rise to forward anaphora (e.g. Roberto/Adriana ha salutato Adriana/Roberto con un grande sorriso quando lui/Ø è entrato in ufficio dopo pranzo, ‘Roberto/Adriana greeted Adriana/Roberto with a big smile when he/null entered the office after lunch’). All sentences were followed by a comprehension question that targeted the pronoun antecedent. Additional 84 sentences were included as fillers.

In both experiments, L2 learners converged with native speakers in their online (and offline) comprehension of the pronouns. More precisely, both groups of speakers had a subject preference for the null pronoun and an object preference for the overt pronoun in backward anaphora, as predicted by the PAS. In forward anaphora, they had an object preference for the overt pronoun (in line with the PAS) and no detectable antecedent preference for the null pronoun (not in line with the PAS, but in line with the results of some previous offline studies). We compare these results with our previous closely related work with English-specking L2 learners of Italian (whose L1 has only overt pronouns), who linked subject pronouns to the linearly closest antecedent in both types of anaphora; the native speakers showed antecedent preferences consistent with the PAS (Kraš, Sturt, Sorace, 2014, 2015). Based on this, we conclude that L2 learners are capable of target-like processing of L2 grammar, at least when their L1 does not differ from their L2 as far as the relevant properties are concerned.
References


Recent advances in the neurocognition of bilingualism have been closely linked to an understanding of bilingual effects as a function of experiences, leaving behind categorical notions of monolinguals vs. bi-/multilinguals (e.g., Gullifer & Titone, 2020). This approach has been successful in identifying continuous effects of bilingual language experience on brain structure, function and biochemistry (e.g., Deluca et al. 2019). The present study uses this same fine-grained approach to bilingual language experience as a continuous variable, examining implicit language processing as a function of exposure to two closely related varieties (bidialectalism) of the same language.

Bidialectals acquire linguistic systems that align in most domains, but differ to a variable degree in lexical, morphosyntactic and/or phonological aspects. In some cases, misalignments between these grammars pull the licensing of certain grammatical structures in opposite directions. Instances where a grammatical structure in one dialect is patently ungrammatical in the other constitute an extreme test case to study the dynamic interaction of linguistic representations in bidialectal populations. How do bidialectals deal with the processing of grammatical properties where their dialects clash? We investigate this question examining the Norwegian context. Most Southern and Western Norwegian dialects have obligatory number agreement between a plural subject noun and a predicative adjective in copulative constructions (e.g., Husene er nye, House.DEF-PL are new.PL). However, in Northern Norwegian the adjective cannot be inflected in the plural for the sentence to be grammatical (Husen er ny*(e), House.DEF-PL are new.SG).

We tested 112 Norwegian speakers living in Northern Norway, who displayed a wide range of exposure to Northern Norwegian (from native speakers to newcomers in the North from the South, and much in between). Exposure was calculated through a modified version of the Language and Social Background Questionnaire (Anderson et al., 2018). Participants completed an EEG/ERP experiment where they read sentences in Northern Norwegian word-by-word. The critical contrasts used two types of violations. In the Gender condition, a mismatch between a predicative adjective and the gender of the subject noun yielded an ungrammatical string across all dialects of Norwegian. In the Number condition, however, an agreement between a plural subject noun and a predicative adjective is ungrammatical in Northern Norwegian, but otherwise licensed by most non-Northern varieties.

ERP results (Fig. 1) show a clear P600 effect for all participants in response to the gender violation. Although not as drastic as the gender condition, the number violation also shows a P600 effect with amplitudes being higher for the number mismatch trials. Next, we regressed the amplitude of the P600 effect (difference between agreement and mismatch trials in the 500-900ms window) to the composite score indexing relative exposure to Northern Norwegian. Regression analyses (Fig. 2) show a clear relationship between sensitivity to the number violation and exposure to Northern Norwegian—an interaction absent for gender. That is, participants who had more exposure to the Northern Norwegian dialect showed greater sensitivity to the presence of number agreement—a system that is indeed ungrammatical in Northern Norwegian. We discuss these results in light of recent proposals to approach bilingualism as a continuum and suggest that bidialectalism entails a similar phenomenon that should likewise be understood as a fine-grained spectrum with subtle linguistic effects.
Figure 1. Event-related potentials for the gender (left) and number (right) violations at electrode Pz.

Figure 2. Correlation between average voltage in the P600 (500-900ms) time window and exposure to Northern Norwegian for the two pairs of conditions: gender (left) and number (right).

References


Introduction: Most research on children’s acquisition of adult-like recursion has focused on monolinguals with little attention to bilinguals. The few existing studies on indirect recursion (i.e., iterative embedding of one phrasal category inside another of the same type) with simultaneous bilingual children found that they performed similarly to monolingual counterparts (Pérez-Leroux et al., 2017; Pérez-Leroux et al., 2021) and occasionally outperformed them (Leandro and Amaral, 2014). We hypothesize that right, left, and mixed branching directionality (as found in English and other languages), may influence the acquisition path of recursive nominal phrases in bilingual children, an issue that remains unexplored to our knowledge. Specifically, we predict that branching directionality of possessive and adjectival nominal phrases (i.e., in bilingual children’s non-English language/s vis-à-vis that of English), impacts comprehension and production of indirect recursion.

Methods: A story-cum-picture task (Foucault, et al., 2022) (Fig. 1) administered via Zoom was used to assess children’s adult-like use (comprehension and production) of 4 recursive types in English: 2-Level and 3-Level left-branching recursive gradable (set/subset) adjectives and recursive possessives (e.g., small big mushrooms, big small big mushrooms; the deer’s friend’s mushrooms; the deer’s friend’s sister’s mushrooms). Our sample (to date) comprises 45 English-speaking children (age-range 4;0-12;0) in the US and Canada (Table 1). Based on a language background questionnaire, 21 children were identified as bilinguals (Simultaneous=16; Sequential=5) who regularly use another language besides English (mean age: 7;6 [6 < 7 and15 ≥7], with all, except one, reporting English as their stronger language. The remaining 24 were monolinguals (mean age: 6;11 [14 < 7;10 ≥7]. The bilingual children’s non-English languages were categorized into three types based on the branching directionality of possessive and adjectival nominal phrases: (Group 1) Left-branching (Hindi, Mandarin, Marathi, Cantonese, Kannada; N= 8; 6 simultaneous and 2 sequential), (Group 2) Right-Branching (Spanish, Italian, French; N=7; 4 simultaneous and 3 sequential), (Group 3) Mixed-directionality (German, Russian, Bulgarian; N=6; all 6 simultaneous).

Results: Bilingual children had numerically lower Median Accuracy scores (comprehension and production combined) compared to their monolingual counterparts for all except 2-Level adjectives (Tables 1-2). However, the results of a Kruskal-Wallis test showed the differences to be non-significant, with both groups patterning similarly across the four different recursive types. The results of a Friedman test of Repeated Measures revealed statistically significant differences in Accuracy scores according to the four Recursive Types for both groups. Post-hoc analyses showed that both groups performed significantly worse on 3-Level Adjectives than 3-Level possessives (Monolingual: Chi-square = 14.135; df=3; p=.003; Bilingual: Chi-square = 14.005; df=3; p=.003). As for the impact of branching directionality (Table 3), the Left-branching group (group 1) received the lowest scores, even though the branching directionality of their other language matched that of the target recursive possessive and adjectival phrases in English. The Mixed-branching group (group 3) received the highest Accuracy scores on all except the 3-Level recursive adjectives, for which the Right-branching group received slightly higher scores. A Kruskal-Wallis test failed to find the differences to be significant.

Conclusion: Despite the nonsignificant results, the numerical trends in relation to the three branching groups’ accuracy on recursive possessives and adjectives suggest a potentially important role for branching directionality for bilingual children. Specifically, regular use of a mixed branching directionality language could be advantageous for left-branching recursive structures in English, itself a mixed directionality language. In the current research, only the stronger language (English) and only Left-branching (prenominal) recursives were assessed. Further research, where bilinguals are assessed
in both of their languages, and on both left and right branching recursives, is necessary for a fuller understanding of the impact of branching directionality on bilingual children’s use of recursive structures.

### Table 1: Recursion Accuracy (Mean and Median) Monolingual

<table>
<thead>
<tr>
<th>Recursive Type</th>
<th>N</th>
<th>Mean %</th>
<th>Std. Dev</th>
<th>Min</th>
<th>Max</th>
<th>Median %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Level Adj</td>
<td>24</td>
<td>79.40</td>
<td>18.90</td>
<td>36.36</td>
<td>130.00</td>
<td>77.94</td>
</tr>
<tr>
<td>2-Level Pass</td>
<td>24</td>
<td>59.88</td>
<td>27.34</td>
<td>0.0</td>
<td>100.00</td>
<td>73.22</td>
</tr>
<tr>
<td>3-Level Adj</td>
<td>24</td>
<td>65.66</td>
<td>20.98</td>
<td>16.67</td>
<td>100.00</td>
<td>67.34</td>
</tr>
<tr>
<td>3-Level Pass</td>
<td>24</td>
<td>80.67</td>
<td>20.58</td>
<td>0.0</td>
<td>100.00</td>
<td>91.87</td>
</tr>
</tbody>
</table>

### Table 2: Recursion Accuracy (Mean and Median) Bilingual

<table>
<thead>
<tr>
<th>Recursive Type</th>
<th>N</th>
<th>Mean %</th>
<th>Std. Dev</th>
<th>Min</th>
<th>Max</th>
<th>Median %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Level Adj</td>
<td>21</td>
<td>79.30%</td>
<td>19.04%</td>
<td>10.18%</td>
<td>100.00</td>
<td>78.95%</td>
</tr>
<tr>
<td>2-Level Pass</td>
<td>21</td>
<td>69.78%</td>
<td>20.08%</td>
<td>14.34%</td>
<td>100.00</td>
<td>66.67%</td>
</tr>
<tr>
<td>3-Level Adj</td>
<td>21</td>
<td>55.01%</td>
<td>31.37%</td>
<td>0.0</td>
<td>100.00</td>
<td>65.57%</td>
</tr>
<tr>
<td>3-Level Pass</td>
<td>21</td>
<td>79.56%</td>
<td>28.39%</td>
<td>0.0</td>
<td>100.00</td>
<td>85.71%</td>
</tr>
</tbody>
</table>

### Table 3: Recursion Accuracy (Mean and Median) by Branching Directionality Type (four types of recursive phrases) Bilingual

<table>
<thead>
<tr>
<th>Branching Directionality Type</th>
<th>Recursive Type</th>
<th>Mean %</th>
<th>Std. Dev</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Median %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ga1 (N=4)</td>
<td>2-Level Adj</td>
<td>71.11</td>
<td>24.47</td>
<td>86.18</td>
<td>94.12</td>
<td>70.00</td>
</tr>
<tr>
<td>Ga2 (N=7)</td>
<td></td>
<td>70.78</td>
<td>15.34</td>
<td>58.82</td>
<td>100.00</td>
<td>78.95</td>
</tr>
<tr>
<td>Ga3 (N=4)</td>
<td></td>
<td>83.34</td>
<td>10.39</td>
<td>72.22</td>
<td>100.00</td>
<td>80.95</td>
</tr>
<tr>
<td>Ga1 (N=4)</td>
<td>2-Level Pass</td>
<td>69.08</td>
<td>38.04</td>
<td>94.3</td>
<td>100.00</td>
<td>56.34</td>
</tr>
<tr>
<td>Ga2 (N=7)</td>
<td></td>
<td>86.85</td>
<td>20.09</td>
<td>83.3</td>
<td>100.00</td>
<td>66.67</td>
</tr>
<tr>
<td>Ga3 (N=4)</td>
<td></td>
<td>81.95</td>
<td>19.75</td>
<td>80.0</td>
<td>100.00</td>
<td>86.91</td>
</tr>
<tr>
<td>Ga1 (N=4)</td>
<td>3-Level Adj</td>
<td>40.45</td>
<td>38.61</td>
<td>0.0</td>
<td>100.00</td>
<td>46.53</td>
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<tr>
<td>Ga2 (N=7)</td>
<td></td>
<td>85.30</td>
<td>20.77</td>
<td>22.30</td>
<td>88.90</td>
<td>71.43</td>
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<tr>
<td>Ga3 (N=4)</td>
<td></td>
<td>81.16</td>
<td>28.63</td>
<td>17.0</td>
<td>90.0</td>
<td>71.27</td>
</tr>
<tr>
<td>Ga1 (N=4)</td>
<td>3-Level Pass</td>
<td>70.00</td>
<td>34.41</td>
<td>0.0</td>
<td>100.00</td>
<td>75.00</td>
</tr>
<tr>
<td>Ga2 (N=7)</td>
<td></td>
<td>82.48</td>
<td>19.55</td>
<td>35.0</td>
<td>100.00</td>
<td>85.71</td>
</tr>
<tr>
<td>Ga3 (N=4)</td>
<td></td>
<td>88.89</td>
<td>20.19</td>
<td>50.0</td>
<td>100.00</td>
<td>100.00</td>
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</table>

References:


The production of subject-verb number agreement in bilinguals

Chae Eun Lee
University of Illinois at Urbana-Champaign

Monolingual English speakers often produce subject-verb number agreement errors (Bock & Miller, 1991). One situation involves agreement attraction (1a), where the verb agrees with the local plural noun rather than the head noun. Another situation involves collective nouns (1b), where the verb is inflected to the notional (plural), not the grammatical number (singular) of the subject noun phrase (NP). The Marking and Morphing model (MM; Eberhard et al., 2005) has been proposed to account for this joint involvement of the grammatical and notional number of the subject NP in monolingual subject-verb number agreement production.

