

New Approaches to Bilingualism and Multilingualism and Language Learning/Teaching Conference (BiMuLT)



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Book of Abstracts

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Keynote Speakers

Abstracts are alphabetized by surname of the lead author.

The ‘Attrition via Acquisition model’ to investigate native grammatical attrition

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It is widely recognised that learning more than one language delivers a range of cultural, socioeconomic and wellbeing benefits, both for individuals and for the wider society. By contrast, hardly any emphasis is typically placed on the other side of the coin, namely whether becoming proficient in a second language might negatively affect a speaker’s knowledge, use or confidence in their native language. Furthermore, grammatical attrition has not always been straightforward to account for by formal models of language acquisition which generally assume that speakers’ grammars remain impervious to change beyond the childhood period of language acquisition.

In this talk I will present and discuss the ‘Attrition via Acquisition (AvA)’ formal model of the human language faculty (Hicks and Domínguez, 2019) that accommodates the possibility of ‘attrition’ (i.e. modification or loss) of morphosyntactic properties in a first language. The AvA model integrates a formally explicit generative grammar (see Chomsky 2000, 2001) into a generalised model of language acquisition that decouples linguistic input from acquisitional intake (following Lidz and Gagliardi, 2015). A key feature of this model is that the mechanism of attrition exists independently of the language faculty via the language acquisition device. This implies that L1 grammatical attrition is simply a possible (and expected) outcome of acquisition under a particular set of external and internal conditions.

I will explore the main predictions of the model for a variety of grammatical structures and explain (using real examples) how the model can be useful in predicting when attrition is likely to take place.

Assigning grammatical gender by young Australian heritage Greek speakers

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(with Demetris Karayiannis, Maria Kambanaros, and Artemis Alexiadou)

A ‘heritage language’ is the language that early bilingual children acquire in their home/family environment before becoming dominant in the main language of their country/society (Polinsky and Kagan, 2007). The growing field of linguistic inquiry into such heritage languages and their speakers (Polinsky, 2018) is of particular relevance for Australia, where still today (though perhaps decreasingly so), children from immigrant families acquire in their home/family environment a language other than English.

This talk presents a first study on grammatical gender investigating Greek as a heritage language acquired and used by young speakers from Greek-speaking family backgrounds in Adelaide, South Australia. The determiner elicitation task from Varlokosta (2005) was employed to assess the role of morphological and semantic cues when it comes to gender assignment for real and novel nouns. Ralli’s (1994) inflectional classes for Greek nouns and Anastasiadi-Symeonidi and Cheila-Markopoulou’s (2003) categories of prototypicality were employed in the analysis of the collected data. The performance of heritage speakers was compared to that of monolingual speakers from Greece (Varlokosta, 2011).

The Test for Grammatical Gender Assignment to Greek Nouns, which comprises 141 items in total (77 real and 64 novel nouns), was administered to 24 children (6–8 years of age) and 13 adolescents (15–18 years). The study assesses Greek heritage speakers’ accuracies in identifying the gender of real nouns (e.g., masculine *o pateras* ‘the father’, feminine *i kori* ‘the girl’, neuter *to mathima* ‘the lesson’) and to determine strategies for gender identification in novel nouns (e.g., putative masculine *kuperas*, putative feminine *tari*, putative neuter *pefisma*).

The goals of this study were on the one hand to establish whether a determiner elicitation task is a suitable tool for the population in question, and on the other hand to provide novel data on the accuracy of heritage Greek speakers in assigning grammatical gender to real nouns, to investigate whether the lack of semantic information is a significant factor in gender assignment in novel nouns, and to investigate to what extent the same lexical, morphological, and referential principles guide the grammatical gender assignment in the mental grammar of heritage and homeland speakers.

One particular question regards how Greek heritage speakers learn regular patterns across all declension classes and irregular nouns, and whether they utilize this knowledge when confronted with new words. The results indicate that—beyond age differences in the two groups—a formal phonological rule guides gender assignment in the production of heritage speakers which departs from initial expectations. This study highlights the relevance of access to the inflectional paradigms (case and number) of the nominal suffixes in question. This holds particularly for the reliance on strictly phonological cues by the heritage speaker population in such a way that gives rise to ambiguous gender-marking situations not found in monolingual Greek homeland speakers’ productions.

The obvious differences in accurately assigning gender by heritage speakers compared to native speakers from Greece can be compared to other instances of learning Greek in the diaspora or as a second language. Importantly, it can also be viewed from the perspective of literacy, which develops as part and parcel of school education in one but not so much in the other community. Although not part of this research, the case can be made that heritage language instruction should look beyond communicative competencies and appropriately teach grammatical aspects.

Treating multilingual aphasia: The role of cross-linguistic transfer

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Over two thirds of the world's population speak more than one language, generating interest in the field of bilingual aphasia and particularly its recovery. Among the many theories on recovery patterns, it is widely accepted that parallel recovery of a bilingual's languages is the most common pattern. There are numerous factors that can affect the recovery of aphasia such as age, severity of aphasia, context of acquisition, degree of similarity of the languages, and relevance of the environment to the language. Moreover, structurally similar languages tend to be impaired and recover more similarly than structurally different languages.

It is widely accepted that regular speech-language therapy generally benefits recovery from aphasia and especially during the chronic stage (>6 months post-onset). Nevertheless, there is no treatment method that is yet confirmed as the most effective. Additionally, the mechanics of how therapy shapes recovery are still unspecified. With regards to therapy in multilingual aphasia, there is little recent research on the transferability of treatment benefits to a patient's untreated languages.

In this talk, evidence from early studies will be presented that suggest that intervention in one language will indeed transfer to other languages, however they lack adequate information about the specific language skills recuperated. More recent studies report cross-language transfer (CLT), especially when L1 was treated.

CLT is often a goal in bilingual aphasia therapy, since an intervention of all languages of the patient is hardly achievable. The factors that have been proposed to influence to some extent the cross-linguistic transfer are the therapy approach, the pre-morbid proficiency and the word type. A number of authors have explored the effect of the semantic and phonological treatment in bilingual aphasia therapy. Overall, seven (7) clinical implications will be proposed from the research evidence in relation to cross-linguistic transfer of therapy effects. Finally, organism-intrinsic (neural) factors and organism-extrinsic (treatment) variables that influence CLT effects will be explored.

“-Lingualism” as a spectrum: Consequences and methodological insights when it includes more than one language

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In this talk, I will problematize the categorizations of mon-, bi-, multi-lingualism arguing that they are too overlapping, multifarious and dynamic to maintain strict divides. I will highlight how and why this has been especially problematic for various questions important to language acquisition, processing and related brain structure/function research, especially when -lingualism includes more than one language. I will highlight some recent studies from my lab—in language acquisition, processing and brain structure and function in bi/multilingualism—where treating “-lingualism” as a contentious variable of experience has been especially fruitful. Finally, I will discuss the larger implications of this looking towards the future.

Full Length Paper Presentations

Abstracts are alphabetized by surname of the lead author.

Degree of bidialectal exposure modulates sensitivity to conflicting grammatical properties across closely related varieties: An ERP study

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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 and 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; Pliatsikas et al., 2021). 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. Standard Norwegian and most Southern and Western 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 (*Husan 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 (LSBQ; 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 Ungrammatical condition, a predicative adjective mismatched the gender of the subject noun, yielding an ungrammatical string across all dialects of Norwegian. In the Number Ungrammatical condition, a predicative adjective agreed in number with a plural subject noun, an ungrammaticality in Northern Norwegian otherwise licensed by the Standard as well as most non-Northern varieties.

ERP results (Fig. 1) show a clear P600 effect for all participants in response to the gender violation. In the number contrast, the group as a whole shows no effect. Next, we regressed the amplitude of the P600 effect (difference between number ungrammatical and number grammatical in 500-900ms)

to the composite score indexing relative exposure to Northern Norwegian. Correlation analyses (Fig. 2) show a clear relationship between sensitivity to the number violation and exposure to Northern Norwegian, an interaction absent for gender. 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.

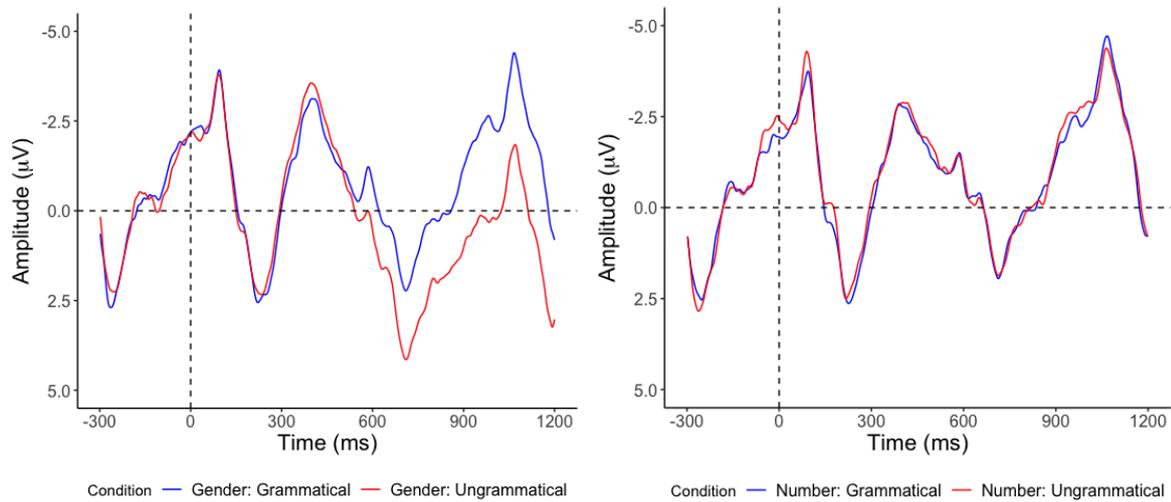


Figure 1. Event-related potentials for the gender (left) and number (right) violations at electrode

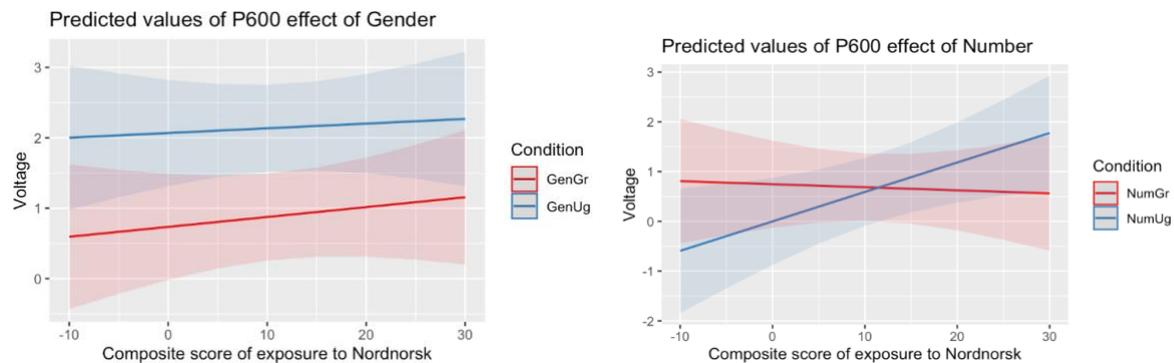


Figure 2. Correlation between average voltage in the P600 (500-900ms) time window and exposure to Northern Norwegian for the two pairs of conditions: gender (left) and number (right).

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Urdu-English bilinguals: What aspects of bilingualism predict phonological awareness skills in children?

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Along with linguistic and cognitive differences across monolinguals and bilinguals, there are important nuances within bilinguals – including language background (Bialystok and Sullivan, 2017; de Bruin, 2019; Gullifer and Titone, 2019). Researchers typically assess child bilingual language background via oral language evaluations and parental reports, such as the LEAP-Q (Marian et al., 2007). Child language background factors, including expressive vocabulary, age of acquisition (AoA) and language exposure/usage across spoken languages, influence development of literacy precursors such as phonological awareness. We seek to determine which bilingual language background factors best predict English and Urdu phonological awareness skills in Urdu-English simultaneous bilinguals (i.e., AoA between 0-3 years).

We tested 95 typically-developing Grade 1-2 (i.e., 6-8 years) Urdu-English bilinguals across Canada and Pakistan on their English (via EVT, Wagner et al., 2013; CTOPP, Williams, 2007) and Urdu expressive vocabulary and phonological awareness skills. Parental reports of child bilingual language background were obtained via the LEAP-Q.

We conducted a multiple regression analysis for the two dependent variables, Urdu and English phonological awareness scores, in relation to eight predictors: expressive vocabulary, AoA, language exposure, and language usage. English expressive vocabulary significantly predicted English phonological awareness; Urdu and English expressive vocabulary (both combined and separate) significantly predicted Urdu phonological awareness — thereby indicating both within- and across-language influences on child phonological awareness performance, depending on the language(s) of assessment.

While previous studies examine whether precursors of literacy are the same across monolinguals and bilinguals (e.g., Kuo et al., 2016), this study highlights aspects of child bilingual language background, specifically expressive vocabulary, that predict phonological awareness — an important literacy precursor. Our findings highlight the importance of comprehensively evaluating child bilingual language background to facilitate literacy precursor skill development, and ensure external generalizability of emergent biliteracy research findings — depending on the type of bilingual population and language(s) assessed.

Keywords: Bilingualism, Child language background, Heritage languages, Phonological awareness, Assessment tools.

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Comprehension of Ukrainian by Estonian speakers in mediated Receptive Multilingualism: perceived similarity and extra-linguistic factors

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This study reports on the experimental settings on how speakers of L1 Estonian comprehend L3 Ukrainian via their acquired knowledge of L2 Russian using mediated Receptive multilingual mode. Mediated Receptive Multilingualism is possible between typologically distant languages via acquired L+, which is closely related to the target, e.g., Estonians understand Ukrainian via Russian (Branets et al., 2019). The specific focus of this study is on the perceived similarity and extra-linguistic factors that enhance comprehension. The perceived similarity is defined as “what language learners perceive to be similar between languages” (Ringbom, 2007: 7). The quantitative data was collected based on the participants’ debriefing interviews; participants reported how perceived similarities were working between Ukrainian and Russian and detected other extra-linguistic predictors that came into play when perceived similarity was not helping.

The study was conducted with 30 speakers of Estonian as L1 with B1-B2 proficiency in Russian who filled out a sociolinguistic questionnaire (Kaivapalu, 2015), performed a C-test in Russian (Grotjahn, 1987), and completed three tests in Ukrainian in terms of individual words (Shumarova, 2000) and text as a whole (Gooskens, 2013). After completing the tasks, participants provided their explanations during the debriefing session.