The first goal of the current study is to examine whether MM can be extended to bilingual number agreement production. We ask whether bilinguals consider the local plural noun and the notional number of the head noun when producing English subject-verb agreement. Given that agreement production requires the rapid integration of multiple information sources and agreement morphology poses persistent difficulties to learners (Jiang, 2004), bilinguals might not use the same information in real time as monolinguals do. The second goal of the study is to examine whether age of acquisition (AoA) modulates how agreement is produced. Foote (2010) examined the production of subject-verb agreement in Spanish-English bilinguals and concluded that mechanisms of agreement in bilinguals are like those of agreement in monolinguals, regardless of AoA. However, Spanish and English require subject-verb agreement, and this cross-language similarity could decrease the potential difficulties that bilinguals experience or AoA effects. In this light, the current study examines the production of English subject-verb number agreement in early and late Korean-English (KE) bilinguals, whose L1 lacks subject-verb agreement.

Data collection is ongoing; 20 KE bilinguals and 15 English monolinguals participated in an oral production task. Early bilinguals (N=10) in this study were those who arrived in the US before the age of 6 and late bilinguals (N=10) were those who arrived in the US after 12. All bilinguals were studying in the US and scored between 78% and 98% on a proficiency test. Participants completed the sentence by connecting the predicate and the preamble using was or were (Figure 1). The notional number of the HeadNoun and the grammatical number of the LocalNoun were manipulated as in (2) and the 16 sets of 4 conditions were distributed across four lists using a Latin-square design. Results: Participants produced more errors when the head noun was Collective and when the local noun was Plural, showing notional agreement and attraction errors. However, both early and late KE bilinguals produced significantly more errors than monolinguals (Figure 2). To examine whether KE bilinguals’ production errors result from the lack of knowledge on subject-verb agreement, we also conducted an Acceptability Judgment Task (AJT). All groups were sensitive to agreement errors offline, providing low ratings to ungrammatical plural verb conditions (3e-g) (Figure 3). This suggests that KE bilinguals in the study have explicit knowledge of how agreement works. In sum, the results suggest that KE bilinguals seem to rely on similar agreement mechanisms as monolinguals (i.e., MM): they show sensitivity to the number morpheme of the local plural noun (consistent with Choi & Ionin, 2021; cf. Jiang, 2004) and the notional number of the head noun. However, both early and late KE bilinguals were more prone to making errors than monolinguals, suggesting the bilingual disadvantage in production and the potential influence of L1 (Runnqvist et al., 2013). The absence of processing routines for computing agreement in L1 could cause more attraction errors and more susceptibility to notional number in production. Finally, different error rates across the groups (Late > Early > Monolinguals) seem to suggest AoA effects in agreement production.

(1) a. The singer for the church services was / *were (error) practicing.
   b. The choir for the church service was / *were (error in American English) practicing.
**Production task conditions and example stimuli**

(2)

a. The *singer* for the church *service* [Singleton, Singular: SS]
b. The *singer* for the church *services* [Singleton, Plural: SP]
c. The *choir* for the church *service* [Collective, Singular: CS]
d. The *choir* for the church *services* [Collective, Plural: CP]

**AJT conditions and example stimuli**

(3)

a./e. The *singer* for the church *service* was / were practicing [SSS / SSP]
b./f. The *singer* for the church *services* was / were practicing [SPS / SPP]
c./g. The *choir* for the church *service* was / were practicing [CSS / CSP]
d./h. The *choir* for the church *services* was / were practicing [CPS / CPP]

**Selected References:**


Syntactic complexity is an important indicator of learners’ language proficiency. To discover cross-linguistic differences in syntactic complexity, recently researchers have adopted fine-grained measures (e.g., clausal and phrasal complexity) to gauge syntactic complexity, in addition to general measures (i.e., overall complexity) (see Kuiken et al., 2019).

Syntactic complexity in L2 has been captured in coordination structures (e.g., I have a son and he is 12 years old), which develops most rapidly among beginners and then decrease or enters plateau after that, at least in L2 English, Dutch, Italian, Spanish (Kuiken & Vedder, 2019; Lambert & Nakamura, 2019; Wolfe-Quintero et al., 1998). However, whether this pattern also exists in L2 Chinese learners has not been tested. Besides, a salient feature of Mandarin Chinese is that it allows phonetically null elements including topic, subject and object. As a discourse-oriented language, when a sentence consists of several clauses which share the identical topic, Mandarin Chinese allows deleting the rest of the topics except the first one (Huang, 1984) (see example (1)). As for phonetically null subjects and objects, they are allowed in Chinese when the referent has been explicitly mentioned in the prior discourses, or the referent is salient enough in the pragmatic context for addressee to identify (Zhou, Mai & Yip, 2021) (see example (2)). Therefore, the null element may be a sensitive index to reflect the syntactic complexity of L2 Chinese. However, there’s few studies considering null elements when assessing proficiency-related complexity (except for Jin, 2007). Thus, it remains to be seen whether there is a variation pattern of null elements in Chinese learners’ speech.

This study investigates the syntactic complexity variation in L2 learners of Mandarin Chinese with different proficiency levels. Drawing on existing spoken language data from the recently published Global Chinese Interlanguage Texts Corpus, a total of 240 L2 learners’ recordings of elicited production were analyzed with both general and fine-grained measures. Recordings of native controls (n = 40) were collected for the purpose of this study. ANOVA results show that there are significant differences in overall complexity between proficiency groups (p<0.01), consistent with previous findings. However, the variation of coordination structure and null elements demonstrate some unique patterns in L2 Chinese (see figure 1). Results of MANOVA show that the number of coordination structures keeps rising continuously with the increase of proficiency and reaches its peak in native speakers’ speech. The number of empty elements shows a significant increase at the advanced and native proficiency (p<0.01).

The findings show the different variation pattern of Chinese syntactic complexity compared with Indo-European languages. In L2 Chinese, the number of coordination keeps rising without entering a plateau. The number of empty elements is a sensitive indicator of advanced even native proficiency in speech. This study has important implication on studies which try to explore the cross-linguistic differences in syntactic complexity. The fine-grained measure adopted by this study also shed light on future complexity studies which target at languages with empty elements such as Italian and Spanish.
Examples:

(1) [Zhongguo, defang hen da.] [e, renkou hen duo.] [e, tudi hen feiwo.] [e, qihou ye hao.] [e, women dou hao xihan e.]
China place very big population very many land very fertile climate too very good we all very like
‘(As for) China, (its) land area is very large. (Its) population is very big. (Its) land is very fertile. (Its) climate is also very good. We all like (it).’ (Example from Huang, 1984)

(2) Speaker A: Zhangsan kanjian Lisi le ma?
Zhangsan see Lisi LE Q
‘Did Zhangsan see Lisi?’
Speaker B: e kanjian e le.
see LE
‘[He] saw [him].’ (Example from Huang, 1984)

Figure 1: average number of coordination (MNco) and empty element (MNem) in the speech of speakers with different proficiency

Selected references:
This paper investigates how L1-Chinese learners of English interpret plurality associated with bare plurals in their L2-English. The readings associated with overt plural marking have been argued to take two forms: the exclusive reading (more than one x) and the inclusive reading (one or more x) (e.g., Spector, 2007). Tieu et al. (2014) shows that native English adults interpreted positive sentences with plurals such as (1), with an exclusive reading (1a), rather than (1b); while for the negative context, they interpreted (2) with an inclusive reading (not one or more = none, (2b)), rather than (not more than one, (2a)). English-speaking children (4-7 years), however, computed exclusive readings for English plurals less often than adults in both positive and negative contexts, preferring inclusive reading ((1b) and (2b)). This is in line with the proposal that children tend to compute fewer scalar implicatures than adults do. That is, English plurals are inherently inclusive (as shown by English children) and their exclusive reading by the adults is made possible by scalar implicature (Tieu et al., 2014). This is also supported by L1 experimental evidence from other obligatory plural marking languages such as Greek and Turkish (Renans, et al., 2018; Renans, et al., 2020).

Mandarin Chinese exhibits a number of differences from English in plural marking. The plural marker, -men, is used only for humans or personified individuals and it is optional (3a-b). It has been reported to yield an exclusive reading only (Li, 2020). Using the mapping process of the Feature Reassembly Hypothesis (Lardiere, 2009) as a model for L1 transfer, we predict that L2 learners will map the English plural morpheme -s to Chinese -men, and that L2 learners interpret English plurals exclusively in both positive and negative contexts, i.e., (not) more than one x.

We tested 65 L1-Chinese L2-English adults with three proficiency levels and 50 L1-English speakers in their interpretation of English plurals in both positive and negative contexts, following the Truth Value Judgment Task in Tieu et al. (2014) (Figure 1). The results (Figure 2) show significant effects of context (p<.001) in L2 learners and native speakers, but no effect of language groups (low intermediate vs. high intermediate vs. advanced vs. natives) (p>.1). That is, the L2 group performed largely like the English controls. The L2 group interpreted English plurals exclusively in the positive context, supporting our prediction, but inclusively under negation contra our prediction. In the negative context, despite no significant difference across the groups, there is an observable trend that the exclusive interpretation by the L2 group grows with the proficiency towards that of the English controls. In general, the results suggest L2 learners have no difficulty interpreting English plurals at the target level.

Our finding is that despite the difference in plural marking between English and Chinese, L2 learners are able to compute scalar implicature which leads to the inclusive reading in the negative context. This supports the universality of pragmatic inferences, i.e., scalar implicature in L2 (Slabakova, 2010). However, the role of proficiency is open to discussion as the current L2 learners were of higher proficiency. More data is needed from the lower proficiency learners to observe at what level of proficiency L1 transfer cedes to standard pragmatic inferences.
Examples

1. Emily fed giraffes.
   a. Emily fed more than one giraffe.
   b. Emily fed one or more than one giraffe.
2. Emily didn’t feed giraffes.
   a. Emily didn’t feed more than one giraffe.
   b. Emily didn’t feed one or more than one giraffe. (= Emily didn’t feed any giraffe.)

3. Students are in the classroom.
   a. Xuesheng-men zai jiaoshi li.
      Students ADV classroom in (‘There are students in the classroom’) 
   b. Xuesheng zai jiaoshi li.
      Students ADV classroom in (‘There is/are a student/students in the classroom’) 

4. a. Qianqian zai jiao xiao tuzi-men xue yingyu.
      Qianqian AD teach little rabbit-s learn English ‘Qianqian is teaching more than one little rabbit to learn English.’
   b. Qianqian mei zai jiao xiao tuzi-men xue yingyu.
      Qianqian not AD teach little rabbit-s learn English ‘Qianqian is not teaching more than one little rabbit to learn English.’

Selected references


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5 Participants were presented with an animated context (Figure 1), followed by a rabbit being asked ‘what happened in the story’. Then the rabbit replied with either a positive or negative test sentence (e.g., (4a) and (4b)), to which participants responded with True or False.
Comprehension of temporal conjunctions in bilingual children: length of exposure wins over age of onset

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According to the timing hypothesis [7,8], effects of Age of Onset of bilingualism (AoO) are modulated by effects of timing in monolingual acquisition: phenomena mastered early (before age 4) by monolingual children should reveal an advantage for bilingual children with early L2-AoOs. Late phenomena (mastered after age 4 by monolinguals), should reveal similar (high or low) performance across bilingual groups with different L2-AoOs, with length of exposure to the L2 (LoE) overriding AoO effects.

First empirical studies confirm that timing differences result in different patterns for 2L1 and successive bilingual learners, for early but not for late phenomena [see summaries in 7,8]. The present study extends this research by investigating how bilingual children master comprehension of complex sentences containing the temporal conjunctions after and before (1), a phenomenon acquired very late, after age 7, cross-linguistically [1,2,3,5,6]. Following the timing hypothesis, we expected LoE to be a better predictor of performance than AoO.

(1) a. After/before she put the plate on the table, she closed the window.

b. She closed the window, after/before she put the plate on the table.

Note that some studies [1-3, but not 4-6] found earlier comprehension of the iconic clause order, which is parallel to the chronological order of the events ((1a) for after, (2b) for before), than the non-iconic clause order ((1a) for before, (2b) for after). Few studies [1,3] also report memory effects on comprehension.

Fifty-one typically developing Greek-German bilingual children aged 6;0–12;9 (Mean=8;11) performed a sentence-picture matching task in German. All children lived in Germany and had regular exposure to Greek from birth (AoO of German: 0;0–8;6, Mean=1;10; LoE to German: 1;19–12;1, Mean=7;1). 12 items tested nachdem (‘after’) and 12 bevor (‘before’) (see (2) for an example), each half iconic and half non-iconic; the encoded events could not be ordered based on world knowledge (Figure 1). To control for effects of short-term memory (STM) on comprehension, children were also tested with a forward digit-recall task.

As there was a correlation between AoO and LoE (r=0.599), the results (see Figure 2) were analyzed with separate GLMs for each variable to avoid multicollinearity problems. Then the two models were compared regarding their goodness of fit. Both models included the interactions of Iconicity (iconic/non-iconic) by Conjunction (after/before) by age, STM, and either AoO or LoE (see (3)). The GLMs revealed a main effect of age and an interaction effect of Iconicity by Conjunction, but provided the same data fit (AIC=915.3). Accordingly, the relative importance of AoO and LoE was investigated via two additional GLMs, including either AoO or LoE (as well as their interactions with Iconicity and Conjunction) as predictors. The resulting model for LoE offered a better fit to the data than the model for AoO (AIC_{LoE}=924.5, AIC_{AoO}=927.4). Moreover, there was a main effect of LoE, but no main effect of AoO (Table 1). The two-way interaction Iconicity by Conjunction remained in all models; post-hoc comparisons revealed that iconic AFTER-sentences were easier than non-iconic ones (p<0.001), whereas for before the reverse pattern was found (p=0.023). This pattern agrees with previous findings from monolingual and heritage language acquisition that non-iconicity causes difficulty only in case of a so-called event-semantic kindergarten-path, caused by sentence-medial after [4,6].

Using the late acquired domain of the semantics of temporal conjunctions as a testbed, our results provide novel support for the timing hypothesis: effects of LoE win over AoO effects, despite an AoO range of nearly 9 years. Further research should examine if this result holds cross-linguistically,
independent of the L1/L2 pairs and the form of the temporal connective.

\( (2) = (1a) \)

Nachdem/bevor sie den Teller hingestellt hat,
After / before she the plate putPTCP has

hat sie das Fenster zugemacht.
has sie the window closed-PTCP

‘After/before the plate on the table, she closed the window.’

(3) Model formulas

Step 1: Result ~ 1 + Iconicity*Conjunction*Age + Iconicity*Conjunction*STM + Iconicity*Conjunction*AoO/LoE + (1 + Iconicity + Conjunction | Participant);
Step 2: Result ~ 1 + Iconicity*Conjunction*AoO/LoE + (1 + Iconicity + Conjunction | Participant)

Table 3: Summary of model output in Step 2

<table>
<thead>
<tr>
<th>Model for AoO (AIC=927.4)</th>
<th>Model for LoE (AIC=924.5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimate</td>
<td>Pr(&gt;</td>
</tr>
<tr>
<td>Iconicity</td>
<td>0.260</td>
</tr>
<tr>
<td>Conjunction</td>
<td>0.884</td>
</tr>
<tr>
<td>AoO</td>
<td>0.133</td>
</tr>
<tr>
<td>Iconicity*Conjunction</td>
<td>-3.988</td>
</tr>
<tr>
<td>Iconicity*AoO</td>
<td>-0.074</td>
</tr>
<tr>
<td>Conjunction*AoO</td>
<td>-0.450</td>
</tr>
<tr>
<td>Iconicity<em>Conjunction</em>AoO</td>
<td>-0.954</td>
</tr>
</tbody>
</table>

References

Crosslinguistic influence in L3 acquisition: Evidence from artificial language learning
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UiT¹, NTNU², U. Rovira i Virgili³

A widely discussed issue in L3/Ln acquisition is whether transfer/crosslinguistic influence (CLI) at early stages is dependent on overall typological similarity (cf. the Typological Primacy Model, TPM, Rothman 2011, Rothman et al. 2019), or whether this influence can be selectively sourced from the L1 and/or the L2 depending on linguistic property-specific similarities (cf. the Scalpel Model, Slabakova 2017, and the Linguistic Proximity Model, LPM, Westergaard et al. 2017, Westergaard 2021a, b).

For proponents of the former position, the source language is selected based on overall typological similarity to the L3, following a hierarchy of cues where the lexicon is the most salient, followed by phonology, morphology and syntax. Thus, L3 learners of French or Italian who have English and Spanish as their previously acquired languages are expected to transfer the Spanish grammar wholesale at the initial stages (Rothman & Cabrelli-Amaro 2010). The LPM and Scalpel model, on the other hand, argue that CLI is due to co-activation of both previously acquired grammars. This means that, while superficial similarity may have an effect very early in the learning process, property-by-property structural similarity should be an important factor from early on.

Focusing on this issue, we designed a picture-sentence matching task employing a mini-artificial language as an L3. We followed the subtracted language groups design and tested two groups of participants: Norwegian-English and Norwegian-Russian bilinguals (n = 23 for each group). The L3 was constructed using Norwegian lexical roots combined with case marking suffixes, as in Russian. After a short training phase, where the participants were exposed to correct examples of both SVO and OVS sentences (see examples 1-2), they were asked to decide if similar sentences accurately described pictures on a screen. Stimuli were correct/incorrect SVO and OVS sentences (see examples 3-6). Incorrect sentences used the wrong case (NOM on the object or ACC on the subject).

Our predictions were the following (see Figure 1): If lexical similarity prompts transfer from Norwegian for both groups (as per the TPM), no difference between the groups was expected. However, if case-licensed flexible word order can be selectively supported by any previous language (as argued by the LPM), Russian-Norwegian bilinguals should have an advantage over Norwegian-English bilinguals, who have no case-marking language in their repertoire.

As shown in Figure 2, our results show a higher accuracy for the two critical conditions for the Russian-Norwegian group, indicating that these learners are sensitive to the structural similarity between the L3 and Russian at an early stage, even though the L3 is lexically similar to Norwegian. This supports models of L3/Ln acquisition which assume that CLI is property by property from either or both of the previously acquired languages and that structural similarity is an important factor.

In this talk we also report on a follow-up study with Norwegian-Greek bilinguals (n=8, data collection ongoing), which tested whether this influence is dependent on the L3 structure in question being identical to the previously acquired language or whether a more abstract similarity has the same effect, more specifically whether case in the previously acquired language has to be marked as suffixes (as in Russian – and the L3) or whether case on prenominal articles (as in Greek) is sufficiently similar to the L3 to cause CLI.

![Figure 1: Predictions according to the TPM and the LPM](image-url)

(1) Sebra-il tegner opp-su. Zebra-NOM draw mushroom-ACC
(2) Hatt-su holder rev-il. Hat-ACC hold fox-NOM
(3) Kylling-il spiser mais-su Chicken-NOM eat corn-ACC
(4) Baker-su spiser suppe-il. Baker-ACC eats soup-NOM
(5) Laks-su spiser sel-il. Salmon-ACC eats seal-NOM
(6) *Mark-il spiser fugl-su. Worm-NOM eats bird-ACC
Figure 2: Results

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Case</th>
<th>WO</th>
<th>NOR</th>
<th>NOR-RUS (TBM)</th>
<th>NOR-RUS (LPM)</th>
<th>NOR-GRE (LPM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Rabbit-NOM finds carrot-ACC</td>
<td>correct</td>
<td>SVO</td>
<td>Accept</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Rabbit-ACC finds carrot-NOM</td>
<td>incorrect</td>
<td>SVO</td>
<td>Accept</td>
<td>Reject</td>
<td>Reject?</td>
<td></td>
</tr>
<tr>
<td>C. Carrot-ACC finds rabbit-NOM</td>
<td>correct</td>
<td>OVS</td>
<td>Reject</td>
<td>Accept</td>
<td>Accept?</td>
<td></td>
</tr>
<tr>
<td>D. Carrot-NOM finds rabbit-ACC</td>
<td>incorrect</td>
<td>OVS</td>
<td></td>
<td>Reject</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

References


**Sensitivity to silently structured intervener: From L2 learners’ sluicing interpretation**

*Atsushi Miura*

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Previous findings of asymmetry between subject relatives and object relatives were supported from the model of Intervention Effect, which is based on Relativized Minimality (Rizzi, 1990). In an L1 acquisition study provided consistent results in which child learners can accurately interpret the meaning of the subject relative clauses but they have some difficulty comprehending the object relative clauses (e.g., Adani *et al.*, 2010; Friedman *et al.*, 2009; Hu *et al.*, 2016; Mateu & Hyams, 2020). Similarly, the research on this asymmetry has been investigated in an L2 acquisition. Xia, *et al.* (2021) investigated L1-Chinese/L2-English learners’ reading time of relative clauses. Their result partially supported the intervention effect. It is necessary to provide further L2 data to support and/or reject the intervention effect.

Extending the L1 study done by Mateu & Hyams (2020) to L2 learners, the current study aims to investigate the comprehension of sluicing sentences with structurally existing intervener, as shown below.

1. a. I can see that someone is hitting the boy, can you see who, *i < t, is hitting the boy>*?  
   b. I can see that the boy is hitting someone, can you see who, *the boy is hitting t>*?

As predicted by Mateu & Hyams (2020), sentence (1b) potentially has intervener “the boy” but (1a) does not. To validate the participants’ interpretations of sluiced structure well, non-sluiçing structures were also tested, as shown below (c.f., Mateu & Hyams, 2020).

2. a. I can see that someone is washing the boy, can you see who, *it is washing the boy>*?  
   b. I can see that the boy is washing someone, can you see who, *the boy is washing it>*?

The 21 L1-Japanese/L2-English learners engaged in an “yes-no-question task” (see Figure 1). They read 10 target sentences for each condition (i.e., sluiced-subject (1a), sluiced-object (1b), non-sluiçed-subject (2a), and non-sluiçed-object (2b)) and 40 additional fillers. The 80 sentences in total were randmized and counterbalanced.

The accurate responses between (2a) and (2b) are the statistically significant difference (*p* < .001), indicating that the participants interpret the non-intervener structure (2a) more accurately than the structure with intervener (2b). Interestingly, for the sluiced sentences, the participants’ response seems to affect by the intervention effect according to the statistical analysis (*p* < .001).

According to the result, L2 learners showed subject/object asymmetry, supporting intervention effect even in the sluiced structure (i.e., overcoming POS problems). The discussion whether intervention effect is grammatical or processing issues will also be discussed.
References
Apparent U-shaped learning in the acquisition of stress in Mongolian: surface vs. underlying similarity

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The concept of similarity has garnered much attention in research on the acquisition of second language (L2) speech, relying on both phonetic and phonological sources of similarity (e.g. Archibald, 2021; Flege & Bohn, 2021, van Leussen & Escudero, 2015). In this paper, concentrating on the acquisition of word stress in L2 Mongolian, I investigate phonological similarity, and demonstrate an interesting learning scenario where learners go through developmental stages that are similar neither to the L1 nor to the L2, and crucially, even when L1 and L2 are similar on the surface with respect to the relevant property, i.e. location of stress.