The results have shown that Estonians were able to understand Ukrainian without previous exposure via their knowledge of Russian. The perceived similarity between Ukrainian and Russian was both positive and negative. There were cases when participants were able to rely only on similarity. However, there are also cases when participants experienced difficulties with different inflections, false friends, cognates with a different meaning, unfamiliar words in Russian, etc., and it turned out not to be enough to rely only on similarities. In some cases, participants turned to the context to grasp the meaning of the words, and in these cases context outweighed similarity. Based on the debriefing interviews such extralinguistic factors as general knowledge, exposure to various registers of Russian, M-factor, meta-linguistic awareness, and learnability were detected. The participants' explanations provided a more broad perspective on the comprehension process in receptive multilingualism.

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Do English-Spanish bilinguals differ when acquiring Spanish dative alternation as a heritage language and as the language of the community?

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The present proposal aims at shedding further light on the status of two types of complex predicates in Spanish, as analyzed in the spontaneous production of heritage Spanish bilingual children when compared to non-heritage Spanish bilingual children's data. In particular, it examines the dative alternation (DA) between *a/para*-datives (1a), and dative clitic doubled (DCLD) structures (1b).

- (1) a. Entregué las llaves al conserje [*a*-dative]
give.1sg.past the keys to+the janitor
'I gave the keys to the janitor'
b. Le entregué las llaves al conserje [DCLD]
him.cl.dat. give.1sg.past the keys to+the janitor
'I gave the janitor the keys'
[Demonte 1995: 6]

There are two opposing views on the grammatical relationship that exists between the two DA structures. Demonte (1995) argues for the derivation of DCLDs from *a/para*-datives, as marked by the presence-absence of a dative clitic, while Cuervo (2003, 2007) proposes two syntactically and semantically different structures. The present study tests these formal accounts by using acquisition data.

Previous works on Spanish monolingual (L1) acquisition have reported the early emergence of DCLDs (Torrens and Wexler, 2000) which suggests they are the base structure. To date, no works on Spanish bilingual acquisition have addressed this issue.

In order to fill this gap, Spanish DA structures are examined in the spontaneous longitudinal production of 7 English-Spanish bilinguals and in the corresponding child-directed speech, as available in CHILDES (MacWhinney, 2000). The English-Spanish bilingual children's social and home contexts are also taken into account: 2 of the children live in a Spanish social context and Spanish is their L1 (1;01-3;01); the other 5 live in an English social context and, thus, Spanish is restricted to the home context and is their heritage language (1;03-3;03). Results show a fairly concurrent emergence of DA structures and a similar incidence throughout development; this suggests DCLDs and *a/para*-datives are not derivationally related, in line with Cuervo (2007, 2003). Besides, no differences between the two language groups appear and child output pattern seems to correlate with their corresponding adult input.

Key words: dative alternation, acquisition, heritage, social context, home context

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Russian-English code-switches of bilingual children in Russia and the USA

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The main objective of the article is to compare the structural characteristics of code switches in the speech of four-year-old children who have been acquiring Russian and English in Russia and the USA. In the Russian family, where both parents represent the same ethnic group and the same culture (Russian) and are native speakers of the same language (Russian), the children simultaneously acquired Russian and English. The bilingual strategy in this family is “one parent—one language”: the mother and her relatives spoke Russian to the children, while the father and his parents interacted with the boys in English. The children’s dominant language is Russian.

In the USA, the children represented both Russian mono-ethnic and Russian-American bi-ethnic families. Their dominant language was English, but in the situations where their speech was observed (at classes in Russian school), they usually spoke Russian.

Linguists have described heritage languages in various aspects and situations of their maintenance and attrition (see publications: Polinsky and Kagan, 2007; Benmamoun et al., 2013; Scontras et al., 2015; Kupisch, Rothman, 2016; Polinsky, 2018; Abutalebi and Clahsen, 2020; Koroteev et al., 2020, among others). However, child code-switching from Russian to English, with Russian as a heritage language, has been under-researched (Schmitt, 2000, 2008). Moreover, Russian-English code-switches have not been compared in different contact situations.

The author analyzes intrasentential code-switches within the framework of the Matrix Language Frame Model by C. Myers-Scotton (Myers-Scotton 1997, 2002; Myers-Scotton and Jake 2017).

The data (855 mixed utterances) were extracted from video recordings and audio recordings of communicative situations when the children interacted with each other and with adults.

The results of the mixed-method research show that the structures of code-switches in Russian mono-ethnic bilingual children in Russia and Russian heritage bilingual children in the USA have much in common.

The most notable differences are mainly quantitative. Interpreting the obtained results, the author argues that structural characteristics of code switches can reveal the dynamic nature of children's bilingual development and the sociocultural contexts of their interaction.

The results of the research may give new insights into the mutual penetration of Russian and English morphosyntactic structures.

Bilingual experience affects white matter integrity across the lifespan

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Bilingual experience has been reported to change the structure and function of the brain across the lifespan (Bialystok, 2021). Bilingualism-induced neural plasticity has also been associated with increases in compensatory mechanisms to age-related neurocognitive decline, delaying dementia symptom onset and leading to a more favorable trajectory of neurocognitive aging (Perani and Abutalebi, 2015). However, the majority of research examining bilingual effects on neurocognitive ageing has typically operationalized bilingualism as a dichotomous variable, despite it being a heterogeneous experience across individuals (Leivada et al., 2020; Luk and Bialystok, 2013). Therefore, little is known about how the degree of bilingual engagement modulates neural outcomes in ageing. Furthermore, little research to date has examined bilingualism-induced effects on neural plasticity in middle-aged individuals. Thus, our understanding of bilingual experience effects on the trajectory of neural decline across the adult lifespan is also limited. In the present study we employed diffusion tensor imaging (DTI) – an imaging method which allows one to measure white matter integrity in the brain – to examine whether bilingualism, and the degree of engagement in bilingual experience, modulates the nature or rate of white matter decline associated with aging across adult lifespan.

DTI and detailed language history data, via the language and social background questionnaire (LSBQ; Anderson et al., 2018), were collected from a cohort of monolingual and bilingual individuals (n=78) spanning a wide age range (30-84 yrs.). We extracted measures of white matter integrity, mean diffusivity (MD) and fractional anisotropy (FA) values. WM integrity was gauged at the whole-brain level as an indicator of total brain health, and in several white matter tracts, implicated in language control and aging. Specifically, we focused on the corpus callosum (CC), bilateral inferior fronto-occipital fasciculi (IFOF), and bilateral superior longitudinal fasciculi (SLF) (Fig. 1) (Anderson et al., 2018; Gold et al., 2012; Hämäläinen et al., 2017; Luk et al., 2011). First, generalized additive models were run on a matched monolingual and bilingual sample, examining effects of age on white matter integrity measures and whether bilingualism modulates this effect. This analysis revealed a significant effect of age within the monolingual group for whole brain MD (Fig. 2), right IFOF MD, and right SLF FA. However, the age effect within the bilingual group was not significant, indicative of a slower decline in white matter integrity within the bilingual group. Second, general linear models were run on the entire participant sample, which examined an interaction between age and a continuous measure of bilingual engagement on white matter integrity. This analysis revealed a significant interaction of age and degree of bilingual engagement on white matter integrity measures in several regions of interest. Notably, bilingual engagement was found to affect whole brain MD and FA values, indicating that lesser engagement in bilingual language use across the lifespan correlates with a steeper decline in white matter integrity with age. Together these results indicate bilingualism, and, specifically, degree of bilingual engagement, positively impacts the trajectory of age-related decline in white matter integrity across the lifespan.

Keywords: bilingualism; white matter; aging; DTI

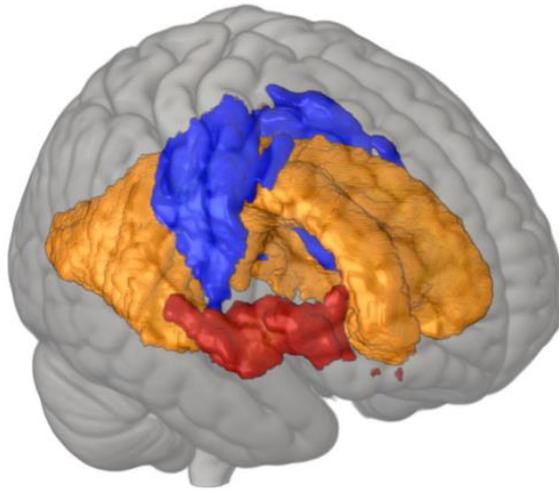


Figure 1. Illustration of regions of interest examined this study imposed on the MNI152 template. Bilateral SLF in blue, bilateral IFOF in red and callosal body in yellow.

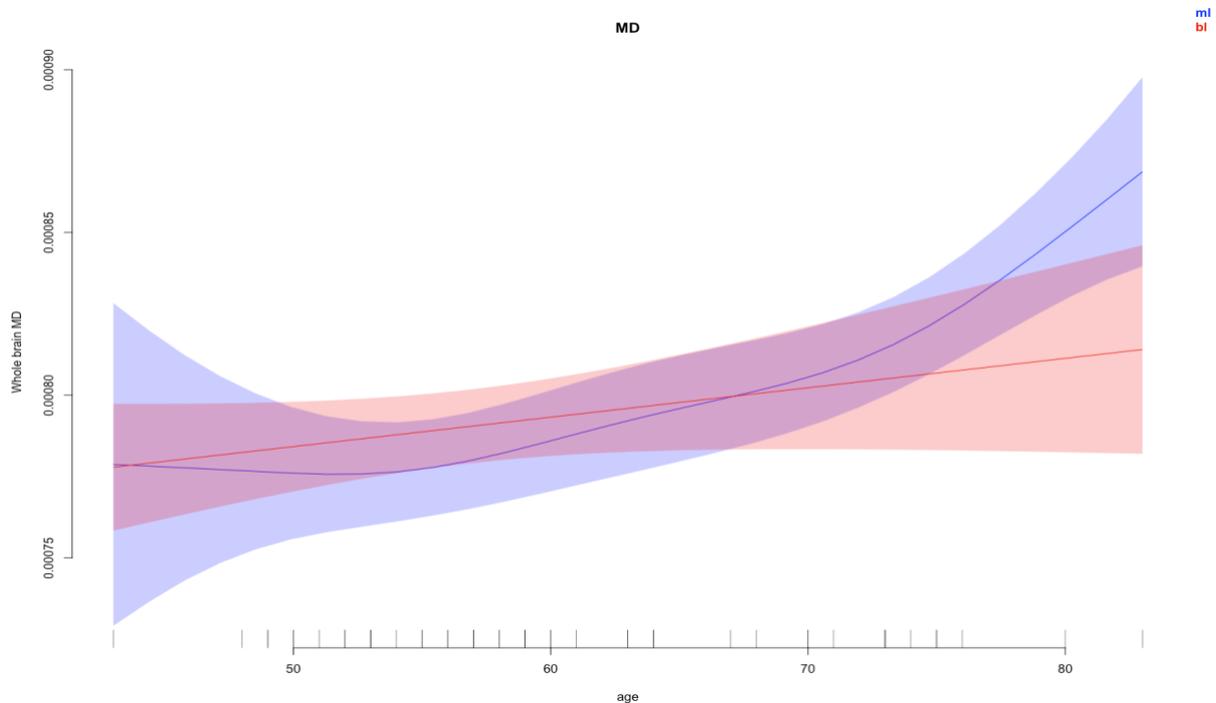


Figure 2. Whole brain mean diffusivity between-groups comparison in an age-matched monolingual and bilingual participant sample. Mean diffusivity plotted against age by group. Monolingual = blue; bilingual = red. Higher mean diffusivity signifies worse structural integrity.

Parents' perspectives on facilitators and barriers influencing their support of children's minority language and English language development in Canada

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Preschoolers who speak a minority language at home often begin school with a disadvantage since they need to learn the school's language in order to learn in school. This disadvantage impacts their communication skills, interactions with teachers and peers, and academic success. However, maintaining the home language is important for connecting with their families, accessing their religion, participating in their community, having high self-esteem, establishing their identity, and being resilient. While it is important to support both the children's home language and the language of schooling, parents can find it difficult to support their children's language development in both languages. In addition, many families who speak a minority language at home with limited English proficiency and small social networks were left isolated during the COVID-19 pandemic. The goal of our study was to assess the facilitators and barriers faced by parents in supporting the language development of their multilingual children, before and after the COVID-19 pandemic.

To understand the facilitators and barriers experienced by parents, we completed six semi-structured interviews with parents of pre-schoolers between the ages of 3 and 5, who lived in Edmonton (Canada), and spoke a minority language at home (Arabic, Hindi, Malayalam, Somali, Tamazight, and Urdu). The semi-structured interviews included questions regarding the parents' attitudes and support of their children's dual-language development, the facilitators and barriers faced by parents when supporting the development of these languages before and after COVID-19, and the additional resources they need to better support both languages. We analyzed the data using the qualitative method of directed content analysis (Hsieh and Shannon, 2005). This method makes use of both deductive and inductive coding. We completed deductive coding of data according to Bronfenbrenner's (1979) bioecological systems theory (child, microsystem, mesosystem, exosystem, and macrosystem) and to previous research that has identified barriers and facilitators faced by preschool staff in supporting dual-language development of children. Newly identified barriers and facilitators that were not previously established in the research were added using inductive coding.

Preliminary results revealed similar, different, and new facilitators and barriers as compared to those reported by preschool staff and previous research. These factors, organized within the bioecological systems theory, were related to the children, their families, their preschool, the relationship between families and the preschool as well as between other systems, and the culture. For example, there were facilitators and barriers regarding the attitudes and knowledge of parents and preschool staff, their technology access, the language barriers between parents and preschool staff, their relationship and communication, and the impact of parents' work.

This study helps us gain knowledge of specific facilitators and barriers within the local context of Edmonton. This knowledge is an important step in identifying gaps to implement appropriate strategies and recommendations. Therefore, we can target the most effective strategies according to the barriers found. In addition, knowledge of the facilitators already in place can guide us on which strategies to maintain and enhance. In the end, this will help us better support multilingual children's language development.

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A bilingual disadvantage is systematically compensated by a bilingual advantage: A PRISMA review

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One of the most debated topics in psycholinguistics concerns the effects of bilingualism on cognition. Although bilingualism is always an advantage (Bright and Filippi, 2019), the term ‘bilingual advantage’ was introduced to refer to results that showed that bilinguals may perform better than monolinguals in certain cognitive tasks. Early evidence suggested that the constant management of two languages enhances executive functions (Bialystok, 2001). Since then, this claim has been confirmed across various populations. At the same time, a growing number of studies report a cognitive disadvantage in bilingual populations (Gollan et al., 2002). In executive functioning (EF), different studies report contradictory findings, even when using the same tasks (Costa et al., 2008, Duñabeitia et al., 2014). While several explanations have been offered for this fact (Leivada et al., 2021), the degree to which a bilingual disadvantage is counterbalanced by a bilingual advantage is still unclear. The present systematic review addresses this question.

The starting point of this review is an observation that comes from the field of biology and relates to the notion of the trade-off. This notion refers to a negative correlation between processes that make use the same finite resources within an organism (West-Eberhard, 2003). We performed a systematic review of the literature on the bilingual disadvantage. The review was conducted according to the PRISMA Statement (Liberati et al., 2009). A systematic search of the literature was conducted in the following databases: PsycInfo, PsycExtra, APA Journals, and PubMed. The search strategy consisted of the following keywords: “bilingual”, “disadvantage”. Figure 1 presents the screening and selection process.

Our results can be split in the following categories: (i) studies that report both an advantage and a disadvantage (category: Advantage & Disadvantage); (ii) studies that report neither an advantage nor disadvantage (category: Neither Advantage, Nor Disadvantage); (iii) studies that report only an advantage (category: Advantage); (iv) studies that report a disadvantage for a population/language group for which an advantage has been also reported in the literature (category: Disadvantage & External Advantage); and (v) studies that report a disadvantage for a population/language group for which no advantage has been found in the literature (category: Disadvantage). Table 1 shows the obtained results for each category.

Encompassing a variety of tasks and populations, our results suggest that less than half of the screened studies report only a bilingual disadvantage. Among the studies that obtain evidence against a null result (i.e., excluding category (ii)), the remaining studies either report both an advantage and a disadvantage or only an advantage. To obtain the overall picture, we performed a second search of the literature, outside the sample obtained through the PRISMA method. This search targeted the specific populations mentioned in the studies that reported only a disadvantage. We found that 100% of these populations have been linked to bilingual advantages in other studies. We argue that this result suggests that the terms ‘bilingual advantage’ and ‘bilingual disadvantage’ should be conceived as inseparable parts of an overall fitness trade-off.

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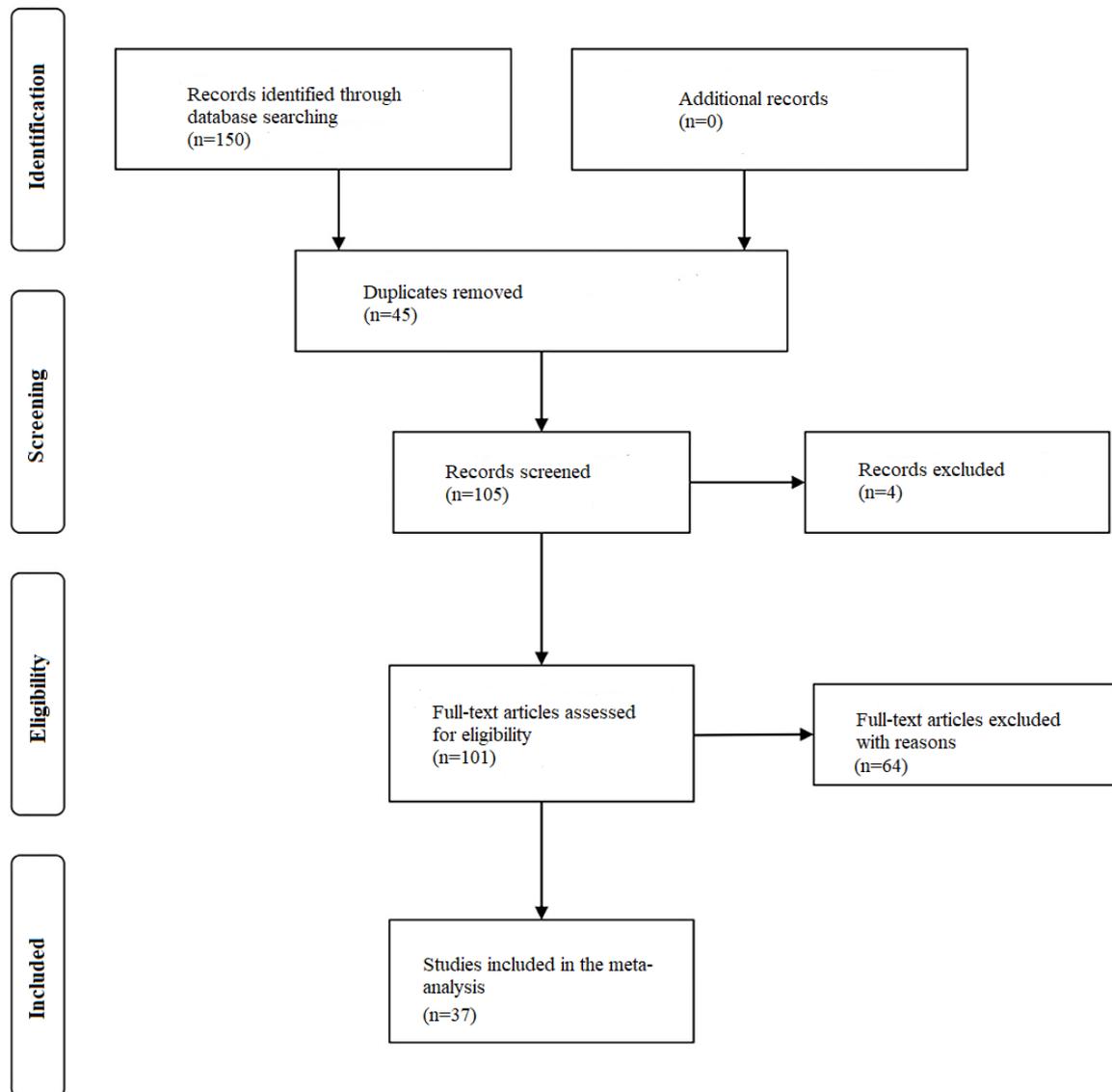


Figure 1: PRISMA flow chart

Category	Percentage	Number of studies (n=37)
Advantage & Disadvantage	21.62%	8
Neither Advantage, Nor Disadvantage	29.73%	11
Advantage	8.11%	3
Disadvantage & External Advantage	40.54%	15
Disadvantage	0.00%	0

Table 1: Summary of the results

Heritage Russian in contact with English and Hebrew: Effects of cross-linguistic influence and input in the domain of morphosyntax

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Heritage language (HL) speakers use a language at home which is different from the dominant societal language (SL) around them (Benmamoun et al., 2013; Montrul, 2016; Polinsky, 2018; Rothman, 2009). Extensive studies of HL speakers have found HL acquisition of morphosyntax to be particularly fragile (Montrul, 2016; Polinsky, 2018). In general, HL grammar is affected by various internal and external factors, most notably cross-linguistic influence (CLI) and diminished input. CLI refers to transfer and imposition of one language's features onto the other. Thus, features that are similar in the HL and SL will be maintained better than those that are different. Diminished input posits that speakers with greater HL exposure, and later SL onset, will be more proficient.

The present study is among the first comparing early bilingual adults to each other, rather than to monolingual controls. We evaluate the performance of adult HL Russian speakers on a variety of morphosyntactic phenomena, focusing on HL Russian in contact with two SLs, Hebrew and English. These languages were specifically chosen for their morphosyntactic differences both from each other and from Standard Russian.

66 participants were sampled between the two groups. All participants were born in their country of residence or immigrated from the former USSR prior to age 5. The two groups were matched for age and sex and did not differ on background measures (ie. SL age of onset, etc). The groups exhibited comparable performance on an objective vocabulary baseline derived through a picture-naming task. Vocabulary size was found to be highly correlated with Russian use at home and at work. Participants were then tested on three experimental tasks assessing production accuracy of adjective-noun agreement, the accusative case, and numeral phrases.

Our results found that the SL-Hebrew group performed significantly better on adjective-noun agreement, with no notable group differences on accusative case or numeral phrases. This finding aligned with our hypotheses, as adjective-noun agreement works almost identically in Russian and Hebrew, but does not exist in English. Thus, this task shows a clear CLI effect. Next, a series of stepwise regressions showed Group to be the greatest predictor on adjective-noun agreement, with an additional small effect of home input. Home input was the only predictor on the accusative case and the primary predictor for numeral phrases, which also had an additional Group effect. The Group effect, pointing to CLI as the mechanism at play, is presumed to be present on numeral phrases as these require a mastery of grammatical gender, as is also the case in adjective-noun agreement. Our findings paint a complex picture of the interactions between CLI and input, with both being imperative in HL proficiency. The next steps in this study will include a detailed analysis of group-level performance on each individual task and a qualitative analysis of error types at the individual level.

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NN compounds put to the test in a boardgame: Can explicit instruction boost learning?

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Despite of the fact that noun modification in the form of noun-noun compounds (NN) in English (e.g., paper frog) is a very productive structure (Snyder, 2001) and it is also very common in the textbooks used in an average CLIL (Content and Language Integrated Learning) context in primary education in Spain (Gómez Garzarán and Fernández Fuertes, 2020), this structure is not typically part of the teaching practices or curricula in textbooks used in the L2 English classroom for L1 Spanish children. To add on, NN compounds in Spanish differs from English NN compounds not only in terms of productivity but also in terms of directionality (e.g., pirate boat vs. barcoboat piratapirate)

Additionally, the (lack of) effectiveness of explicit instruction versus implicit instruction when applied to language teaching has been widely discussed (a.o., Norris and Ortega, 2000; de Graaff and Housen, 2009). There is no clear answer as to whether one type of instruction should be favored over the other, and if so, under which specific conditions each instruction type should be implemented. However, explicit instruction is said to positively contribute to grammar knowledge (Spada and Tomita, 2010).

The purpose of our study is to analyze English NN compounds when a specially designed, explicit, NN-centered, teaching plan is implemented. In order to see if there is any effect of explicit instruction, we have tested 84 L1 Spanish-L2 English children from four participant groups that differ in terms of age (6-year-olds and 8-year-olds) and in terms of whether they have received explicit NN instruction (instruction group and non-instruction group)

To test our participants, we have designed a referential communication task (Yule, 1997), in the form of a boardgame. In this task, two distinct roles have been used: the director, assumed by the participant being tested, who had to describe a set of pictures so that the matcher (role assumed by the experimenter) could identify those pictures on a board in a given order. By means of this director-matcher task, participants have been prompted to orally produce NNs with a set of specifically designed pictures.

Results show (i) that explicit instruction does have a positive effect in that a more native-like production is achieved after the explicit instruction period in the instruction group when compared to the non-instruction group; and (ii) that length of exposure observed in the two age groups also has a parallel effect that is accentuated when combined with explicit instruction.

Besides the fact that a task designed as a game is an effective research method in a language learning/teaching scenario, these results also have a double implication: (i) that explicit teaching of grammatical properties is effective and (ii) that the teaching of English NNs renders positive results as seen in overall higher production rates and higher grammaticality rates in the production of these L2 English children

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Are heritage language vocabulary and grammar equally vulnerable to input?

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Heritage language (HL) outcome differences from the monolingual baselines do not seem to be random; instead, these differences can be related to the continuum of individual variation in HL exposure and use (Kupisch and Rothman, 2018; Polinsky and Scontras, 2020). The main objective of this study is to better understand the dynamic nature of the relationship between HL performance outcomes and the context in which these outcomes are obtained. In addition, we aim to capture the potential role the quality of input -- mothers' linguistic performance more specifically -- could play on HL vocabulary knowledge as well as morphosyntactic complexity.

To that end, we present data from child heritage speakers (HSs) of Persian (aged 6-13, N: 38) and their *own* mothers (aged 33-49, N: 20) in New Zealand and the UK as well as a control group of age-matched child monolinguals in Iran. All participants completed a film retelling task and their speech samples were measured in terms of clausal density (CD) (Scott and Stokes, 1995) and lexical sophistication (LS) (Schmid and Jarvis, 2014). Additionally, the mothers were interviewed based on a sociolinguistic questionnaire on language use/exposure patterns of their own and their children (Gharibi and Boers, 2017, 2019).

The analysis showed differences between the HSs and their monolingual controls *only* in LS scores ($p = 0.01$). We did a follow-up Random Forest analysis to extract variables (demographic and/or sociolinguistic) that correlate to the HSs' CD and LS scores. We were particularly interested in the relationship between the mothers' linguistic performance and language use patterns and their children's task performance scores. The analyses showed that while literacy was the most important variable for the HSs' CD ($p < 0.05$), for LS, age of the HSs at the time of the study was the most important one ($p = 0.001$). In addition, the mothers' scores were only important for their children's LS scores ($p < 0.05$).

At first glance, the asymmetry between grammar and lexicon might look surprising, since various studies have shown strong correlations between grammatical and lexical knowledge both in L1 and L2 contexts, especially lexical proficiency being a reliable measure for grammatical proficiency. However, given the findings of our study, we can assume that the HSs were less resistant to the negative effects of environmental/input related factors in their lexical development and seem to have had sufficient opportunities facilitating the development of a monolingual-like grammatical performance. Overall, our results offer further support to the previous findings showing that lexical development, especially in the home language of child bilingual is more vulnerable to input related factors compared to grammatical development which seems to be more robust (e.g., Armon-Lotem et al., 2021; Pearson et al., 1997; Paradis and Genesee, 1996). More importantly, our findings show that although both grammar (as measured by CD) and vocabulary (as measured by LS) in child HSs are influenced by input and environmental factors, not all factors interact with both of domains at the same time (e.g., Lloyd-Smith et al., 2020).