In standard Mongolian, (i) primary stress falls on the rightmost nonfinal heavy (i.e. CVV) syllable (see (1)), (ii) on the final heavy syllable if it is the only heavy syllable (see (2)), or (iii) if there are no heavy syllables, on the leftmost light syllable (see (3)) (Bosson 1964, Walker 1997). (CVC is treated as LI in Mongolian, as with CV). This is a very complex system demonstrating conflicting directionality, which gets even more complex given the additional Nonfinality effect. How do English-speaking learners of Mongolian come to learn such a system?

In order to investigate these issues, a semi-controlled production experiment was conducted with English-speaking learners of L2 Khalkha (n=12), of various proficiency levels. The stimuli, composed of 240 words (all nouns), of various syllable structure profiles, were first uttered in isolation, and then in a carrier sentence (see (4)), which was transcribed and analyzed for acoustic measures (pitch, intensity, duration). For this paper, the focus was on rule (iii) above, which targets words composed of all light syllables.

The results demonstrate that although both English and Mongolian native speakers stress the initial syllable of words composed of all light syllables (i.e. LLL), L2 learners of Mongolian did not consistently produce these words with target-like (or native-like) stress. They instead demonstrated stage-like behavior leading to what looks like an inverse bell-shaped learning curve - see illustrations of stages 1 through 5 (examples (5) to (9)) with three sample LLL words: learners start with 2 target-like (initially-stressed) forms out of 3 (as is expected at the initial state by full transfer of L1 parameter settings and weight preferences); their (surface) performance falls all the way down to 0/3 at the next stage, and then improves a bit, going up to 1/3, and then up again to 2/3, before finally reaching 3/3.

If one looked only at surface forms, or surface similarity, it would, thus, have appeared to be a case of getting worse with respect to stress patterns and getting back to the starting point again, before finally getting better, when in fact, individual grammars are being restructured aligned with the possible options made available by human languages, and in the context of conflicting input from Mongolian words that contain heavy syllables (which are stressed on the rightmost non-final heavy syllable - e.g. HLHH).

Note that the learners at this stage employ not only prosodic representations that are neither like the L1 nor the L2, but also surface stress patterns that are very much unlike both languages. Neither English nor Mongolian stresses the second syllable in cases like (6c) and (7c) for example. In fact, both English and Mongolian stress the first syllable in these cases, words composed of three open/light syllables. The fact that the learners here stress the second syllable is, I argue, evidence that they make changes to their grammar on a parameter-by-parameter basis (see also Özçelik 2018), which implies that they have access to these options which are made available by UG. Otherwise, we would expect them to have somewhat of a random increase in stressing the first syllable for words that are composed only of open/light syllables, and predict no intermediate stages that are otherwise inexplicable.
Examples:
(1) a.  b.  c.  d.
(2) a.  b.  c.  d.
(3) a.  b.  c.  d.
(4) Чингис хаан __________ гэж хэлсэн.
Genghis Khan __________ said
“Genghis Khan said __________.”

(5) Stage 1
(6) Stage 2:
(7) Stage 3
(8) Stage 4:
(9) Stage 5:

References:
Late, Very Late, or Never: Development of Non-Personal Clitics in Bilingual Catalan

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Though clitic pronouns are a generally well-researched property of Romance languages (Pérez-Leroux et al., 2017), little is known about the development and ultimate attainment of non-personal clitics. By non-personal clitics, we refer to partitive en (1), oblique en (2), locative hi (3), and oblique hi (4) clitics, traditionally called ‘adverbial clitics’ in Catalan. Oblique clitics replace prepositional arguments introduced by specific prepositions, while the partitive clitic refers to indefinite and quantified direct objects, and the locative clitic can refer to a PP or an adverb. Previous work had found that partitive clitics are acquired by age 5 by Catalan speakers (Gavarró et al., 2006; Gavarró et al., 2011), but recent work suggests that the dominance of the Catalan-Spanish bilingual may influence development and ultimate attainment of this clitic (Perpiñan, 2017; Soto-Corominas, 2020). Given the scarcity of research on these clitics, our first research question regards their acquisition timeline: 1- Do they emerge early in language development, similarly to accusative and dative clitics, or do they appear later? Furthermore, 2 - Due to homophony in the non-personal clitic inventory, do the two en clitics, on the one hand, and the two hi clitics, on the other, follow a similar acquisition timeline? And finally, 3 - Does language dominance affect the development of these four clitics in Catalan-Spanish bilinguals?

We collected data from Catalan-Spanish bilingual children (ages 4-9, n = 336), and comparable bilingual adults (ages 22-35, n = 102), and classified them with a language dominance questionnaire, as Catalan-dominant, Balanced Bilingual, or Spanish-dominant. Dominance was determined by considering quantity and quality of input in the two languages, onset of bilingualism, language preference, and fluency (self-rated in the adults, or parent-rated in the children). Participants completed an oral production task that elicited the clitics. Children answered 4 tokens per clitic, while adults answered 5. Responses were coded as: target clitic, omission, overt phrase, doubling, clitic replacement, or other (Fig. 1-4, one for each clitic).

Overall, we can state that, with the arguable exception of the partitive, non-personal clitics appear late, very late, or simply do not appear in language development, unlike accusative or dative clitics, which appear relatively early (Grohmann & Neokleous, 2014). Furthermore, the development of these four clitics is asymmetrical and strongly modulated by language dominance. In particular, dominance effects in bilinguals were evident from the earliest ages, with Catalan-dominant bilinguals producing more target instances of the clitic than the other two groups, who overall performed similarly. These two groups showed protracted development despite an early onset of Catalan-Spanish bilingualism. In turn, adult Balanced and Spanish-dominant bilinguals showed evidence of fossilized development. Regarding question 2, results showed between-clitic similarities, but in an unexpected direction. The two partitive clitics (en and hi) patterned together in two respects: 1) There is late development, as substantial gains are made between age 9 and adulthood. 2) Clitic replacements (whereby an inappropriate clitic replaces the target oblique) remain frequent throughout. On the other hand, for partitive en and locative hi, bilinguals reach a plateau early on (i.e., little development is observed between children and adults) signaling early fossilization, and clitic replacements remain infrequent.

We conclude that language-internal (properties of the target clitic) and language-external (language dominance) factors influence developmental timelines (cfr. Tsimpi, 2014). While the mechanisms by which dominance would affect development (e.g., reduced quantity/quality of input in Catalan over time) are clearer, the asymmetry between oblique vs. non-oblique clitics indicates that the internal structure of these clitics, rather than their surface form, may delay the development of the former.
Examples:

1. Tinc [cinc pomes]. [En], tinc cinc.
   ‘I have [five apples]. I have five (of those).’
2. Parlo [de cases]. [En], parlo.
   ‘I talk [about stuff]. I talk (about it).’
3. Visc [allà]. [Hi], visc.
   ‘I live [there]. I live (there).’
4. Penso [en cases]. [Hi], penso.
   ‘I think [about stuff]. I think (about it).’

Figures 1-4. Results of Catalan-dominant (CDm), Balanced (BB), Spanish-dominant (SDm) Bilinguals.
The effect of bilingualism on language development in autistic children
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Although there is an increasing number of children with Autism spectrum disorder (ASD) growing up in bilingual settings, the impact of bilingualism on language development in autism remains poorly understood. ASD is a neurodevelopmental disorder involving impaired communication and social interaction [1]. While all autistic children have impaired pragmatics, many also have difficulties with formal language, which have been shown to resemble what is found in Developmental Language Disorder (DLD), which affects language in absence of any primary disorder [2]. It is generally claimed that bilingualism is not disadvantageous for language development in children with ASD (Bi-ASD) [3]. However, language performance reported in existing studies is difficult to interpret because it is generally based on indirect measures of language, e.g. parental questionnaires, omnibus language scores or single-domain language scores which leave key linguistic abilities unassessed, and/or language tasks that are ill-adapted both to the autistic population (they often rely heavily on pragmatic skills) and to bilinguals in general (tests standardized on monolinguals) [4-5]. Moreover, very little research has looked at the effects on language performance of bilingual experience, although it is known to vary greatly across children [6]. Finally, little attention has been paid to language impairment (LI) in Bi-ASD children, including very few comparisons to bilingual children with DLD (Bi-DLD), or to monolinguals with ASD and LI and monolinguals with DLD.

Our comparative study of language development in Bi-ASD children takes up the question of whether bilingual language experience affects autistic children differently. On the one hand, social communication and interaction is challenging for autistic children, yet, on the other hand, the additional language experience inherent in bilingualism may provide increased language uptake, which would otherwise be compromised in this population. We recruited 60 bilingual children (ages 6-12, with different home languages) living in France: 20 with ASD, 20 with TD, and 20 with DLD. An additional 60 age-matched French-speaking monolinguals were recruited: 20 with ASD, 20 with TD, and 20 with DLD. All children were administered French versions of LITMUS sentence repetition (SR) and nonword repetition (NWR) tasks [7-8]. These tasks focus on specific aspects of morphosyntactic and phonological complexity, and they have been shown to be appropriate for autistic children. For children speaking Arabic, Portuguese or Turkish, the home language was evaluated as well. Nonverbal abilities were assessed, including working memory and short-term memory (backward/forward digit span) and nonverbal IQ (NVIQ) (via Matrix Reasoning and Block Design, WISC-V) [9]. Information about children's language history and bilingual contexts was gathered via the LITMUS questionnaire for parents of bilingual children [10].

So far, the data from 14 Bi-ASD children have been analyzed and compared to a larger group of Mo-ASD children. A K-means cluster analysis performed on nonverbal abilities and performance on SR and NWR revealed five profiles, three with homogenous results (e.g. nonverbal skills and language scores were both high/average or both low) and two with discrepant results (e.g. low nonverbal skills and high language scores). Crucially, the bilingual children were evenly distributed across these five profiles; they did not constitute a separate cluster. This initial cluster analysis will be extended to the entire group of 20 Bi-ASD (testing of the additional children is currently underway). The result will be compared to a similar cluster analysis over the entire group of 60 non-autistic children, TD and DLD, monolingual and bilingual. Linguistic profiles obtained via these analyses will be explored from the vantage point of bilingual experience variables (e.g., early exposure and use, current exposure and use, language dominance) in order to ascertain whether/which aspects of bilingual experience predict language performance, including error patterns, in the different bilingual groups.
References


Modelling L3 developmental trajectories: Japanese-English bilinguals acquiring Spanish

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King’s College London\textsuperscript{1}, UiT the Arctic University of Norway\textsuperscript{2} & Takushoku University\textsuperscript{3}

Our study contributes to the understanding of which linguistic and extralinguistic factors model L3 developmental trajectories. Recent work suggests that initial stages transfer will play a significant role in modelling the rate at which the acquisition of an L3 will take place, suggesting that linguistic experience in the transferred language modulates the rate at which non-facilitation is overcome (e.g., Cabrelli Amaro et al., 2020; Cabrelli and Iverson, submitted; Puig-Mayenco, et al. 2020). Herein, we precisely test such claim by examining whether language dominance, as measured by the Bilingual Language Profile (Birdsong et al., 2012) (amongst some other variables), shapes the rate at which adult Japanese-English bilinguals acquire L3 Spanish and overcome initial non-facilitation. Our study explores the following two interrelated research questions: (a) does linguistic proximity at the property level (e.g., Westegaard, 2020) override other proposed factors such as holistic structural similarity (Rothman, 2015; Rothman, et al. 2019) for transfer selection at the initial stages of L3 acquisition? and (b) does linguistic experience in the initial transferred representation modulate the rate at which non-facilitation is overcome in L3 acquisition (Cabrelli and Iverson, submitted)?

To answer the above, we examine the interaction between sentential negation (‘no’ [=NEG’]) and Negative Concord Items (‘nadie’[=nobody], ‘nada’[=nothing]) in Japanese-English bilinguals acquiring L3 Spanish. As indicated in Table 1 (and examples in Table 2), for some syntactic contexts, Japanese and Spanish share the same distribution (2-A & 2-B), as opposed to English, while in others the distribution is shared between English and Spanish (1-A & 1-B), and not Japanese. In addition, the distribution of NCIs between Japanese and English is similar in one of the contexts (3-A). The choice of all these contexts allows us to manipulate and predict the directionality of transfer—if holistic structural similarity determines transfer, then English should always transfer to Spanish, while if structural proximity at the property level is the determining factor, then English and Japanese will transfer to Spanish depending on the specific context. With regards to development, we predict that the degree of dominance in the transferred language will determine the rate at which the learners will overcome non-facilitation. We devised a Grammaticality Judgement Task (GJT)\textsuperscript{6} with 8 conditions (see conditions and exemplary items in table 2). Two groups of Japanese-English bilinguals acquiring Spanish were tested: Group-A consists of 21 \textit{ab initio} learners with 2 months of instructed L3 Spanish; Group B consists of 45 intermediate/advanced learners with various degrees of both exposure and proficiency in Spanish. All participants were enrolled in a Spanish course in the same Japanese institution at the time of testing, thus, guaranteeing fairly homogenous groups with respect to age, motivation and learning environment.