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A psychoacoustic study on the perception of Italian vowels by Cypriot Greek speakers

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Adult learners of a nonnative language often present with difficulty in perceiving the acoustic features of nonnative phones. Therefore, members of nonnative phone contrasts might be highly confusable either with each other or with similar first language (L1) phones. The aim of this study is to investigate the vowel perceptual patterns of Cypriot Greek learners of Italian as a foreign language; to date, there is no other study that investigated phone perception in these two languages. The study's protocol was based on the tenets of the newly introduced Universal Perceptual Model (UPM) (Georgiou, 2021). Fifteen adult (Mage = 26.3) Cypriot Greek learners of Italian participated in two computer-based psychoacoustic tasks. The first task examined how learners classify the Italian vowels in their native vowel inventory. They listened to an Italian vowel in [bV] context through a set of headphones and clicked the most appropriate Cypriot Greek vowel label from the Praat script. The second task was an AXB test that examined the ability of learners in discriminating particular nonnative phone contrasts. They listened through the headphones to a triad of Italian words that embedded the target vowels and selected whether the middle word was the same as the first or the third word by clicking on the script labels 'first' or 'third' respectively. The confusion matrix of the classification task showed that the Italian vowels [i ε a o ɔ u] were classified as above chance responses in the Cypriot Greek [i e a u o u] respectively, while the Italian [e] was classified as an above chance response in two Cypriot Greek categories, [i] and [e]. This would make the Italian contrastive vowel pairs [i – e] and [e – ε] as partially overlapping contrasts, [ɔ – o] as a non-overlapping contrast, and [o – u] as a completely overlapping contrast. The discriminability of these types was analyzed through linear mixed-effects models in R. The results agreed with the predictions of UPM as the non-overlapping contrast was the most discriminable, followed by the partially overlapping and the completely overlapping contrasts. The

results are also consistent with the assumptions of UPM in that the acoustic properties of nativenonnative sounds and their position in the shared phonological space can predict the learners' speech perception patterns in the nonnative language. For example, the Italian vowel pair [o – u] received poor discrimination since the acoustic properties of both Italian vowels approach those of the Cypriot Greek [u]. Finally, the methods employed in this study quantified differences of native and nonnative language vowel perception, which can facilitate estimations of the progression of vowel learning in foreign language learners and ultimately guide personalized teaching methodologies.

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A bi-/multilingual learner in a monolingual class. A socio-educational perspective on the role of various agents in successful school socialisation

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Over the last decade, teachers around Poland might have observed an increase in the number of primary school children with bi/multilingual and culturally diverse backgrounds. They are, among others, children of return migrant, immigrant or expatriate families. Regardless of their complex experiences, they all face many cultural, social, linguistic and educational challenges once they enter primary school. English teachers are often at the forefront, helping them navigate through the intricacy of their “dual lives” (Wei and Hua, 2013: 531). The paper presents the results of an interview study among 23 Polish EFL teachers with a view to investigating Polish EFL teachers' experiences and ways of working with bi/multilingual children directed at child integration and socialization to the new environment.

The collected data was coded following the content analysis approach (Krippendorff, 2003) and analysed from the ecological perspective (see Bronfenbrenner, 1993; van Lier, 2004), whereby successful child socialization was observed to be dependent on the intricate network of interrelated factors, such as the child's age of arrival, migration experience, personality, language repertoire, and agents, i.e., teachers, classmates and parents, their plurilingual and intercultural competence. The role of the exosystem, i.e. the school system has been found the least supportive due to absence of multilingual policy, lack of teacher support via teacher training, which have been thereof concluded as of urgent need in the emergent multilingual setting.

Using adapted Vocabulary Knowledge Scale to measure L3 lexical knowledge

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The mechanisms of acquiring vocabulary in a third language (L3) are still understudied. It is unknown whether just one or all known languages influence L3 lexical acquisition. In this study, we investigated how cross-linguistic language similarity (cognateness) modulates the knowledge of L3 words in speakers of L1-Polish, L2-English, and L3-Italian. We also examined the impact of participants' individual differences (L2 and L3 proficiency levels, language learning aptitude, working memory) on their knowledge of L3 words that were cognate or non-cognate only with L2-English (L2-L3 cognates), or both with L1-Polish and L2-English (L1-L2-L3 cognates). We hypothesized that learners with higher proficiency in L2-English would benefit more from cognateness, and that L1-L2-L3 cognates should have an advantage over L2-L3 cognates and non-cognates.

To investigate the knowledge of L3-Italian words, we adapted the Vocabulary Knowledge Scale originally used to elicit L2 lexical knowledge (VKS; Wesche and Paribakht, 1996). Our L3-VKS tapped into productive levels of L3 vocabulary knowledge and activated three languages: L2-English (stimulus presentation), L1-Polish (the language of instructions), and L3-Italian (word and sentence elicitation). Additionally, our L3-VKS controlled for guessing thanks to confidence ratings and the incorporation of 40 L2-cognate-like and non-cognate-like nonwords in the test measurement. Using the L3-VKS we elicited the knowledge of 120 L3-Italian words: 40 non-cognates, 40 L1-L2-L3 cognates, and 40 L2-L3 cognates. All words were controlled for part of speech (adjective, noun), L1-L2-L3 word frequency (SUBTLEX; <http://crr.ugent.be/programs-data/subtitle-frequencies>), concreteness (Brysbaert et al., 2014), length, and orthographic overlap for cognates (Levenshtein distance). To control for participants' individual differences, we used the DIALANG test (English and Italian proficiency; <https://dialangweb.lancaster.ac.uk>), the Polish Reading Span Test (working memory, WM; Biedroń & Szczepaniak, 2012) and LLAMA B (vocabulary learning aptitude; Meara, 2005).

Forty-six Polish learners ($Mage = 22.09$, $SD = 2.88$) of intermediate to advanced L2-English ($MDialangENG = 645.17$, $SD = 155.55$) and L3-Italian ($MDialangIT = 437.02$, $SD = 236.76$) proficiency took part in the study. The L3-VKS outputs were rated by two proficient Italian academic teachers (inter-rater agreement $\kappa = .985$). The generalized linear mixed-effects model revealed that, after controlling for guessing, the L1-L2-L3 cognates were known better than the L2-L3 cognates and non-cognates, but there was no difference between the non-cognates and L2-L3 cognates. Also, guessing was most common among the L2-L3 words and the least common for the L1-L2-L3 cognates. The model also revealed that proficiency in L3-Italian and vocabulary learning aptitude (but not WM) lead to an increase in L3-VKS scores. The effect of proficiency in L2-English (trend) was strongest for L2-L3 cognates and weakest for L1-L2-L3 cognates. Overall, these results suggest that similarity to L1, but not L2, facilitates learning of novel L3 words. Moreover, the obtained results point to the role of learner's aptitude, L2 and L3 proficiency, and guessing to L3 word learning. Also, L3 learner's benefitting from L2-L3 similarity is probably conditioned by their L2 proficiency.

Effects of word order and case in the processing of relative clauses in heritage speakers of Greek in Germany

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Long distance dependencies such as relative clauses (RCs) are vulnerable in heritage grammars (e.g. Montrul, 2008). Results of previous studies are still inconclusive, as some studies show that heritage speakers (HSs) are sensitive to higher and more salient positions in the structure, and less sensitive to case morphology than monolingually raised speakers, others show that the processing of object relative clauses (ORs) may or may not actually cause extra difficulty to HSs (O'Grady et al., 2001; Polinsky, 2011; Sánchez-Walker, 2013). Studies on the processing of RCs in children also have contradictory results. Although heritage children (h-children) have been shown to have native-like comprehension but not native-like production of RCs (Jia and Paradis, 2016), non-native performance in comprehension has also been shown (Kidd et al., 2015). This study aims to contribute to a better understanding of h-children and heritage adults' (h-adults) parsing strategies in the real-time processing of RCs in heritage Greek in contact with German.

Importantly, Greek and German native speakers do not use similar parsing strategies when processing complex structures in real time. In German, which is a verb final and V2 language with a relative flexibility of non-verbal constituents and rich morphological marking, predictive processing is the main parsing strategy (Konieczny, 2000, Konieczny and Döring, 2003). Greek is also a language with rich morphological marking but, in contrast to German, it is a free word order language. Previous research has shown that Greek native speakers, in line with native Russian and Hungarian speakers, adopt a combination of predictive and memory limitation parsing strategies in online RC processing (Levy et al., 2013, Kovács and Vasishth, 2013, Katsika and Allen, 2014).

We conducted a self-paced listening task in Greek in which we manipulated the type of RC (subject vs. object), and the RC internal word order (canonical vs. scrambled). RCs were introduced with the complementizer *pu* ('that'). In total there were four conditions (see examples 1a-1d). Sentences were presented in a segment-by-segment fashion, and in the end of each sentence participants judged the grammaticality of each sentence. We have up to now recorded online listening times (LTs) and grammaticality judgments from 18 11- to 13-year-old children and 7 adults (data collection in process).

The statistical analysis of the LTs on the RC verb segment showed faster LTs for ORs than SRs in h-children and h-adults (marginal significance for adults due to lack of power). This contrasts the previous finding of faster processing for SRs in monolingually raised Greek speakers (Katsika and Allen, 2014). Importantly, the significant OR effect in both groups of HSs stems from h-adult and h-children's processing nominative preverbal NPs faster than accusative ones (1c vs. 1b), a pattern that contrasts with monolingually raised speakers, and may constitute evidence of cross-linguistic influence from German. In addition, h-children's LTs correlated with age. The younger the children the "shallower" they seemed to process RCs, a fact possibly linked to evidence that RCs are not fully mastered until adolescence (MacWhinney and Pléh, 1988).

Examples

1a. O majiras-NOM *pu* **esprokse** ton servitoro-ACC ekapse to fajito. (SR, canonical)

1b. O majiras-NOM *pu* ton servitoro-ACC **esprokse** ekapse to fajito. (SR, scrambled)
"The cook that pushed the waiter burned the food"

1c. O majiras-NOM *pu* o servitoros-NOM **esprokse** ekapse to fajito. (OR, canonical)

1d. O majiras-NOM *pu* **esprokse** o servitoros-NOM ekapse to fajito. (OR, scrambled)
"The cook that the waiter pushed burned the food"

Figures

Figure 1. Listening times (in ms) in heritage adults.

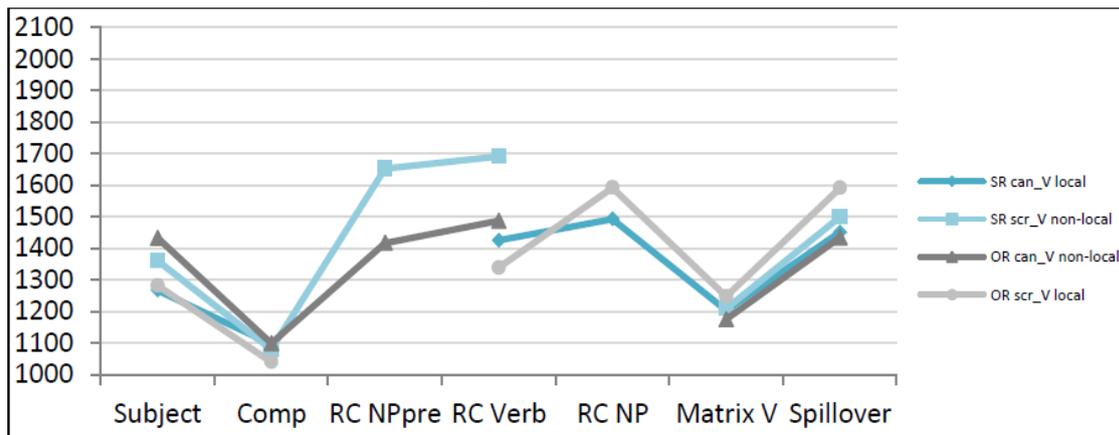
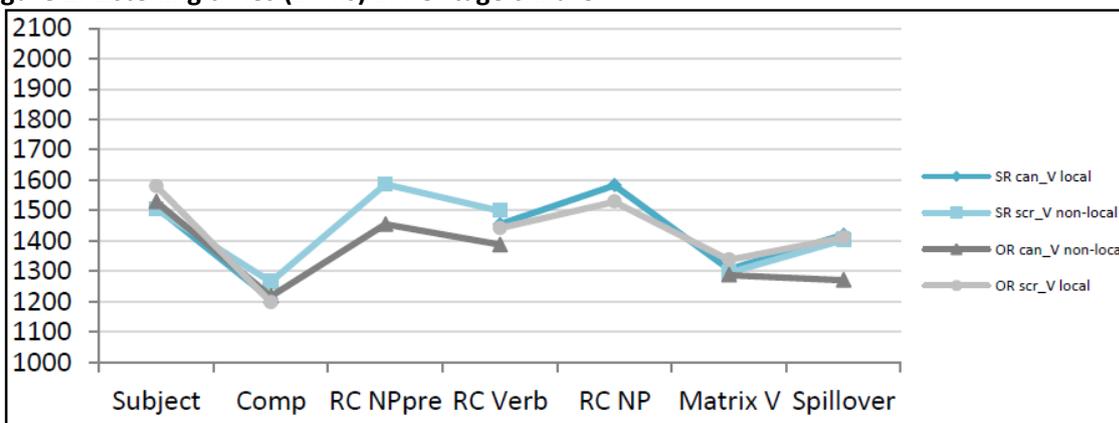


Figure 2. Listening times (in ms) in heritage children.



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Factors that influence language choice as a pedagogical strategy in multilingual classrooms: the case of four French as a foreign language classrooms in Botswana.

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This study investigates the use of languages as a pedagogical strategy in a foreign language multilingual classroom setting. Its aim is to explore the factors that influence the choice of different languages by the teacher in French as a foreign language classroom of Botswana. This qualitative study uses data derived from video-recorded classroom observations and interviews of 4 French foreign language teachers. The data was treated as four case studies using individual and cross-case analysis. The results revealed that the choice of language used depends on the pedagogical objectives, linguistic component studied and the teacher's methodological convictions. Findings further revealed that these conditions are reflective of the multilingual practices of the Botswana society. Implications of the study for teaching foreign languages in multilingual settings are discussed.

Keywords: Pedagogical strategies, Multilingualism, French as a foreign language

A longitudinal study on cross-linguistic influence in L3 German

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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.

We conducted an acceptability judgment task (AJT) with five conditions, two of which are structurally similar to Norwegian (adverb placement in subject-initial declaratives (1), V2 in non-subject initial declaratives (2)), one to English (obligatory articles in generic contexts that allow article omission in Norwegian (3)), one to both English and Norwegian (prenominal placement of possessive determiners (4)), and one to none of the two languages (object-verb word order (5)).

(1) Lisa **malt nie** Bilder.

Lisa draws never pictures

'Lisa never draws pictures.'

(2) Heute **sieht Paul** seinen Vater.

today sees Paul his father

'Today Paul sees his father.'

(3) Er hat **ein Haus**.

he has a house

'He has a house.'

(4) **Mein Glas** ist grün.

my glass is green

'My glass is green.'

(5) Marie hat **das Brot gebacken**.

Marie has the bread baked

'Marie (has) baked the bread'

We included six ungrammatical and six grammatical items per condition. A mini-AJT with the five conditions was conducted in L2 English.

We found a significant main effect of test time, grammaticality and condition. 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 typology, 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.

However, 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 (88.77% mean accuracy in L2 English), which is in line with Westergaard (2003) who found that this word order is acquired late in L2 English by L1 Norwegian speakers.

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Condition	Norwegian	English	German	
Adverb Placement (V-Adv)	V-Adv (-V2) <i>Lisa tegner aldri bilder.</i>	Adv-V (+V2) <i>Lisa never draws pictures.</i>	V-Adv (-V2) <i>Lisa malt nie Bilder.</i>	GER = NOR ≠ ENG
Non-subject-initial Declaratives (XVS)	XVS (+V2) <i>I dag besøker Paul faren sin.</i>	XSV (-V2) <i>Today Paul visits his father.</i>	XVS (+V2) <i>Heute besucht Paul seinen Vater.</i>	
Det. Use in Generic Contexts (Det N)	Ø N <i>Jeg har hus.</i>	Det N <i>I have a house.</i>	Det N <i>Ich habe ein Haus.</i>	GER = ENG ≠ NOR
Possessive Det. Placement (Poss N)	Post- and prenominal <i>Glasset mitt er grønt.</i>	Prenominal <i>My glass is green.</i>	Prenominal <i>Mein Glas ist grün.</i>	GER = ENG (+NOR)
Object-Verb (OV)	VO <i>Marie har bakt brødet.</i>	VO <i>Mary (has) baked the bread.</i>	OV <i>Marie hat das Brot gebacken.</i>	GER ≠ ENG + NOR

Figure 1: Overview of the 5 conditions

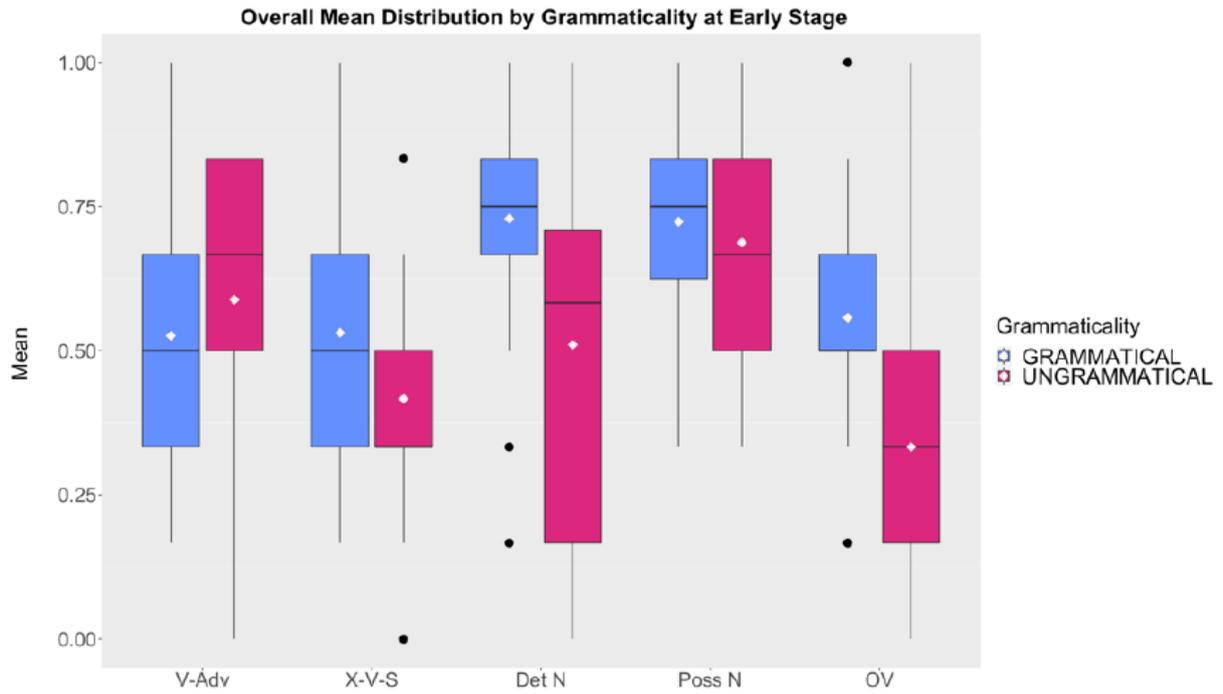


Figure 2: Test time 1 - Overall means by grammaticality

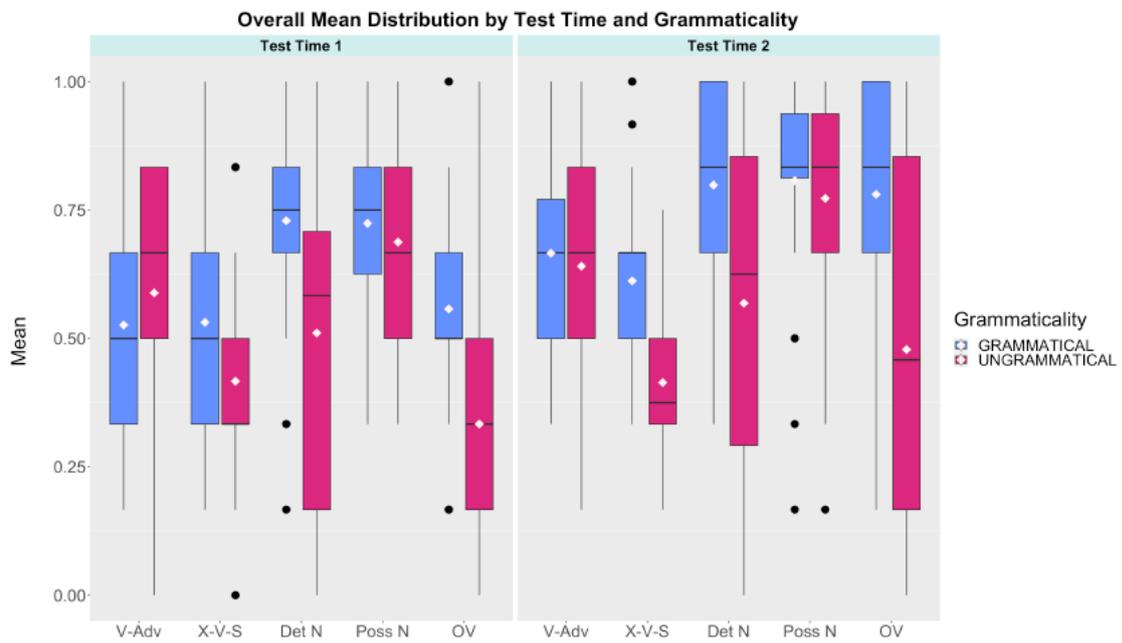


Figure 3: Overall means by test time and grammaticality

Register usage by heritage speakers of Russian and English in Israel

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Multilingualism is viewed as a distinctive feature of an Israeli society. Despite the fact that Hebrew has become a dominant language for the children of the immigrants most of them still preserve their heritage languages. As a result, a considerable part of the population in Israel is bilingual varying in their linguistic proficiency.

The research aims to determine the main features of register usage in the written language of bilingual 'second generation' in Israel i.e., those people who were born or grew up in Israel after their families moved here from either Russian- or English-speaking countries. The research focuses on Russian-Hebrew and English-Hebrew bilinguals aiming at the evaluation of the difference between their formal and informal writing in Russian and in English in comparison with monolingual speakers of Russian and English. Russian and English are considered to be the heritage languages of the bilingual second-generation adults in Israel. It is assumed that the general informality which is common in Israeli society might influence the sensitivity of the speakers to different degrees of formality in written registers.

Bilingual participants come from a wide range of social backgrounds to enable the analysis of the sociocultural factors influencing the usage of formal and informal written registers. In order to analyze how the participants cope with different degrees of formality in writing they are provided with a context. i.e., a formal/informal e-mail that they need to reply to. The comparison of formal and informal texts produced by bilinguals in their heritage language (Russian or English) is based on a set of the following criteria: nominalization, complex and compound sentences, word origin (Germanic vs. Latin for English vocabulary; Slavic vs. Latin for Russian) average sentence length, and average word length.

Based on the analysis of formal and informal e-mails written by bilingual and monolingual participants, it is possible to come to the following general conclusions. Although English monolinguals and English-Hebrew bilinguals do differentiate between formal and informal written registers in a similar way, there is a minor variation in the usage of Latin origin vocabulary. Bilingual speakers use this vocabulary evenly in formal and informal e-mails, unlike monolinguals.

Russian heritage speakers differ significantly from monolingual speakers in the average sentence length and nominalization cases. Sentence length practically does not change in the formal and informal e-mails of bilinguals. Regarding nominalizations, there is a certain group of bilinguals that has zero nominalization cases in their formal e-mails, showing no difference in this parameter from the informal register.

To conclude, both groups of bilinguals show the awareness of formal and informal registers in their heritage language (Russian and English). However, as far as English is a more socially prestigious language, English-Hebrew bilinguals are more similar to English monolinguals in the way they use formal and informal registers, while Russian-Hebrew bilinguals show a more significant difference in the use of register compared to Russian monolinguals.

The analysis of the sociocultural factors revealed that different factors turned out to be significant register-wise for two heritage languages: Russian and English. For Russian heritage speakers, variation was found primarily based on the amount of reading in Russian in their daily life, and less significantly on studying Russian at school. For English heritage speakers, variation was found based on the regular exposure to formal register in their daily life, and less significantly on the level of education.

The multilingualism of Roma children

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The paper is going to present results from a research with Roma kindergarten children from two different European countries: North Macedonia and Sweden.

In both countries the children attend kindergarten and learn Romani as a mother tongue. In North Macedonia the children learn Macedonian and they also learn the language of another minority – the Albanian and at home they speak also Turkish. They grow up with 4 languages – Romani, Macedonian Turkish and Albanian. The Swedish Roma children learn Swedish at kindergarten but at home they speak Macedonian or Serbian as well, because the parents are migrants from North Macedonia or Serbia. They grow up with 3 languages – Romani, Macedonian/Serbian and Swedish. From sociolinguistic point of view all these languages have different prestige in society and different status in the development of the children.

60 Roma children between 3-6 years old (30 from North Macedonia and 30 from Sweden) were tested with a language Test in Romani, measuring the knowledge of 9 grammatical categories in Romani: wh question, wh compliments, passive verbs, sentence repetition, possessives, tense, aspect, fast mapping nouns, fast mapping adjectives. The children are divided into 3 age groups: 1 gr. 3-4 years old, 2 gr. 4-5 years old, 3 gr. 5-6 years old. The results from the test show that the children have some differences in the knowledge of the grammatical categories when they are young but around the age of 5 the differences between the two groups disappears.

The paper is going to answer two very important research questions:

1. How the multilingualism and languages with different status in the society, which Roma children learn from early age, create obstacles or help them to learn their mother tongue from early ages?
2. Which educational factors help the children to understand the grammatical categories and to acquire them better.

Operationalising plurilingualism - the potential for teacher collaboration within current language curricula

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Operationalising plurilingual instruction is a commonly debated topic and goal of educational linguists (Dooly and Vallejo, 2020). An opportunity for reaching that goal lies in language teacher collaboration. Previous research revealed that teachers of the language of schooling and of foreign languages are hesitant to collaborate with each other because they have differing knowledge about language (Burley and Pomphrey, 2003; Pomphrey and Moger, 1999) and regard the learning of each language as separate processes (Haukås, 2015; Jakisch, 2014). At the same time, teachers recognise that there is overlap in the skills students are required to develop, and studies in which teachers of different languages coordinate their teaching report positive feedback from students as well as an increase in

their language awareness and in strategy transfer (Forbes, 2020; Gunning et al., 2016; Krogager Andersen, 2020; Man Chu Lau et al., 2020).

However, there is a need for a more detailed understanding of the teachers' perspective, i.e., their beliefs on plurilingual instruction and the discourses that inform and influence their current practices. In order to identify those discourses, it is essential to closely analyse relevant policy documents and curricula that shape current teaching practice. Given that nexus analysis (Scollon and Scollon, 2004), with its three phases of engaging, navigating and changing the nexus of practice (i.e., teaching practice of language teachers in this case), will serve as the methodological framework for the planned PhD study, the purpose of the proposed presentation is to spotlight the engaging phase. In other words, the presentation will (1) outline relevant language policies on the European and national levels, (2) contrast the content of language curricula and syllabi applicable to the secondary school context in Germany (Berlin) and Sweden, (3) as well as suggest possibilities for teacher collaboration within those documents. A content analysis (Bryman, 2016) of the two language curricula in Germany (German and modern languages which includes English and other foreign languages) and the three language curricula in Sweden (Swedish, English and modern languages) will show overlaps that language teachers may build on in order to collaborate with one another across the curriculum. The presentation will also provide a short outlook on the navigating and changing phases of the planned study (scheduled to start in January 2022) which are more teacher-centred and will entail linguistic ethnography and a cross-curricular project at the participating schools, ideally to be developed jointly by the researcher and all language teachers of a given classroom, i.e. the Swedish, English and German teacher in the Swedish context, and the German, English and French teacher in the German context.

In sum, the proposed presentation will suggest common ground between current educational policies in the contexts of Germany (Berlin) and Sweden, and shed light on the possibilities for plurilingual instruction within them.

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Why are they so similar? The impact of extra-linguistic variables on monolingual and bilingual learners of English

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The current study investigates the relationship between linguistic as well as extra-linguistic variables and proficiency in the foreign language English. Based in the context of Germany, we assess whether proficiency in the background languages (German for all participants, German and either Russian or Turkish for the bilingual participants), cognition (visual-spatial ability), type of school, gender, socio-economic status, self-concept, motivation, and self-efficacy function differently in predicting English language proficiency when monolingual German learners of English are compared to their bilingual peers. The comparison is based on 1,403 secondary school students attending school years seven or nine (German monolinguals: n = 849, Russian-German bilinguals: n = 236, Turkish-German bilinguals: n = 318). Two comprehensive structural equation models are fitted to capture the multitude of factors influencing English language proficiency, detailing each factor's contribution to explaining the observed variance in English proficiency. In doing so, the study contributes to the current discussion of multilingual advantages or effects.

The comparisons between the monolinguals and unbalanced bilingual heritage speakers reveal that almost all variables make a statistically significant contribution. Moreover, the structural equation models function similarly across the three language groups; yet, group specific differences can be identified. We argue that the three groups are more similar than different, as the heritage languages Russian and Turkish add comparably little to predicting English language proficiency.