The preliminary results indicate English-like behavior in the \textit{ab initio} learners (see Figure 1), which we take to suggest that holistic structural similarity overrides linguistic proximity (Rothman, 2015). Preliminary examination of the data from post-beginner participants suggests that the interaction between L2 reported use and the amount of exposure to the L3 modulate the rate at which learners overcome initial non-facilitation (see Figure 2). We will discuss the results in relation to current theories of morphosyntactic transfer (e.g., Fallah, et al., 2016; Rothman, 2015; Rothman et al., 2019; Slabakova, 2017; Westergaard, 2020) and recent proposals that explicate developmental patterns in L3 acquisition (Cabrelli and Iverson, Submitted).

\textsuperscript{6} Each participant is further tested in an adapted version of the GJT in Japanese and English to establish their actual distribution for NCIs in Japanese and NQs in English.
Table 1. Summary of the properties and conditions tested in the GJT

<table>
<thead>
<tr>
<th>Condition</th>
<th>English</th>
<th>Spanish</th>
<th>Japanese</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-A. N-item + VERB</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>1-B. N-item + NOT</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>2-A. VERB + N-item</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>2-B. NOT + N-item</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>3-A. N-item + N-item</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>3-B. N-item + NOT + N-item</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>

Table 2. Exemplary items for each condition of interest.

<table>
<thead>
<tr>
<th>Example sentence (Set A)</th>
<th>Example sentence (Set B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  SP Nadie bebe café</td>
<td>Nadie no bebe café</td>
</tr>
<tr>
<td>EN Nobody drinks coffee.</td>
<td>*Nobody does not drink coffee</td>
</tr>
<tr>
<td>JP *Dare-mo kohi-o nomu.</td>
<td>Dare-mo kohi-o nomanai.</td>
</tr>
<tr>
<td>2  SP *Pedro bebe nada</td>
<td>Pedro no bebe nada</td>
</tr>
<tr>
<td>EN Peter drinks nothing</td>
<td>*Peter does not drink nothing.</td>
</tr>
<tr>
<td>JP *Pitā-wa nani-mo nomu</td>
<td>Pitā-wa nani-mo nomanai</td>
</tr>
<tr>
<td>3  SP Nadie bebe nada.</td>
<td>*Nadie no bebe nada.</td>
</tr>
<tr>
<td>EN *Nobody drinks nothing.</td>
<td>*Nobody does not drink nothing.</td>
</tr>
<tr>
<td>JP *Dare-mo nani mo nomu.</td>
<td>Dare-mo nani-mo nomanai</td>
</tr>
</tbody>
</table>

*No glosses are provided because all Spanish and Japanese examples are direct translations from the English examples in each condition.  
**Japanese examples are presented in furigana for ease of presentation. In the actual Japanese experiment, traditional Japanese script was employed.

Figure 1. Acceptance data in the Spanish, Japanese and English GJTs [Spanish data for the ab initio participants only]

Figure 2. Accuracy data in the Spanish GJTs for the ab initio and post-beginner participants.
Until recently, suprasegmental aspects, such as prosody, of heritage speakers (HSs) have received far less attention than the segmental level. The segmental level is considered robust, especially in perception, while the suprasegmental level is said to be more vulnerable (Polinsky & Scontras, 2019, p. 5). The few studies on polar questions (PolQs) in HSs and of suprasegmental phenomena in general report mixed findings. First, supporting the vulnerability of the heritage language (HL), the majority of studies report majority language (ML) influence, resulting in non-target-like intonation (e.g., Andreeva, et al., 2021; Dehé, 2018). Second, some studies report bidirectional influence or converged systems (e.g., Queen, 2001; Zuban, Rathcke, & Zerbian, 2020) showing that not only the HL but also the ML is vulnerable to some extent. Third, few studies report that the intonational features of the HL are maintained (Dehé, 2018; Queen, 2001) and are thus not vulnerable.

In this study, we contribute to the discussion of the vulnerability of the suprasegmental level in the context of HSs. More precisely, we focus on intonation in German (ML) and Italian (HL) information-seeking PolQs. This language combination is promising in this context because the two languages differ with respect to intonational patterns, such as nuclear pitch accents, boundary tones, and pitch excursion. With respect to boundary tones, Italian PolQs are marked by a final fall (L%) in the regional varieties of this study, some of those allow for a final rise, like in Standard Italian (LH%, Savino, 2012). In German, PolQs exhibit a high-rise (H^-H%, Braun, Dehé, Neitsch, Wochner, & Zahner, 2019).

In our study, we aim to investigate (i) whether German-dominant HSs of Italian differentiate between their ML and their HL with respect to intonational patterns (nuclear pitch accents, boundary tones, nuclear tune, pitch excursion) in PolQs, and (ii) whether HSs produce monolingual-like intonational patterns in their two languages. Therefore, we conducted an oral elicited production task in which the participants produced a PolQ after having seen a context. A total of 30 Italian HSs (mean age = 26, range = 18-50) with German as ML participated in the study, as well as 30 German (L1-Ge, mean age = 27, range = 20-54) and 30 Italian monolinguals (L1-It, mean age = 27, range = 18-40). HSs were tested in both languages and compared with the respective monolingual control group, who were matched with respect to the regional origin in Germany and Italy respectively.

Preliminary analysis (8HSs, 8 L1-It, 8 L1-Ge) of the produced boundary tones are summarized in Figure 1 for German and in Figure 2 for Italian. A within-group analysis revealed that HSs differentiate between their ML and their HL. Accordingly, they produced a higher rate of (high-)rising boundary tones in German (H^-H%) than in Italian (LH%, $\beta = -5.4, SE = .72, z = -7.4, p = .46$). A between-groups analysis showed that, for German, both groups mostly produced the typical German high-rise (H^-H%, $\beta = -5.4, SE = .72, z = -7.4, p = .46$). For Italian, HSs produced a higher rate of rising boundary tones (LH%). This difference approaches significance ($\beta = 2.28, SE = 1.20, z = 1.9, p = .058$). Although, at first glance, it seems that the HSs use the Standard Italian boundary tone to a higher extent, a closer analysis of the contours at the individual level shows that at least some speakers transfer the contour from German (compare Figure 3 and 4), suggesting CLI from the ML into the HL. Therefore, our preliminary results are in line with previous studies showing the suprasegmental level is vulnerable in HL acquisition.

In the talk, we will provide results for all 90 participants including a detailed analysis of pitch accents, boundary tones, and pitch excursion. We will further discuss our findings in the light of individual variation and the use of regional varieties in HSs.
Figure 1: Percentage frequency of boundary tones across groups in German

Figure 2: Percentage frequency of boundary tones across groups in Italian

Figure 3: Contour of a German PolQ produced by HS 407.

Figure 4: Contour of an Italian PolQ produced by HS 407.

References


When L1 transfer persists: resetting features with CLLD in Romanian and Italian.

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This study examines the role of L1 transfer in the acquisition of constraints on clitic left dislocation (CLLD) in L2 Romanian and L2 Italian. We extend the feature-reassembly hypothesis (Lardiere, 2009) to the syntax-discourse interface to predict potential learning difficulties in remapping features associated with CLLD in Romanian and Italian. Testing both Romanian and Italian as either L1 or L2 allows for examining the relative contribution of (1) the role of L1 transfer, (2) external (discourse) vs. internal (semantic) interfaces (i.e. Interface Hypothesis, Sorace 2011) and (3) construction frequency (Slabakova 2015) within the same syntactic construction. The results suggest that L1 transfer, and in particular the need for unlearning L1 options, is most pertinent to L2 non-convergence.

The project compares the acquisition of CLLD in four groups: English and Romanian near-native speakers of Italian and English and Italian near-native speaker of Romanian. We compare two types of object left dislocation: contrastive topics and contrastive foci. Although English allows object left dislocation, it does not use clitics. Italian and Romanian do use clitics with left dislocated word orders, but differ in the contexts in which it is used. In Italian, the insertion of a clitic after dislocating a direct object is restricted to contrastive topics and is disallowed when fronting a contrastive focus (compare 1a to 2a). In Romanian, both topics and foci 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). Thus, in Italian CLLD is constrained by discourse anaphoricity (following López, 2009) and in Romanian by specificity, a semantic property.

The L2 learning task depends on properties of the L1. English learners of Italian or Romanian have to acquire the syntax and function of CLLD in each respective language from scratch (discourse anaphoricity for Italian and specificity for Romanian). Romanian learners of Italian and Italian learners of Romanian have to reconfigure the mapping of the relevant feature onto the syntactic structure, which is arguably more difficult.

Results from an acceptability judgment task show that while English near-native L2 speakers of Italian\(^{1,13}\) or Romanian\(^{1,5}\) show a preference for clitic vs. non-clitic sentences similar to native speakers (compare Fig.1 to 2 and 3 to 4), Romanian learners of Italian\(^{1,15}\) and Italian learners of Romanian\(^{1,6}\) do not perform target-like. Romanian learners of Italian correctly learned that clitics are used with non-specific topics in Italian (Fig.3, top-right), but did not unlearn the use of clitics with specific foci (Fig.3, bottom-left). Similarly, Italian learners of Romanian correctly learned that clitics are used with specific foci (Fig.6, bottom left) but did not unlearn the use clitics with non-specific topics (Fig.6, top-right), suggesting persistent L1 transfer effects in both directions, regardless of whether the L2 involves a semantic or discourse constraint and the difference in frequency of Focus vs. Topic fronting (topic fronting being more frequent cross-linguistically). Specifically, persistent difficulties with feature reconfiguration pertain when negative evidence is required to unlearn the L1 options.

References:


(1) What will you do with the apples and the oranges that are about to go bad?  
   a. Le mele *(le) uo nella torta e farò un succo con le arance.  
      The apples CL.pl.fem use.1sg in-the cake and make.1sg a juice with the oranges  
   b. Merele *(le) voi folosi in tort și voi face un suc din portocale.  
      Apples-the CL.pl.fem fut. use in cake and fut. make a juice with oranges-the  
      ‘The apples I will use in the cake and I will make a juice out of the oranges.’

(2) You’ll use the oranges for the pie, right?  
   a. Le MELE *(le) uo nella torta, non le arance. Con le arance faccio un succo.  
      The apples CL.pl.fem use.1sg in-the ake, not the oranges. With the orange make.1sg a juice.  
   b. MERELE *(le) voi folosi in tort, ni portocalele. Din portocale voi face un suc.  
      Apples-the CL.pl.fem fut. use in cake and fut. make a juice.  
      ‘The APPLES I will use in the cake, not the oranges. From the oranges I will make a juice.’

(3) Who ordered a glass of beer and who ordered a wine?  
   a. Un vino *(lo) ha ordinato tuo fratello e tua sorella vorrebbe una birra.  
      A wine CL.sg.masc has ordered your brother and your sister want.cond. a beer.  
   b. Un vin *(l)-a comandat frateli tăi iar sora ta ar vrea o bere.  
      A wine CL.sg.masc-has ordered brother your and sister your would want a beer.  
      ‘Your brother ordered a wine and your sister would like a beer.’