We discuss why the participants of the current study are so “similar” in regard to their English proficiency. We identify three reasons which find support in the current literature, namely i) the status of the bilinguals as unbalanced bilinguals, ii) the institutional environment in German schools, and iii) that non-linguistic variables “override” language effects. Due to the dominant status of German and the weaker status of the heritage language, the bilinguals in the current study apparently overlap with the monolingual German participants (see Bonfieni, 2018). In addition, German schools are largely dominated by a monolingual ideology, disfavoring languages other than German. This extends – mutatis mutandis – to the English language classroom inasmuch as German or any other languages tend to be avoided (Fuller, 2020). Given such an ideology of language separation, it appears unlikely that the bilingual students can make use of their larger language repertoires when acquiring the foreign language English. Finally, the impact of non-linguistic variables, especially cognitive skills and school type, account for most of the variation observed in English proficiency, supporting the findings in Berthele and Udry (2019).

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Modelling L3 development patterns: Japanese-English bilinguals acquiring Spanish

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Our study contributes to the understanding of which intra 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., Westgaard, 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 two of contexts (3-A and 4-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)1 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 42 ab initio learners with 2 months of instructed L3 Spanish; Group B consists of 86 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 ab initio learners, 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 dominance and the amount of exposure to the L3 modulate the rate at which learners overcome initial non-facilitation. 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; Westgaard, 2020) and recent proposals that explicate developmental patterns in L3 acquisition (Cabrelli and Iverson, submitted).

Table 1. Summary of the properties and conditions tested in the GJT

Condition	English	Spanish	Japanese
1-A. N-item + VERB	YES	YES	NO
1-B. N-item + NOT	NO	NO	YES
2-A. VERB + N-item	YES	NO	NO
2-B. NOT + N-item	NO	YES	YES
3-A. N-item + N-item	NO	YES	NO
3-B. N-item + NOT + N-item	NO	NO	YES
4-A. N-DP + N-DP	NO	YES	NO
4-B. N-DP + NOT + N-DP	NO	NO	YES

Table 2. Exemplary items for each condition of interest.

	Example sentence (Set A)		Example sentence (Set B)	
1-	SP	Nadie bebe café	EN	Nadie no bebe café
	EN	Nobody drinks coffee.	JP	*Nobody does not drink coffee
	JP	*Dare-mo kohi-o nomu.		Dare-mo kohi-o nomanai.
2	SP	*Pedro bebe nada	EN	Peter drinks nothing
	EN	Peter drinks nothing	JP	*Pītā-wa nani-mo nomu
	JP	*Pītā-wa nani-mo nomu		Pītā-wa nani-mo nomanai
3	SP	Nadie bebe nada.	EN	*Nobody drinks nothing.
	EN	*Nobody drinks nothing.	JP	*Dare-mo nani mo nomu.
	JP	*Dare-mo nani mo nomu.		Dare-mo nani-mo nomanai
4	SP	#Ningún estudiante compra ningún libro.	EN	*Ningún estudiante no compra ningún libro.
	EN	*No student buys no book	JP	No student does not buy no book.
	JP	*Dono otkokonoko-mo dono hon-mo kau.		dono otkokonoko-mo dono hon-mo kawanai

*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.

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Subtractive language groups design – a new standard in L3A research

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The formal study of L3/Ln acquisition is a field that has developed rapidly over the last two decades, informed both by previous work on L2 acquisition and current work on processing and inhibitory control in bi- and multilinguals.

Existing theoretical approaches are mainly focused on -- and are differentiated by their answers to -- questions related to cross-linguistic influence (CLI) from previously acquired grammars. These include: 1) source of CLI (L1, L2, typologically closest language, the dominant language etc.); 2) type of CLI (only facilitative, or also non-facilitative); 3) extent of CLI (wholesale, or property-by-property; see Rothman et al., 2019; Westergaard et al., forthcoming for an overview).

The *mirror image groups* methodology (Rothman, 2013; Marsden, 2021; see also Ringbom, 1987; Cenoz and Valencia, 1994) makes it possible to test whether the L1 or the L2 has a privileged role in influencing the developing L3 grammar, i.e., to assess the effect of the order of acquisition in L3A. This is achieved by comparing two groups of L3 learners with the same previously acquired languages but contrasting in the order of acquisition of these languages (for instance, Ringbom, 1987 compares two groups of bilinguals: L1 Swedish/L2 Finnish and L1 Finnish/L2 Swedish learners acquiring L3 English).

However, the mirror image groups methodology cannot provide a reliable answer to the question of whether only one or *both* of the previously acquired languages are the source of CLI in the L3, or to evaluate the size of the effects associated with the individual languages (see Green, 2017; Lago et al., 2021). In this talk we will present a different study design, referred to as *subtractive language groups* design, which allows us to assess the extent of CLI from each of the previously acquired languages on the L3. In experiments employing this methodology, the performance of the L3 group is compared to L2 controls – where the target language is kept constant, but the other languages are varied parametrically. For example, if we take a group with L1 Greek–L2 English–L3 Spanish, we can isolate the effect of Greek and English on the development of the L3 by comparing the performance of this group to the performance of an (otherwise matched) L1 English–L2 Spanish group and an L1 Greek–L2 Spanish group. If we find significant differences between the L3 group and the L2 control groups we can reject the hypothesis that the subtracted language does not exert influence on the L3 (i.e., we can reliably state that this language *does* influence the learners' grammatical behavior in the L3).

We will discuss the application of this methodology in a range of recent studies on L3A (Kolb et al., 2021; Jensen et al., under review). The results of these studies provide support to a new approach to multilingual language acquisition where crosslinguistic influence is assumed to be due to co-activation of previously acquired languages in processing and is primarily governed by abstract similarity between individual linguistic properties (Westergaard et al. 2017, forthcoming; Westergaard, 2019, 2021).

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CLIL or not CLIL? The competence of mediation in bilingualism: an experimental analysis

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Mediation is a key competence in the process of acquiring a second language. It allows communication among people who are unable to communicate with each other directly and has a bearing not only on the receptive and productive modes but also on written and oral activities (North and Piccardo, 2016). Within the exercise of this competence, several strategies have been identified, namely translation, interpretation, paraphrasing, and summarization (Council of Europe, 2001 [1996]: 18). It is thus a comprehensive competence that can also be exercised to enhance both intercultural and multilingual competence (Sánchez Castro, 2013), let alone the integration of textual multimodality in the classroom (Nadal, in preparation).

Within the framework of bilingual education, Content and Language Integrated Learning (CLIL) deems appropriate the use of an additional language (different from the L1) as a means of instruction for the transmission of curricular content (Bruton, 2013: 588). The effectiveness of this methodology in the development of communicative competence at the different educational levels has been proved (Pérez Cañado, 2018) using empirical and comparative perspectives. Studies show that advantages of CLIL can be perceived on different competences (oral comprehension, grammar, oral and written production) (Lagasabaster, 2008; Dalton-Puffer, Nikula and Smit, 2010). However, comparative analyses have so far not taken into account the competence of mediation (Nadal and Thome, a and b under review).

Since CLIL promotes bilingualism by using an additional language as a medium for the transmission of content from different areas, the communicative mediation activities proposed by the Common European Framework of Reference (CEFR) are of special interest in this learning context. This study combines the acquisition of textual mediation within the CLIL context. More specifically, it compares, through conversational analysis, the performance of two groups of German as a second language learners in a textual mediation activity integrated into the processing text in speech scale within the CEFR (Council of Europe, 2018). The independent variable of the study is the type of instruction received by both groups for the acquisition of their second language: one group was instructed using a bilingual CLIL approach whereas the other received tuition under a mainstream approach. Results showed that CLIL students show greater recursion in the use of reformulation strategies (reduction, expansion and adaptation, cf. Ciapuscio, 2001; García Negroni, 2009) in the presentation of a mediated text. Likewise, the data allow us to observe a positive effect on the integration of L1 in communicative mediation activities.

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Exploring the effect of similarity in third language acquisition of a miniature artificial language

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Studies within the field of third language (L3) acquisition have led to several models that aim to describe crosslinguistic influence (CLI). One of the main issues is whether CLI comes from the first language (L1), the second language (L2) or from both previously acquired languages. The L2 Status Factor model (Bardel and Falk, 2007; Bardel and Falk, 2012; Falk and Bardel, 2010) argues that, when the L2 and the L3 are acquired formally, the L2 is the preferred source of influence because of the cognitive and situational similarities between the acquisition processes, as opposed to the implicitly acquired L1. Other models, such as the Linguistic Proximity Model (Westergaard et al., 2017), the Scalpel Model (Slabakova, 2017), the Cumulative-Enhancement Model (Flynn et al., 2004) and the Typological Primacy Model (Rothman, 2011, 2015) argue that both previously acquired languages can be used as the source of influence, regardless of the order or manner of acquisition.

In the current study, we investigated how linguistic similarity affects CLI at very early stages of L3 acquisition. We compared the impact of lexical-phonotactic and morphosyntactic cues after minimal exposure to a miniature artificial language. We tested four groups of adult L1 Norwegian/L2 English speakers (N=120). Two groups were exposed to lexical-phonotactic cues that were similar to their L1 or L2, while the other groups were exposed conflicting cues (L1 lexical-phonotactics and L2 morphosyntax in one group and vice versa in the other). We tested word order preferences in non-subject-initial declarative clauses in a forced-choice acceptability judgment task. The participants had not been exposed to this construction in the L3 before the acceptability judgment task. It is also a construction where the previously acquired languages differed: the verb is placed in the second position in Norwegian (V2 word order) and in the third position in English (V3 word order), as exemplified in (1) and (2).

(1) Yesterday John went to the mall.

(2) I går gikk Jon til kjøpesenteret.

Yesterday went Jon to mall.DEF

We found that participants who had been exposed to English-based lexical-phonotactic cues generally preferred V3 over V2 word order, i.e. the English-based syntax, while participants who had been exposed to Norwegian-based lexical-phonotactic cues preferred V2 over V3. This suggests that the learners did not rely on a default source of CLI, but rather, that lexical and phonotactic similarity was influential. A generalized linear model (Conway-Maxwell Poisson distribution) showed that although the learners were influenced by lexical and phonotactic similarity, they were also sensitive to structural cues in the input. These results support models that argue for linguistic similarity as the main driving force behind CLI.

The impact of teacher education on teacher attitudes towards the use of MT in multilingual EAL classrooms

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English language classrooms around the world are becoming increasingly diverse and multilingual (Conteh and Meier, 2014; Hammer et al., 2019; May, 2013). For many decades, the integration of students' mother tongues (MTs) in EAL classrooms was perceived as a borderline incorrect teaching practice (Aronin and Singleton, 2019; Hall and Cook, 2012; Shin et al., 2020). Currently, however, there has been a shift towards multilingual approaches, which acknowledge optimal or judicious use of students' MTs as a valuable resource (García et al., 2017; Shin et al., 2020). Consequently, there have been calls for language teaching practices that enable multilingual students to draw on their previous language knowledge as a valuable resource to foster the development of English as an additional language (EAL) (Flores and Aneja, 2017; Lee and Levine, 2018).

To materialize this development, teachers' agency in the classroom needs to be taken into consideration. Teacher beliefs impact teachers' choice of pedagogical practices (Borg, 2006), and teacher education programs constitute one of the factors that impact teacher beliefs and actions (Borg, 2011; Phipps, 2007). As increasing numbers of teacher education programs have modified their curricula to include topics, modules, and courses that focus on multilingualism and language teaching in multilingual contexts (Hammer et al., 2019), there is a need to scrutinize EAL language teachers' views about working with multilingual learners. This paper presents a study that examined teachers' own perspectives on the role and uses of students' MTs and on the role teacher education had played in shaping their beliefs about pedagogical practice in the multilingual EAL contexts. The study was guided by the following research questions: (1) What are teachers' beliefs about the use of learners' MTs when teaching English? (2) To what extent do teachers base their teaching practices on the knowledge acquired through teacher education? How has teacher education changed teachers' views about the role of learners' MTs in the teaching and learning of English? (3) Do teachers feel that their teacher education has prepared them for teaching English as an additional language in a multilingual classroom?

Forty-four EFL teachers enrolled in an EAL program at a university in Norway completed an open-ended questionnaire that examined their perspectives on the extent to which teacher education shaped their beliefs about working with multilingual learners. Four additional teachers participated in semi-structured interviews to allow for a more in-depth examination of their views. The responses were first coded using central themes derived from the research questions and then quantified and analyzed using descriptive statistics. While most participants admitted that they found MTs to be a useful resource when employed judiciously, for example to increase student understanding, to introduce new words, to increase motivation, and to decrease both teacher and student anxiety. However, the majority stated that they aimed to maximize the use of the target language. In line with previous research, the results suggest that teacher education is just one of the factors that shape teachers' beliefs (Borg, 2006; Phillips and Borg, 2009), and that teachers feel that their teacher education has not sufficiently prepared them for work in multilingual contexts (Alisaari et al., 2019; Cantone, 2020; De Angelis, 2011; Faez, 2012; Krulatz and Dahl, 2016; Otwinowska, 2014; Rodríguez-Izquierdo, et al., 2020). In the light of these findings, we discuss implications for teacher education programs.

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Accessing words to tell a story: Are there differences between bilinguals and monolinguals?

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In experimental tasks like picture naming, bilinguals often show greater difficulty in accessing words for production than monolinguals and greater difficulty in their weaker language than their stronger language. This lexical access difficulty seems to be related to bilinguals' proficiency: some studies have shown that highly proficient bilinguals can access just as many words as monolinguals. One explanation of these results is the weaker links account (Gollan et al., 2008). According to this account, bilinguals have less exposure to each language and therefore have greater difficulty accessing words for production than monolinguals and in their weaker language.

The purpose of the present study was to test whether these results generalize lexical access in a more naturalistic discourse context: storytelling. There is some evidence that bilinguals' lexical access difficulties are much reduced when bilinguals produce words in a rich semantic context. If, however, the weaker links account extends to storytelling, we reasoned that bilinguals would produce higher frequency words than monolinguals. We used vocabulary scores as a measure for proficiency. Ninety-three adults participated in this study: 31 English-French bilinguals, 23 French-English bilinguals, 28 English monolinguals and 11 French monolinguals. The participants watched a cartoon and told the story back. The participants also took a standardized vocabulary test. The bilinguals did the story and vocabulary test in both French and English, on different days and with different interlocutors. The order of the two language sessions was counterbalanced. The stories that the participants told were transcribed in orthographic words. In English, every word was coded for frequency using the SUBTLEX corpus (Brysbaert and New, 2009). No such similar corpus exists for Canadian French. Therefore, for both languages, we also computed the number of word types (i.e., different words) each participant said and the percentage of word types that were unique to that participant. In English, the number of word types and percentage of unique words were highly correlated with the frequency measures from the SUBTLEX corpus.

The results in English showed no differences between the bilinguals and the monolinguals on either vocabulary scores or frequency measures. In French, the English-French bilinguals scored lower on the vocabulary test and produced higher frequency words than both the French-English bilinguals and the French monolinguals. These results support the argument that the weaker links account not only explains bilinguals' word production in experimental tasks, but also extends to this more naturalistic discourse context. These results further suggest that with enough exposure to a language (as inferred here through vocabulary scores), bilinguals can access words of equivalent frequency to monolinguals. Finally, we discuss some small, intriguing findings from this study that point to the possibility that bilinguals might use different cognitive mechanisms than monolinguals to access words to tell a story. As we did not measure the participants' cognitive abilities in this study, this last point is highly speculative.

Beyond the mean: Cross-language priming through a new distributional lens

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Language processing studies commonly measure response times (RT), assumed to reflect cognitive processes, with the overwhelming majority of such studies employing mean-based analyses. Means are easy to calculate and provide a good representation of the entire dataset, but reducing the distribution to a unique value entails information loss. Mean-based analyses usually avoid skewness and outliers, yet, on many occasions, the main effect is located at the distribution tail. These drawbacks can be overcome by employing distributional analyses. We will show how distributional analyses provide unique insights into some cognitive processes involved in language processing that are hidden by the mean.

It is commonly assumed that spreading activation lies behind priming effects in lexical decision tasks (LDT). The prime's activation spreads to the target, stimulating some of its features and providing a headstart to the target's processing (Forster et al., 2003). This effect would be reflected by an equal shift in the distributions (Figure 1). Alternatively, for the compound cue account (Ratcliff and McKoon, 1988), related primes create joint retrieval cues along with their targets. Prime-target cue's familiarity facilitates the lexical decision, and evidence of this familiarity accumulates over time. Under this approach, priming would be larger in higher quantiles (i.e., trials with longer RTs), resulting in relatedness causing both distributional shifting and skewness (Figure 2). Crucially, the limitations of relying on means are evidenced comparing Figures 1 and 2, where the mean RTs for control trials is roughly the same (800 ms).

In monolingual masked semantic priming—masked paradigms are assumed to tap into automatic processes—a headstart effect has been reported (Balota et al., 2008; Gomez et al., 2013). However, the only cross-language study so far (Nakayama et al., 2018) showed increased priming across quantiles (i.e., compound cue effect). Crucially, (i) no study has investigated cross-language unmasked priming employing a distributional approach and (ii) the few results with monolingual stimuli are inconclusive (Balota et al., 2008, headstart; Gomez et al., 2013, compound cue). We shed light on the conflicting results in the scarce distributional literature exploring cross-language masked/unmasked priming.

We analysed three large datasets (~100,000 observations) from cross-language visual priming LDTs completed by Spanish-English bilinguals. We were also interested in how L2 development, word frequency, and cross-language semantic alignment affect distributional changes. Experiment 1 employed masked translation pairs, whereas Experiments 2 and 3 used unmasked translation and cross-language semantic pairs. We performed quantile and ex-Gaussian analyses on the raw distributions.

With masked primes, distributional shifting was observed (i.e., headstart effect). With unmasked primes, a compound cue effect was observed. Moreover, word frequency and semantic overlap influenced the cue effect's size, indicating a relevant role of these predictors during cue formation and accumulation of evidence. (Table 1 for the quantile analyses' results.)

These results spotlight the informative uniqueness of distributional analyses and reveal that ubiquitous mean-based analyses, although convenient, present drawbacks and limitations. We advocate the need for incorporating distributional analyses into the statistical toolbox in language processing research.

Figure 1. Density plot of simulated RTs in the related and control conditions with only distributional shifting.

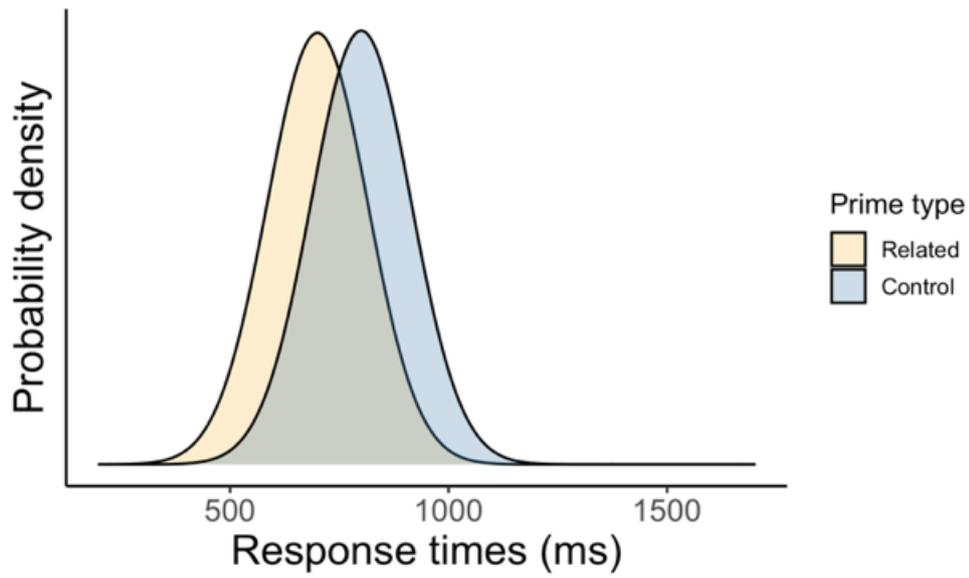


Figure 2. Density plot of simulated RTs in the related and control conditions with distributional shifting and skewness.

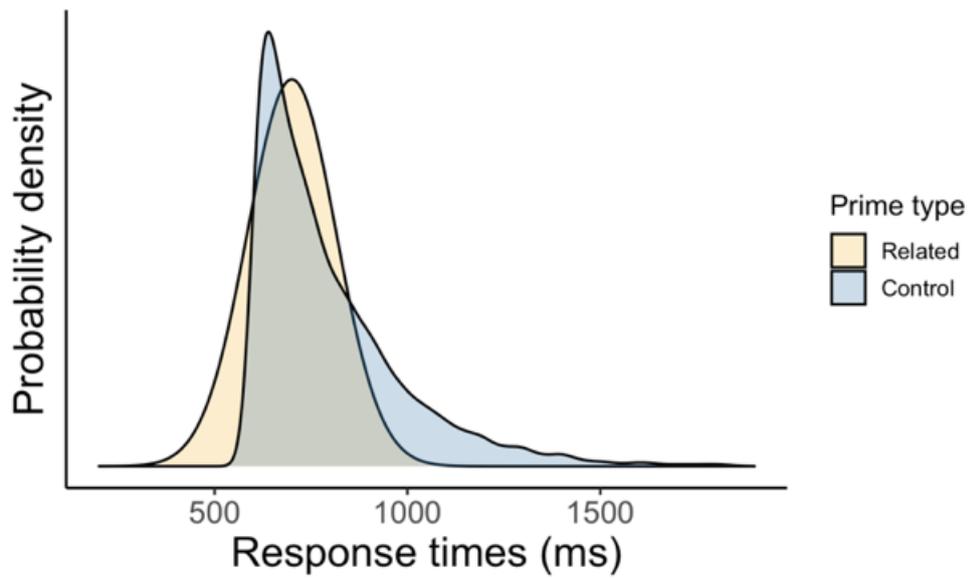


Table 1. Summary of the main results from the quantile analyses for masked and unmasked translation equivalents.

	DFn	DFd	F value	p value
Prime type by quantile (masked)	1	596	2.54	0.11
Prime type by quantile (unmasked)	1	1926	32.03	<.001
Prime type by frequency by quantile (unmasked)	1	3852	12.87	<.001
Prime type by semantic overlap by quantile (unmasked)	1	7632	5.34	<.05

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Cross-language priming and its experiential and word-level predictors

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During the last four decades of research on the bilingual lexicon, a consensus on the network's integrated and non-selective nature is being reached. However, it is less clear how speaker- and word-level factors influence the architecture and functioning of the bilingual lexicon.

This study examines bilingual lexical-semantic processing employing cross-language visual priming. We focus on variables assumed to be relevant to the lexicon's organization but whose investigation in cross-language priming research has been either inconclusive (L2 use, translation semantic overlap) or scarce (word frequency). Additionally, in a novel manner in cross-language priming studies, we investigate potential effects of executive control (EC). Importantly, whereas all models of the bilingual lexicon assume—albeit through different mechanisms—meaningful roles of L2 use and word frequency, localist models (e.g., Multilink; Dijkstra et al., 2019) are agnostic about potential effects of

semantic alignment (contrary to the view held by distributed models; e.g., Distributed Feature Model; van Hell and de Groot, 1998).

We tested 200 high-proficiency Spanish-English late bilinguals with different degrees of L2 use in two cross-language priming lexical decision tasks (in both translation directions, L1 prime to L2 target, and L2 prime to L1 target) with more than 400 word pairs of all frequencies (low to high). Factoring out L2 proficiency (by keeping it constant across participants) allowed us to isolate the potential contribution of L2 use. Experiment 1 employed concrete and abstract non-cognate translation equivalent pairs. Concrete words are assumed to have more consistent meanings across-languages. Thus, concrete translation equivalents would have a higher semantic overlap than abstract ones, which are assumed to be more dependent on linguistic context (e.g., Pexman et al., 2013). In Experiment 2, we used cross-language semantically related pairs (low semantic overlap). The large number of observations, together with a conservative analysis ($\alpha = .01$ for main effects) with mixed-effects models (Baayen, 2008), yielded a robust dataset to explore the variables of interest simultaneously while providing reliable evidence about their role.

Significant effects of prime frequency and executive function in both translation directions were observed. Priming effects (i.e., faster RTs in the related condition than with control trials) were larger when the related primes were more frequent. Further, participants with better EC abilities displayed larger priming effects (i.e., they responded faster to related pairs) under more demanding conditions (i.e., low-frequency words). Overall, semantic alignment significantly modulated the results: priming was smaller when the assumed semantic overlap was lower (i.e., with cross-language semantically related pairs). When looking in detail at the role of semantic alignment in translation equivalents (operationalized through concreteness), an effect was observed only in the L1-L2 data (i.e., larger priming for concrete translation pairs). Finally, L2 use did not meaningfully impact priming. (See Table 1 and 2 for sample stimuli and Table 3 for a summary of the results.)

We discuss these results in light of theoretical models of bilingual lexical-semantic representation and processing and suggest new directions for future research.

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English as access and opportunity for Syrian refugee students in Turkey

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Language proficiency enables migrants to participate in the host society, resist marginalization, and pursue future goals and identities (Norton, 2013; Norton and Toohey, 2011). This is particularly

important for refugees negotiating the acquisition and use of additional linguistic repertoires amidst socioeconomic exclusion and legal precarity. Even in asylum settings where English is not the official language, it can facilitate access to educational and employment opportunities (Karam et al., 2017).

Drawn from a critical ethnographic dissertation study (Carspecken, 1996; Smyth and McInerney, 2013) conducted in Turkey in 2020, this presentation examines the role of English proficiency for Syrian refugees studying in Turkish universities. Using a critical theory lens (Freire, 1972), sociocultural perspectives on language learning (Vygotsky, 1978, 1986), and Norton's (2013) investment framework, the larger study turns the spotlight from the numerous barriers that refugee students face to the personal strengths and strategies they employ to overcome them. This presentation focuses on how participants invested in and drew on English proficiency in order to access higher education, form relationships, and work toward future goals and identities.

Layered narrative analysis of 11 in-depth interviews with Syrian young adults revealed distinct strategies for gaining and leveraging English knowledge for personal, social, and academic purposes. Learning strategies included independent learning using media and other resources as well as taking advantage of non-formal courses offered by NGOs. Participants used their English knowledge to form friendships with other international students and establish informal exchanges of English knowledge for support in Turkish-medium classes from local students. Proficiency also offered the possibility of enrolling in an English-medium degree program and obtaining employment opportunities. In some cases, English also served as a lingua franca employed by professors to provide accommodations and scaffolding of course content.

The presentation provides insights into the meanings and utility of English as an international language in asylum settings, particularly its symbolic value for future aspirations and further mobility to a third country. More broadly, it addresses the limited representation of refugee voices and pushes back against deficit discourses regarding migration, language learning, and higher education access.

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Employing computational Social Network Analysis in the scenario of heteroglossic language learner populations

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Social networks play a vital role in the attainment of individuals. Using computational social network analysis (SNA), we investigate the influence of peer interaction dynamics and social graph topology on measurable outcomes in two intensive language courses: a 5-week course of German for Erasmus exchange students in Baden-Württemberg (n=40), and a 4-week summer course of Polish language and culture in Warsaw (n=181).

In the former, we find i) that the best predictor of progress is reciprocal target language (TL) communication, ii) outgoing TL interactions to be a stronger predictor than incoming interactions, iii) a negative relationship between performance and contact with same-L1 speakers, iv) a significantly underperforming English native-speaker dominated cluster (Fig. 1), and v) more intense interactions taking place across proficiency groups (Fig. 2).

In the latter, participants' patterns of social embeddedness (in- and outdegree = number of fellow students providing input, and being the recipients of output, respectively) in TL communication turn out to be significantly moderated by their i) individual (but not course-group level) entry TL competence (positively) and ii) psycho-situational portrait, while iii) negatively by competence in lingua-franca English. iv) Outdegree centrality in the TL is also negatively impacted by the intensity of communication with the teacher in a (non-L1) non-target language. In other words, the teacher's sanctioning of the use of a non-TL of communication demotivates efforts at TL production out-of-class. v) The influence of the network is strongest in the domains of pronunciation and lexis (Table 1, 2), where the simplest measure of degree centrality (number of an individual's social ties) in TL positively correlates with progress, while betweenness (popularity or control) in total communication is significantly anticorrelated. vi) This mirrors the influence direction—on global TL progress—of closeness centrality (ease of access to other students). Combined with the detrimental impact on SLA of a high in-degree, this suggests that vii) for language acquisition, the structural properties of the network matter more than processes such as information flow. Additionally, we find that viii) lower progress seems to be connected with high use of texting and messaging apps, and that ix) progress is positively influenced by intensity of learning and course satisfaction.

Computational social network analysis provides new insights into the link between social relations and language acquisition, demonstrating how social network configuration and peer interaction dynamics are stronger predictors of L2/L3 performance than individual factors, and offers a novel methodology for investigating the phenomena.