Table 1: Distribution of clitics in Italian and Romanian

<table>
<thead>
<tr>
<th>Property</th>
<th>[+ anaphor] (topic)</th>
<th>[- anaphor] (focus)</th>
<th>Property</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[+ specific]</td>
<td>[- specific]</td>
<td></td>
</tr>
<tr>
<td>Italian</td>
<td>√</td>
<td>√</td>
<td>Italian</td>
</tr>
<tr>
<td>Romanian</td>
<td></td>
<td></td>
<td>Romanian</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

anaphoricity  
specificity

Figure 1: acceptability judgment ratings (1 = unacceptable, 6 = acceptable)
Our study investigates whether second language (L2) learners rely on first language (L1) transfer in the acquisition of the count-mass distinction in L2 English (cf. Choi & Ionin 2021; Tang et al. in press). In English, there are count nouns like *cup(s) or otherwise they are mass nouns such as *furniture/*furnitures (object mass), *sand/*sands (substance mass) but certain nouns appear to be flexible as they can be either countable like *cakes or mass, *cake (flexible). Flexible nouns like *cake have a conceptual principle of individuation and require count syntax for its expression, since the grammatical feature ‘individual’ is not specified lexically (Inagaki, 2014). However, the morphosyntax of the count-mass distinction differs cross-linguistically. In Spanish, count nouns are the same as English, but object, subject and flexible mass nouns appear to be countable. In Japanese, the distinction is not expressed via morphosyntax on the noun itself, as bare nominals are used; rather the distinction is expressed via classifier + count noun whereas mass nouns combine with measure words. Japanese also has a count-mass semantic distinction like English and Spanish, but crucially it lacks the morphology on the noun (Nomoto, 2013). With this in mind, we set out to test the Morphological Congruency Hypothesis (MCH, Jiang, 2004) to see whether morphological similarities between the L1 and L2 aid grammaticality judgements and processing of L2 morphology. We included three groups, 19 native speakers of English, 18 L1 Japanese upper-intermediate and 21 L1 Spanish intermediate L2 learners of English. Two tasks were administered, a quantity judgment task (QJT) requiring judgements and a self-paced reading (SPR) task to address our research question: What role does L1 transfer play in grammaticality judgements and processing of plural-marked nouns? For the QJT, two pictures appeared on a computer screen (see Fig 1) and participants were instructed to select one of the pictures after hearing and reading a question with the quantifier *more + noun. Each randomized version had different nouns appearing as either mass or count. The SPR task included 24 grammatical and 24 ungrammatical sentences with a target noun. For example, the grammatical sentence, “For his birthday, John served cakes to his invited guests”, participants had to judge whether they thought a flexible noun like *cake(s) was acceptable. QJT results show differences in accuracy between the Japanese and Spanish on Flexible count nouns, but not Count nouns (Fig 2). Paired-samples t-tests between grammatical and ungrammatical conditions show that for the L2 groups, there are significant differences between the Flexible condition in the R6 region (Figs 3-5). Our findings are partially consistent with the MCH as there are some advantages for the Spanish group over the Japanese group (not for flexible nouns but for count nouns), but the RTs from the Spanish group do not show clear distinctions of (un)grammaticality, like the native speakers.

References
Figure 1. QJT example of a flexible noun as mass

Who has more cake?

Naomi  Ken

Figure 2. Accuracy of count-mass grammatical conditions

Figures 3-5. Mean RTs on count-mass grammatical conditions across 4 regions (R3= pre noun, R4= noun, R5= post noun, R6= pre wrap-up)

Figure 3. Japanese L2 learners

Figure 4. Spanish L2 learners

Figure 5. Native controls

*FC = Flexible Count, FM = Flexible Mass, CG = Count Grammatical, CU = Count Ungrammatical, SG = Substance Grammatical, SU = Substance Ungrammatical, OG = Object Grammatical, OU = Object Ungrammatical
The reported study approaches L2 acquisition from a processing perspective. It compares the processing behaviour of adult L2 learners who are native speakers of English and Russian, respectively, and checks (a) whether L1 and L2 processing are governed by the same parsing algorithms; and (b) whether learners at the intermediate (B1) level of proficiency demonstrate sensitivity to certain parsing prompts in their L2.

The linguistic target is an ambiguous relative clause (RC), exemplified in (1). A restrictive RC demonstrates high attachment (HA) preference in Russian and low attachment (LA) in English (Fodor 2002). A perception verb see in the matrix clause triggers an additional interpretation – an eventive complement (Grillo & Costa 2014). Structurally, it is a clause whose subject is the complex DP (2). If RC parsing is performed in a top-down manner, a perception verb triggers a structural projection where the entire head DP is modified by the upcoming constituent. In this case, the RC should return a HA preference.

A potential effect of the matrix verb is counter-balanced by anaphora resolution which needs to be performed in a bottom-up manner (1a). Following the binding principles (Chomsky 1981), HA of the RC, typical for Russian, makes the DP [the mother] the nearest c-commanding element to the anaphora. In HA, the reflexive herself is bound by the higher DP [the mother] and the pronoun her by the non-c-commanding lower DP [the woman]. It yields the pattern herself = the mother // her = the woman. In the LA of the RC, typical for English, the nearest c-commanding DP [the woman] binds the reflexive herself, while the pronoun her is bound by the DP [the mother] higher up in the tree. We use anaphora resolution as a proxy for RC resolution, and consider the interpretation pattern, like ‘herself = the woman // her = the mother’ in English and ‘herself = the mother // her = the woman’ in Russian to be evidence for bottom-up parsing of the restrictive RC.

The experiment was a self-paced reading task, where the participants saw one word on the screen at a time. They retrieved every word and selected answers to comprehension questions by pressing the relevant buttons on the keyboard. There were 6 experimental groups with 20 adults in each: 2 groups of monolingual speakers of English and Russian, and 4 groups of English-Russian and Russian-English L2 learners tested in their respective L1s and L2s. The participants’ answer choices, as well as their response and reading time were recorded and analyzed with Mixed Linear Models in R.

The native speaker results showed a combination of two parsing strategies. Even though a bottom-up pattern ‘herself = the mother // her = the woman’ was attested in native Russian, and ‘herself = the woman // her = the mother’ in native English, there was an increased reading time mid-sentence, at the embedded verb (3). This suggests that the anticipated structural prediction for an eventive complement was amended to the restrictive RC after the parser encountered the complementizer that. As for the L2ers, they parsed their non-native language in a L1-like manner, with a few higher proficient ones switching to the L2-like pattern of anaphora resolution. At the same time, the L2ers demonstrated processing sensitivity to certain L2 prompts. For example, the feminine pronoun her is homonymous between the personal and possessive pronoun in English. Therefore, her triggers an anticipation for a possessive phrase, ex., her daughter, while the target sentences have a PP at the end. The need to recover from the wrong anticipation increased the participants’ reading time after her. Our results demonstrate that both native and non-native processing starts with a structural prediction which can be verified and amended at later stages of sentence parsing.
(1) **Restrictive Relative Clause**

Bill saw / arrested the mother of the woman that was talking about herself / her in the yard.

This person was talking about:
(a) the mother
(b) the woman

HA: Bill saw [DP the mother of [DP the woman] [RC that was talking about herself / her in the yard]]
LA: Bill saw [DP the mother of [DP the woman [RC that was talking about herself / her in the yard]]]

(1a) **Restrictive Relative Clause and Anaphora Resolution**

HA: Bill saw [i the mother [of the woman] [RC OP, that t was talking about ANAPHORA, in the yard]].
LA: Bill saw [the mother of [i, the woman [RC OP, that t, was talking about ANAPHORA, in the yard]]].

(2) **Eventive complement**

Bill saw [SC the mother of the woman talking about herself / her in the yard]
(English only)

Bill saw [CP that the mother of the woman was talking about herself / her in the yard]
Bill videl [CP čto mama ženchnyę govorila o sebe / nej vo dvore]
(English and Russian)

(3) **Mismatch in linear word sequence between the restrictive RC and the eventive complement**

Bill saw the mother of the woman that was talking about herself / her in the yard (RC)
Bill saw the mother of the woman talking about herself / her in the yard (SC)
Bill saw (that) the mother of the woman was talking about herself / her in the yard (CP)
Bill videl (čto) mama ženchnyę govorila o sebe / nej vo dvore (CP)
Testing the Interpretability Hypothesis: evidence from the L2 processing of relative clauses by Persian and French learners of L2 English

Ehsan Solaimani, Florence Myles, Laurel Lawyer
University of Essex

This study investigated the acquisition of L2 English RCs by advanced L1 Persian (N=71) and French (N=52) speakers of L2 English. Within Minimalism (Chomsky, 2000), there are two crucial differences in RC derivations between English, French, and Persian. First, while English and French do not syntactically allow resumptive RCs, resumption represents the overt spell-out of agreement features in Persian and is ungrammatical in subject (SU), optional in direct object (DO), and obligatory in object-of-preposition (OP) RCs. Second, English and French C contain an [EPP] feature that attract either an overt [+wh] or null [-wh] wh-operator to its specifier, allowing both wh-pronouns (e.g., who in English and qui in French) and invariant complementisers (that in English and que in French) as potential relativisers. The syntactic distribution of relativisers in English and French RCs is not identical, however. Whereas English allows either that or wh-pronouns, French relativisers are case coded based on the syntactic function of the relativised morpheme: SU and DO RCs in French must have an invariant complementiser, whereas OP RCs are obligatorily introduced by a wh-pronoun. By contrast, Persian is not a structural wh-movement language (C [-EPP]) and the only type of relativiser allowed is an invariant complementiser. The learning task for L1-French speakers does not consist of acquiring new features but ascertaining how these features are expressed in English. L1 Persian speakers, however, are required to pre-empt an L1-based resumptive strategy and acquire an [EPP] feature in English C that motivates wh-movement in Persian. Unlike L1-French speakers, the L1-Persian speakers must access L1 uninterpretable features to both pre-empt an L1-based RC resumptive strategy and to acquire the possibility of wh-movement in L2 English.

According to the Interpretability Hypothesis (IH; Tsimpli & Dimitrakopoulou, 2007), uninterpretable features are inaccessible in L2 acquisition. Thus, IH predicts that while L1-French speakers face less difficulty than L1-Persian speakers in acquiring L2-English RCs, L1 Persian speakers should display relatively high acceptability of resumptive RCs and show non-target-like preference for the potential form of relativiser. Since Persian does not allow wh-pronouns as relativisers, L1 Persian speakers should favour that-relatives to wh-relatives. The participants (3 groups: L1 Persian, L1 French, L1 English controls) completed a grammaticality judgment task on SU, DO, and OP RCs (see table 1), a c-test of proficiency, and a reading span working memory (WM) task. The results indicated that L1 Persian speakers were more likely than L1 French and L1 English speakers to judge English resumptive RCs grammatical, with acceptability rates of 14.8%, 26%, and 28.3% in SU, DO, and OP RCs, respectively. These figures stand in contrast with those for L1 French (SU: 7.5%, DO: 3.7%, OP: 5%) and L1 English (SU: 3.9%, DO: 3.3%, OP: 4.5%) groups. However, judgment data on relativiser preference for the Persian speakers displayed an identical pattern as those for L1 French and L1 English speakers. All 3 groups preferred who to the invariant complementiser that in the three grammatical RC types without resumption, and the form of relativiser did not seem to modulate the degree of resumption ungrammaticality. Resumptive pronouns were judged by all three groups to be less acceptable than gaps in SU, DO, and OP RCs, and this did not seem to depend on the form of relativiser (see figure 1). This is unexpected under the IH, since if Persian speakers were operating on Persian uninterpretable features, it would be expected that they prefer [that ... resumptive] over [who ... resumptive] RCs. Additionally, the results showed that proficiency and WM scores interacted with resumption (un)acceptability (see figure 2), and that highly proficient L2 speakers with sufficiently available working memory resources were capable of pre-empting their L1-based resumptive strategy in L2 English. The findings of this study challenge the claims made by the interpretability hypothesis that access to L1-based uninterpretable features is curtailed in adult L2 acquisition, suggesting that
the residual effects of resumption in adult interlanguage grammars are not necessarily a syntactic issue at highly advanced L2 proficiency stages.

**Table 4 examples of RC sentences used in the grammaticality judgment task**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Resumption / Gap + (relativiser: who)</th>
<th>Resumption / Gap + (relativiser: that)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SU RC</td>
<td>The bodybuilder who she / __ was running did not attend the meeting.</td>
<td>The bodybuilder that she / __ was running did not attend the meeting.</td>
</tr>
<tr>
<td>DO RC</td>
<td>The consultant who the doctor met her / __ was at the hospital.</td>
<td>The consultant that the doctor met her / __ was at the hospital</td>
</tr>
<tr>
<td>OP RC</td>
<td>The professor who you submitted your assignments to her / __ was angry.</td>
<td>The professor that you submitted your assignments to her / __ was angry.</td>
</tr>
</tbody>
</table>

**Figure 1** interaction between relativiser preference and resumption for English, French, and Persian groups

**Figure 2** interaction between proficiency, working memory, and resumption accessibility

**References**
This paper investigates the role of the internal and external interfaces in the acquisition of word order variation by adult L1-French L2-Italian speakers. Italian word order is constrained by both syntax-lexicon and syntax-discourse properties: unaccusativity (Burzio, 1986) and focus (Belletti, 2001). In broad focus, the unmarked order is SV with unergatives and VS with unaccusatives. In narrow focus, both verb classes tend to exhibit the VS order, as shown in previous experimental studies (Belletti et al. 2007; Caloi et al. 2018). Our study adds to previous research by manipulating the type of focus (broad vs. narrow) and by decomposing the semantic classes according to the Unaccusativity Hierarchy (Sorace, 2000). In so doing, we aim at verifying the two versions of the Interface Hypothesis: in the original version (e.g., Sorace, 2005) all interfaces are claimed to be equally vulnerable in L2 populations; conversely, in the revised version (Tsimpli & Sorace, 2006; Sorace, 2011; a.o.) while internal interfaces (syntax-lexicon interface) are unproblematic, external interfaces (syntax-discourse interface) constitute the vulnerable domains prone to L1 transfer even in end-state L2 grammars.

A contextualized forced-choice preference task was administered to 34 adult L1-French L2-Italian speakers with minimum B2 level of proficiency (CEFR) and 40 adult native L1-Italian speakers. 32 stimuli were designed manipulating two variables: (a) focus, broad (N=16) vs. narrow (N=16); (b) 4 semantic classes of the Unaccusativity Hierarchy, (Unaccusatives: Change of Location and Change of State; Unergatives: Uncontrolled process and Controlled Process; 8 items × each class). Each stimulus consisted of a short story providing the context. The story ended with a question in broad focus, cosa è successo? (‘what happened?’) or narrow focus, chi è/ha V\text{participle}? (‘who is/has V\text{participle}?’). The question was followed by two answers, pre-recorded with unmarked prosody, minimally differing in their word order, SV vs. VS. Participants had to read the story and the question, and to listen to the SV/VS answers. They were asked to choose the answer they would utter between the SV or VS orders they heard.

Results of the GLMM (followed by post-hoc comparisons with Tukey’s correction) revealed significant effects of language, focus and semantic classes (all p’s <.001). The L1 group overall chose the VS order significantly more than the L2 group, but both groups chose the VS order significantly more in narrow focus than in broad focus, and more with Change of Location verbs than with other semantic classes. In broad focus (Figure 1) the comparisons between all semantic classes in the L1 group differed significantly (all p’s <.004), showing that the amount of VS decreased along the Unaccusativity Hierarchy; in the L2 group, the amount of VS in the broad focus was only higher with Change of Location than with Change of State (p=.028), but the amount of VS with Change of State did not differ from that of Uncontrolled Process verbs, which in turn did not differ from that of Controlled Process verbs. In narrow focus (Figure 2), the amount of the VS order in both groups was higher with Change of State than with Uncontrolled Process verbs (p<.001), but it did not differ in the comparisons between Change of State vs. Change of Location and Uncontrolled vs. Controlled Process verbs.

Our study demonstrates that L1-French L2-Italian speakers are aware of both the syntax-lexicon and syntax-discourse properties governing Italian word order variation: the VS order was chosen in narrow focus and mostly with Change of Location verbs, i.e., core unaccusatives. Therefore, our results also show that they are sensitive to the Unaccusativity Hierarchy (Sorace, 2000). However, L1-French L2-Italian speakers differ from native Italian speakers with respect to both the syntax-lexicon and syntax-discourse properties. In fact, they prefer the SV strategy available in French for the semantic classes and in the syntax-discourse condition that less likely display the VS order in Italian: the less core verbs of the Unaccusativity Hierarchy and the broad focus. We account for these findings suggesting a return to the original version of the Interface Hypothesis (e.g., Sorace, 2005) which
predicted overall increased vulnerability in the L2 acquisition of interface phenomena, including the syntax-lexicon interface.

**Figure 1. Percentage of the SV/VS answers per semantic classes in broad focus (L1 vs. L2)**

![Figure showing percentage of SV/VS answers per semantic classes in broad focus (L1 vs. L2)]

**Figure 2. Percentage of SV/VS answers per semantic classes in narrow focus (L1 vs. L2)**

![Figure showing percentage of SV/VS answers per semantic classes in narrow focus (L1 vs. L2)]

**Selected References**


Re-examination of the interpretation of L2 Japanese reflexives by Chinese L1 learners: Empathy, logophoricity, and the blocking effect

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Michiko Fukuda¹, John Matthews³, and Neal Snape¹²

¹Gunma Prefectural Women’s University, ²Chuo University, ³Bunkyo University

The present study re-examines the acquisition of Japanese long distance (LD) reflexive zibun ‘self’ by Chinese-speaking learners of Japanese reported in Umeda, et al. (2017). That study examined the two different uses of zibun: empathic zibun, which is bound by the participant the speaker empathizes with most (Kuno, 1987) (see (1a)), and logophoric zibun, which is bound by a ‘logophoric individual,’ one “whose speech, thoughts, feelings, or general state of consciousness are reported” (Clements, 1975, p. 141) (see (2a)). Chinese has a similar LD reflexive, ziji ‘self,’ but Umeda et al. (2017) assumed, following Huang, Li and Li (2009), that LD ziji is logophoric (see (3a)) and that coreference of ziji with an empathetic antecedent is marginal, unlike zibun (see (4)). Using a truth value judgment task, Japanese native speakers and advanced Chinese-speaking learners of Japanese were tested for their knowledge of the blocking effect, by which an LD dependency between antecedent and reflexive is blocked by the presence of an intervening first- or second-person pronoun. With empathic zibun as in (1a), where third-person Ken is the local subject, Mary can be the antecedent of zibun, but when the local subject is a first-person pronoun, as in (1b), LD coreference between Mary and zibun becomes impossible. With logophoric zibun however, an intervening first-person pronoun does not block LD dependency; therefore, LD coreference between Mary and zibun is licit both in (2a) and in (2b). In Chinese, by contrast, the blocking effect is observed with the logophoric use of ziji, as shown in (3b). The results from Umeda et al. (2017) indicated that, while the control group allowed LD interpretations of zibun with an intervening first-person local subject in logophoric contexts and rejected them in empathic contexts, the Chinese-speaker (L2) group rejected LD interpretation of zibun in both logophoric and empathic contexts, showing evidence of L1 transfer (see Table 1).

In this presentation, we present new data from Chinese native speakers, using Chinese translations of the TVJT from Umeda et al. (2017), replacing zibun with ziji. We found, as predicted, the presence of a blocking effect in the blocking condition for logophoric ziji, as shown in Table 2. As for the non-blocking empathic condition, in which dependency between ziji and an empathic antecedent is assumed to be marginal, Chinese NSs accepted the LD interpretation of ziji in the empathic non-blocking condition at 66.0%. They also displayed a blocking effect in the empathic blocking condition. Our Chinese NS results matched the L2 results from Umeda et al. (2017), demonstrating a clear L1 source of transfer from Chinese ziji in L2 Japanese. In light of these additional data, we will propose that Chinese L1 and Japanese L2 data by Chinese-speaking learners are better accounted for by a proposal by Wang and Pang (2012), according to which Chinese LD ziji is not purely logophoric but is associated with an empathy requirement which induces the blocking effect for both empathic and logophoric LD antecedents.

(1) Empathic condition

   Mary-Nom Ken-Nom classroom-at self-Acc criticized after went.home
   ‘Mary went home after Ken criticized her/himself in a classroom.’

b. Mary-ŋa [watasi-ŋa kyoositu-de zibunŋ-o semeta atode] kaetta.
   Mary-Nom i-Nom classroom-at self-Acc criticized. after went.home
   ‘Mary went home after I criticized myself (*her) in a classroom.’
(2) Logophoric condition

   Mary- Nom Ken-Nom kitchen-at self- Acc criticized-Comp said
   ‘Mary said that Ken criticized her/himself in the kitchen.’

b. Mary-ga [watasi-ga kitten-de zibun-o semeta-to] itta.
   Mary- Nom. I-Nom kitchen-at self- Acc criticized-Comp said
   ‘Mary said that I criticized her/himself in the kitchen.’

(3) a. Mary shuo [Ken pipi-le ziji].
   Mary say Ken criticize-Perf self
   ‘Mary said that Ken criticized her/himself.’

b. Mary shuo [wo pipi-le ziji].
   Mary say I criticize-Perf self
   ‘Mary said that I criticized myself (*her).’

(4) ??[Zhangsan lai kan ziji de shihou], Lisi zheng zai kan shu.
   Zhangsan come see self DE moment Lisi now at read book
   ‘Lisi was reading when Zhangsan came to visit him.’ (Huang, et al., 2009: 346)

Table 1. Japanese version (From Umeda et al. [2017]) (the choices of True, out of 4 tokens)

<table>
<thead>
<tr>
<th>Context</th>
<th>Non-blocking</th>
<th>Blocking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>local</td>
<td>LD</td>
</tr>
<tr>
<td>Japanese NS (n = 36)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empathic</td>
<td>2.72</td>
<td>2.33</td>
</tr>
<tr>
<td></td>
<td>(68.1%)</td>
<td>(58.3%)</td>
</tr>
<tr>
<td>Logophoric</td>
<td>1.86</td>
<td>3.44</td>
</tr>
<tr>
<td></td>
<td>(46.5%)</td>
<td>(86.1%)</td>
</tr>
<tr>
<td>L2 group (n = 28)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empathic</td>
<td>2.61</td>
<td>1.89</td>
</tr>
<tr>
<td></td>
<td>(65.2%)</td>
<td>(47.3%)</td>
</tr>
<tr>
<td>Logophoric</td>
<td>2.39</td>
<td>2.53</td>
</tr>
<tr>
<td></td>
<td>(59.8%)</td>
<td>(63.2%)</td>
</tr>
</tbody>
</table>

Table 2. Chinese version (the choices of True, out of 4 tokens)

<table>
<thead>
<tr>
<th>Context</th>
<th>Non-blocking</th>
<th>Blocking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>local</td>
<td>LD</td>
</tr>
<tr>
<td>Chinese NS (n = 28)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empathic</td>
<td>2.21</td>
<td>2.64</td>
</tr>
<tr>
<td></td>
<td>(55.3%)</td>
<td>(66.0%)</td>
</tr>
<tr>
<td>Logophoric</td>
<td>1.92</td>
<td>2.53</td>
</tr>
<tr>
<td></td>
<td>(48.2%)</td>
<td>(63.3%)</td>
</tr>
</tbody>
</table>

References:
Cross-linguistic influence in the processing of possessive pronouns in L2 Norwegian
Brechje van Osch¹, Merete Anderssen¹, Natalia Mitrofanova¹, & Ludovica Serratrice¹,²
¹ Arctic University of Norway (UiT), ² University of Reading

A long-standing debate in the field of multilingualism concerns the extent to which different languages in a speaker’s mind influence each other, a phenomenon commonly called cross-linguistic influence (CLI) (Ringbom 1987). Given that many studies compare bilinguals to monolinguals, it is not always possible to disentangle effects of CLI from general effects of the multilingual experience, such as reduced exposure and/or added processing load (Sorace & Serratrice 2009). In this study we explore CLI by comparing bilinguals to bilinguals.

The study investigates the processing of possessive pronominal agreement in Norwegian as an additional language by adult learners with structurally different L1s: Spanish, Italian, English, Dutch, Russian, German, and Turkish. The participants have been recruited via social media, the experiment is currently running on the online platform Gorilla. In this abstract we submit the experimental design and the predictions, the results will be ready by the time of the conference.

Norwegian possessive pronouns are typically postnominal and come in two sets. In local binding, the pronouns sin (masculine) si (feminine) and sitt (neuter) are used, which agree in gender with the possessee noun (example 1). In non-local binding, the pronouns hans (masculine) and hennes (feminine) are used, which agree in gender with the possessor (example 2). The L1s in our sample differ with respect to their pronominal agreement systems. Russian and Polish possessive agreement works similar to Norwegian. Romance possessive pronouns agree with only the possessee (example 3), while in Dutch they agree with only the possessor, as in English (example 4). German pronouns agree in gender with both possessor and possessee simultaneously (example 5), and Turkish pronouns with neither of them (example 6).

Previous research has shown that L2 speakers of English whose L1 is a Romance language often produce errors with possessive pronouns (i.a. Zobl 1985, Collins et al. 2009, White et al. 2007, Anton Méndez 2011), especially when there is a mismatch between the gender of the possessor and the possessee (e.g. *John kisses her mother), where the gender of the noun impedes the selection of the correct gender of the pronoun at the stage of sentence planning. Relatively less attention has been paid to the comprehension of pronouns, a notable exception being Lago et al. (2019), who tested the processing of possessor agreement in L3 German by Spanish-English bilinguals. Spanish-dominant speakers were less sensitive to possessor agreement errors than English-dominant ones, suggesting CLI. However, contrary to the overwhelming evidence from production studies, no support for a mismatch effect was found. This may be explained by the fact that, in comprehension, the pronoun is encountered before the noun, and therefore no interference from the gender of noun can take place.

Crucially, Norwegian pronouns are by default postnominal, which means that the gender of the noun can in fact influence the processing of the gender of the pronoun. Our study will therefore be able to answer the thus far unanswered question as to whether mismatch effects between the gender of the possessor and the possessee also apply in the domain of comprehension. Our participants, who will be matched in terms of age of onset, length of exposure, and proficiency in Norwegian and English, carry out a timed judgment task and a self-paced reading task including sentences as in examples 7 and 8, where grammaticality and gender match between possessor and possessee are manipulated. The results of the study will have important implications for models of cross-linguistic influence, and multilingual language processing.
Examples

1. Jan i kysser mora si.
   “John kisses his (own) mother.”
2. Jan er sint på Peter, fordi Peter kysser mora hans.
   “John is angry at Peter, because Peter kisses his mother.”
3. Gianni bacia sua madre.
   “John kisses his mother.”
4. Jan kust zijn moeder.
   “John kisses his mother.”
5. Jan küsst sein-e Mutter.
   “John kisses his mother”
   “John kisses his mother.”
7. Arthur møter ikke mye folk, men han møter mora si hver mandag.
   “Arthur meets not many people, but he meets mother each Monday.”
8. Mia møter ikke Lucas så ofte, men hun møter mora hans hver mandag.
   “Mia doesn’t meet Lucas o often, but she meets his mother every Monday.”

References


Can Italian si-causative and venire passives prime English passives in late learners?
Ilaria Venagli1, Michaela M. Vann2, Giulia Bencini2, & Virginia V. Valian3

1University of Konstanz, 2 Ca’ Foscari University of Venice, 3 Hunter College & CUNY Graduate Center

We investigate the representational changes that may occur in late bilinguals’ production of passives, both as a function of L2 proficiency and of cross-linguistic overlap. Cross-linguistic priming tasks, where participants process prime sentences in one language and respond in another language, are increasingly used to investigate the nature, processing, and development of syntactic representations in late bilinguals (Hartsuiker et al., 2017). We ask whether a structure that exists only in the learner’s L1, such as the Italian si-causative passive (see Table 1), can prime a structure in the L2 that is not directly parallel. According to the Shared Syntax Account (Hartsuiker et al., 2017; Hwang et al., 2018; Son, 2020), priming may still occur in such circumstances. Whether L1- and L2-specific syntactic variations and L2 proficiency modulate priming across languages remains controversial (Son, 2020, p. 1244). We examined cross-linguistic priming of target passives in English when primed by Italian “venire” passives (similar to English passives) and by Italian “si-causative passives” (which English does not have). Previous within-language studies in Italian have found that venire passives prime si-causative passives in children (Manetti & Belletti, 2015). Whether the converse holds in adults is unknown.

Method. 84 late bilinguals (Italian L1 English L2) were recruited and tested remotely. English proficiency was self-rated using the CEFR (47 were C1/C2, i.e., coded as high proficiency; 27 were B1/B2, i.e., coded as low proficiency). Participants read and copied 24 primes and 24 fillers in Italian and subsequently described target pictures in English. There was no lexical overlap between prime and target stimuli. Examples are given in Table 1.

Results. Participants’ responses were analyzed using glmer models in R. We predicted the log-odds of English passive production with prime condition and participants’ proficiency (high vs. low proficiency) as fixed effects. We allowed for random intercepts for subjects and item numbers and added the slope for condition for subjects and items. Proficiency predicted the production of English passives ($p = <0.05$). Unexpectedly, the prime condition was not significant: The production of passives after venire-passives (high proficiency = 0.12; low proficiency = 0.07) and si-causative passives (high proficiency = 0.11; low proficiency = 0.05) was not significantly greater than after active primes (high proficiency = 0.11; low proficiency = 0.03). Table 2 shows the best fit model.

Discussion. Our aim was to determine the extent of shared cross-linguistic representations in a case of L1-specific syntactic variation. Neither venire-passives nor si-causative passives increased the production of passives in English relative to active primes. One possibility is that si-causatives were not processed semantically as passives, perhaps because the subject has agentive and volitional properties associated with the initiator role, therefore overlapping with actives. To explore this hypothesis, we conducted a semantic interpretation task with si-causative and regular transitive passives, asking a different group of participants (N=57) to identify the agent and patient role. We found that Italian native speakers are less accurate and slower in assigning thematic roles in si-causative passives relative to transitive passives. We suggest that weak abstract representations of the primed structures might explain our null priming effects. Finally, the effect of L2 proficiency on cross-linguistic priming effects is still controversial in the literature (Son, 2020, p. 1244). The Shared Syntax Account (Hartsuiker et al., 2017) predicts different developmental stages of abstract representations as a function of increasing L2 proficiency: One possibility is that our participants were not proficient enough to have shared abstract representations for passive constructions between their L1 and L2.
Table 1. Example stimuli

<table>
<thead>
<tr>
<th>Example sentences</th>
<th>Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Il papà aiuta il figlio per la verifica</td>
<td>Active sentence</td>
</tr>
<tr>
<td>The dad helps the son for the test</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Il figlio viene aiutato dal papà per la verifica</td>
<td>venire-passive</td>
</tr>
<tr>
<td>The son gets helped by the dad for the test</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Il figlio si fa aiutare dal papà per la verifica *</td>
<td>si-causative passive</td>
</tr>
<tr>
<td>The son himself makes helped by the dad for the test</td>
<td></td>
</tr>
</tbody>
</table>

*Italian si-causative passives are syntactically and semantically different from essere/be or venire/get passives, in that they involve the reflexive clitic si which is the external argument of the causative auxiliary fare, and carries out the initiator role (Belletti, 2020).

Table 2 - Best fit model

<table>
<thead>
<tr>
<th>Fixed Effects</th>
<th>Estimate</th>
<th>SE</th>
<th>z-value</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-4.20</td>
<td>0.42</td>
<td>-9.91</td>
<td>-5.04 to -3.37</td>
<td>&lt;0.00</td>
</tr>
<tr>
<td>si-causative-passive</td>
<td>0.17</td>
<td>0.38</td>
<td>0.44</td>
<td>-0.58 to 0.91</td>
<td>0.66</td>
</tr>
<tr>
<td>venire-passive</td>
<td>0.29</td>
<td>0.36</td>
<td>0.79</td>
<td>-0.43 to 1.00</td>
<td>0.43</td>
</tr>
<tr>
<td>Proficiency</td>
<td>0.76</td>
<td>0.30</td>
<td>2.54</td>
<td>0.17 to 1.35</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>si-causative-passive*Proficiency</td>
<td>0.15</td>
<td>0.19</td>
<td>0.82</td>
<td>-0.21 to 0.53</td>
<td>0.41</td>
</tr>
<tr>
<td>venire-passive*Proficiency</td>
<td>-0.19</td>
<td>0.16</td>
<td>-1.19</td>
<td>-0.51 to 0.13</td>
<td>0.23</td>
</tr>
</tbody>
</table>

References
2. Belletti, A. (2020). (Reflexive) Si as a route to passive in Italian. In L. Franco, & P. Lorusso (a cura di), Linguistic Variation: Structure and Interpretation (pp. 73-86).
Determining prosodic effects in L2 grammars: effectiveness of different methodologies

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In biclausal sentences in Italian like (1), null pronouns are preferred when the antecedent is the subject of a higher clause; otherwise, overt pronouns are preferred. Research on pronoun interpretation has reported that L2 speakers of Italian overuse overt pronouns in contexts where null pronouns would be more appropriate; this has been attributed to problems at the syntax-discourse interface (Belletti et al. 2007; Sorace & Filiaci 2006), to processing problems (Sorace 2011) or to potential effects of prosody (White et al. 2017).

In this paper, we describe and compare two different experiments, presented online, designed to assess whether L2ers are sensitive to prosodic factors, in particular stress on overt pronouns and pauses between clauses. In both cases, our hypothesis was that stress and pause would lead to a shift away from the default interpretation of the pronoun. In both experiments, the task was administered remotely, via computer, using Alchemer, with participants who were intermediate and advanced L2 learners of Italian, L1s English or Dutch. (Exp 1 had 12 L2ers and 13 NS; Exp 2 had 26 L2ers and 18 NS.) Both tasks manipulated overt versus null pronouns, presence versus absence of stress and presence versus absence of pause. Both required participants to listen and respond immediately to sentences as they heard them. However, the methodologies differed and one appears to have been more effective than the other in eliciting significant effects.

Exp 1 included 30 biclausal sentences like (1), presented only auditorily, each followed by an oral comment about the potential antecedent, which participants had to agree or disagree with; see (2). The rationale for this methodology was as follows. The target sentences are all potentially ambiguous (antecedent can be subject/object/external). We wanted to determine if participants would accept the various interpretations (including external referents) without having to make comparisons between potential antecedents for the pronoun. One drawback of this task is that there was no context (linguistic or non-linguistic) for the external referent. Exp 2 included 36 auditorily-presented biclausal sentences, like those in Exp 1, preceded by written contexts. Participants listened to each sentence and indicated one referent for the pronoun. See (3). This is closer to the design employed in written tasks (e.g. Sorace & Filiaci 2006).

Both experiments yielded significant differences between null and overt pronouns for native speakers and L2ers alike and neither yielded significant effects for pause. We focus here on the results relating to stress. Exp 1 showed a non-significant trend in both groups for stress to have an effect, with stressed pronouns resulting in an increase in responses to external. See Fig 1 for the L2ers’ results. In Exp 2, stress proved to be significant, resulting in a reduction of responses to object and an increase in the alternatives, particularly for the advanced learners. See Fig 2.

Regarding the difference in results between the two experiments, we note first that choices of external referents were relatively low in both cases and that providing a context (as in Exp 2) did not make much difference. This may be due to the fact that it is more natural to assume that the referent will be within the closest spoken discourse, i.e. the sentence itself.

As for the absence of effects for pause in either experiment, we hypothesize that participants already assume the existence of a break between the two clauses (acoustically manifested in naturalistic speech as a pause, added duration and/or a specific intonational contour). Thus, manipulating pause does not make a difference to how they interpret the sentences.

Participants reported that Exp 1 required concentration as they listened online, in order to keep track of the names mentioned in test items and comments. Exp 2 was more successful in eliciting an effect of stress (mostly an increase in choices of external referents) but at the same time potentially more metalinguistic, as participants had to select an antecedent rather than responding to a comment.

In conclusion, the advantages of Exp 1 in not requiring participants to make conscious decisions about referents appears to have been lost due to task difficulty. We suggest that this methodology is nevertheless worth pursuing, possibly by adapting the procedure to allow test items and/or comments to be read as well as heard, and by finding some means to make external referents more prominent, which is not a straightforward issue in online or offline tasks.
Lorenzo ha scritto a Roberto quando Ø/lui si è trasferito a Torino.
‘Lorenzo wrote to Roberto when (he) moved to Turin.’

Example test item (Exp 1):

Target sentence (audio): Lorenzo ha scritto a Roberto quando Ø/lui si è trasferito a Torino.
‘Lorenzo wrote to Roberto when (he) moved to Turin.’

Comment (audio):
Subject: È Lorenzo che si è trasferito a Torino.
‘It is Lorenzo who moved to Turin.’

Object: È Roberto che si è trasferito a Torino.
‘It is Roberto who moved to Turin.’

External: È una persona diversa da Lorenzo e Roberto che si è trasferito a Torino.
‘It is a person other than Lorenzo or Roberto who moved to Turin.’

Example test item (Exp 2):

Written context (on screen) Bernardo, Corrado e Francesco sono amici.
(Bernardo, Corrado and Francesco are friends.)

Test sentence (audio) Bernardo ha scritto a Corrado dopo che lui si è trasferito a Torino.
(Bernardo wrote to Corrado after he moved to Turin.)

Question (on screen) Chi si è trasferito a Torino?
(Who moved to Turin?)

Choices (on screen) Bernardo, Corrado, Francesco

Figure 1. L2ers’ results for Exp 1

Figure 2. L2ers’ results for Exp 2

References