Fig. 1. Bidirectional interactions in German, strongest interactions only. Edge (link) thickness indicates relative link weight (frequency or intensity of interactions). Each branch of the graph corresponds to one L1 (color), and is sorted by participants' self-reported improvement in German (node size). The two-colored node represents a bilingual participant. The three branches of the hive plot correspond to the groups detected by a network clustering algorithm. Notably, the upper (English-speaker-dominated) branch displays significantly smaller German language improvement than the other two. One node is isolated, because it does not have any reciprocated interactions of strength >2.

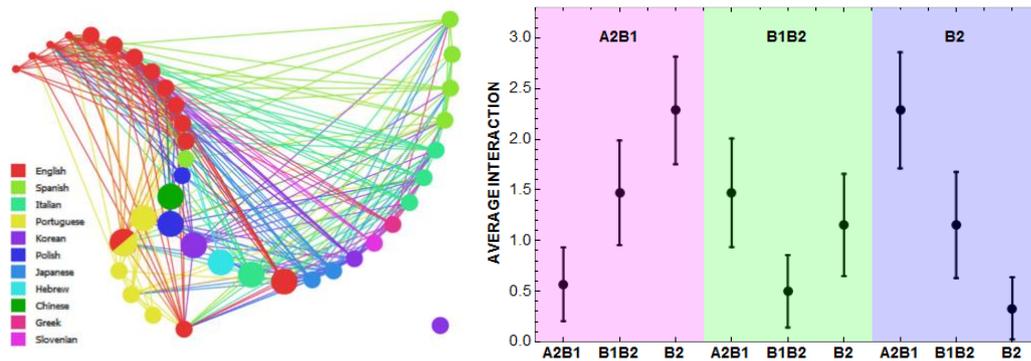


Fig. 2. Average general strongest directed interactions between different language proficiency groups. The data points are grouped by interaction source (upper group labels) and sorted by interaction target (lower labels). The same pattern also holds for interactions in German. Error bars indicate 1 standard deviation.

Table 1. Centrality measures vs. progress. For language acquisition via social interaction, the structural properties of the network matter more than processes such as information flow

centrality measure	measurable progress		
	estimate	std error	<i>p-value</i>
(Intercept)	-25.06	6.61	.01
closeness	2685.93	772.71	.02
degree	1.31	0.46	.04
betweenness	0.23	0.24	.37
pagerank	-93.88	50.71	.12

Table 2. Correlation btw centrality measures and subjective progress in vocabulary and pronunciation

centrality measure	in vocabulary	
	estimate	<i>p-value</i>
Out-degree	0.304	.0002
In-degree	0.263	.001
Betweenness	-0.204	.01
centrality measure	Correlation with subjective progress in pronunciation	
	estimate	<i>p-value</i>
Out-degree	0.258	.001
In-degree	-0.075	insign.
Betweenness	-0.242	.003

Bilinguals' social normativity is dampened in the second language: Insights from swearwords

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Recent research (Costa et al. 2014; Geipel, Hadjichristidis and Surian 2015, 2016; Ciolletti, McFarlane and Weissglass 2016; Corey et al. 2017; Hayakawa et al. 2017; Ćavar and Tytus 2018; Brouwer 2019; Karataş 2019; Dylman and Champoux-Larsson 2019; Driver 2020) has shown that the same dilemma may elicit different moral judgements depending on the language in which it has been described.

Using a covert 2×2×2 experiment where 61 bilinguals were asked to translate (L1↔L2) a passage peppered with swearwords, we show that the picture is much more complex. While the results ostensibly corroborate the so-called ‘foreign language effect’, it was only observed in the case of ethnophaulisms, that is expletives directed at social (out)groups. This indicates that the key factor modulating response strength is not so much the different emotional power associated with the respective languages, but social and cultural norms.

Long cultural learning and socialisation make expressions in L1 highly prone to normative influences, whereas using a foreign language exempts the speaker from these (whether our own or socially imposed) norms and limitations. It transpires that switching to a foreign language during decision-making may not only reduce emotionally-driven responses and political correctness biases, but also promote candid deliberative processes (e.g., rational cost-benefit considerations). This clashes with the notion that the effort of using a FL cues our cognitive system to prepare for strenuous activity and thus a more deliberate mode of thinking.

The orthogonal influence of the language medium on decisions, judgments and reactions has far-reaching consequences in our multilingual and multicultural world (not limited to such high-stakes scenarios as legal contexts). The repercussions may be serious, and raise the question whether at least in the case of slurs, machine translation might not be a more objective, unbiased and neutral solution than human translators and interpreters.

The affordances of corpus-aided instruction to improve L2 learners’ academic writing

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This study analyzes lexical bundles from international second language (L2) students’ placement test essays and utilizes them to the L2 writing instruction in intentional and incidental language learning to examine the effectiveness of the lexical bundle interventions through a multimethod research design. Corpus research was employed as the first phase to generate a list of lexical bundles. Mixed-methods research with quasi-experiment and qualitative research was subsequently used as the second phase. 367 placement test essays were used for corpus research. With the extracted list of lexical bundles, mixed-methods research was subsequently implemented to 50 L2 students in the college writing classes. The interventions yielded some effectiveness of lexico-grammatical writing gains. This study intends to examine the characteristics of lexical bundles with a linguistic view, utilize the list of identified lexical bundles, and suggest the effectiveness of lexical bundle instruction in instructed second language acquisition with a pedagogical view. The study promotes the awareness of lexical bundle use for L2 learners, learning transfer, and the need for corpus literacy (i.e., the ability to use the technology of corpus linguistics for language development) for L2 educators, writing teachers, and researchers. This study fills the gaps by analyzing lexical bundles from international L2 students’ placement test essays and utilizing a list of lexical bundles to the students’ L2 writing

instruction with the interventions of intentional and incidental language learning. As mentioned, little research on the connection between linguistics and pedagogy through the multimethod research design exists in the field of L2 writing research and applied linguistics. Therefore, it is needed to carry out pragmatic approaches in the transdisciplinary framework (The Douglas Fir Group, 2016) of second language learning and acquisition. Combining research methods from different fields can synergize research outcomes (Römer, 2016). This study combines diverse research methods: corpus research and mixed-methods research of quasi-experiments and qualitative methods. The needs-based corpus approach is essential for improving the learners' awareness of language use and satisfying them with the appropriate language instruction (Braun, 2007). Finally, learning transfer is spotlighted in qualitative research.

Word frequency affecting lexical retrieval in French as L2

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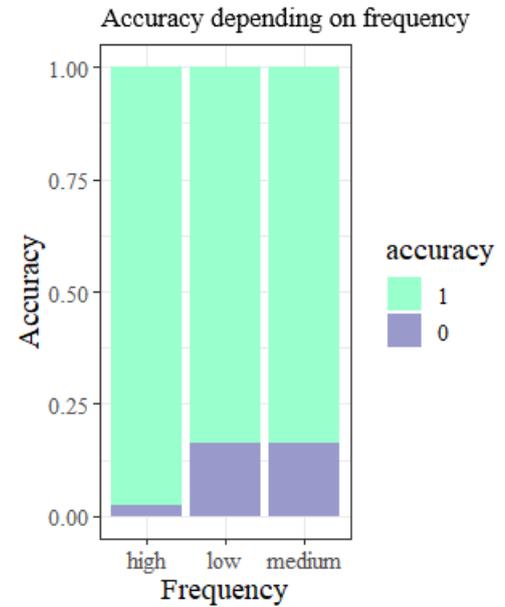
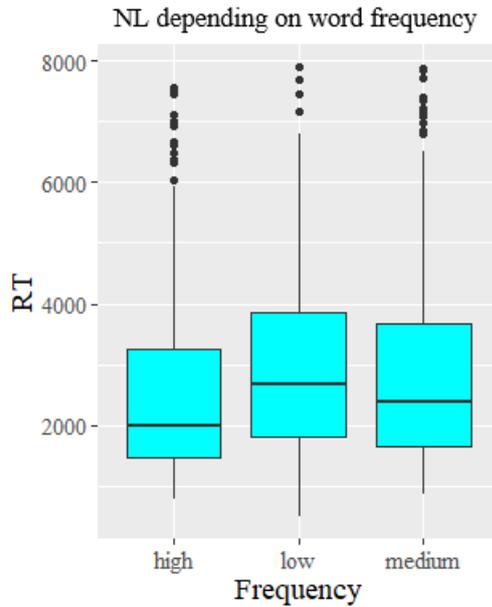
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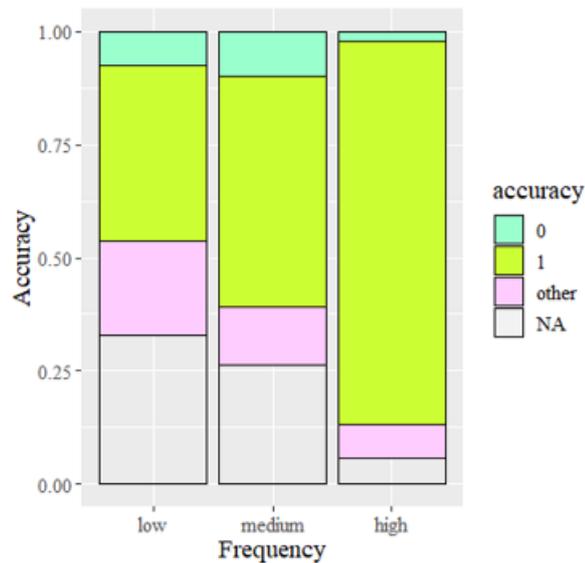
Introduction. Effect of word frequency on monolingual lexical retrieval was first established by Oldfield and Wingfield (1965) in a picture naming experiment: higher word frequency was associated with lower naming latency (NL) and higher accuracy, suggesting easier availability and higher background activation of lexical representations in the mental lexicon for high-frequency words. The aim of the current study was to see if the same effect is applicable for bilingual speakers (L2 learners) as well as to explore, how different bilingual profiles affect lexical retrieval.

Method. 32 Russian native speakers and (Upper-)Intermediate French learners participated in a picture naming experiment programmed in OpenSesame3.3.9. Prior to experiment adapted LeapQ questionnaire and consent form were filled. Participants were asked to name the pictures in French as fast and accurately as possible after the audio signal and then press the key to proceed. 33 pictures were selected from French Multipic database (Duñabeitia et al., 2018). We used logged items per million frequencies from Sketch Engine to divide words into three groups (high-frequency (HF), medium-frequency (MF), low-frequency (LF)) of 11 items balanced by animacy, gender, word length, picture complexity, semantic type and (non-)cognates.

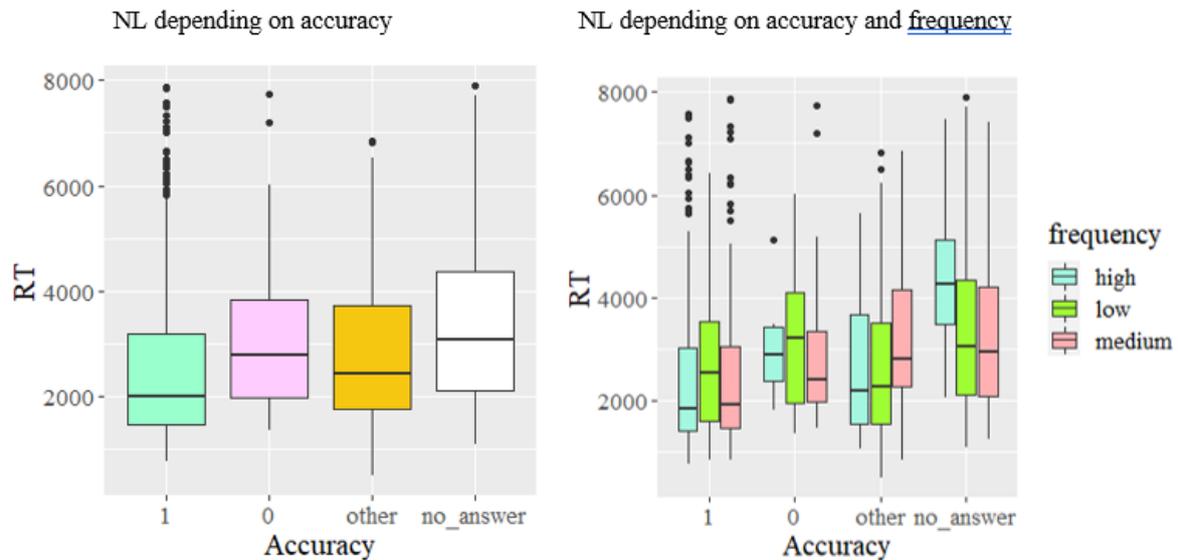
Results. For accuracy and NL Generalized and Linear Mixed-effects models were used. Consistent with predictions participants named HF words significantly faster than LF words ($p < 0.01$) and accuracy was higher for HF words than for LF and MF words ($p < 0.002$). Lower word frequency rather caused increase of NA (no answer) and other (the word different from monolingual data, but acceptable) answers, rather than incorrect ones ($\chi^2 = 151.54$, $df = 6$, p -value < 0.001).



Accuracy (including NA and 'other') depending on frequency



Answers further from monolingual norm required more time and cognitive effort to compensate for the inaccessibility of the corresponding node. Correct answers were given significantly faster than incorrect ones ($p < 0.02$) or NA ($p < 0.001$); other answers were produced faster than NAs ($p < 0.02$). Interestingly, word frequency largely affected only correct answers, reflecting general pattern ($p < 0.02$), and NA answers, showing inverse pattern: inability to remember the word or lack of knowledge was admitted faster for LF words, suggesting bilingual speakers understand the probability of them knowing/remembering a LF/MF word is lower, than HF word, spending more time on the latter.



Linguistic profiles of respondents were observed in an exploratory manner. French usage and proficiency compared with other languages were associated with better task performance, while number of languages known negatively influenced the performance in the task. Age, when a person started learning French, and language exposure duration showed no clear pattern for neither latency, nor accuracy.

Conclusion. The study supports the earlier findings of frequency effect on picture NL and accuracy for French L2 learners. Despite controlling for a wide specter of parameters, precise bilingual linguistic profile largely affected task performance. Results also show the importance to consider accuracy as a non-binary variable: L2 learners often substituted LF words with acceptable alternatives, that were not given by native speakers.

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The expression of indefiniteness in Italo-Ferrarese bilingual speakers

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According to Rowe and Grohmann, (2013) and Leivada et al. (2017a,b), bilingualism is found when speakers are competent in two highly similar languages that have a different sociolinguistic status. This situation is particularly common within the Italian territory, in which a high degree of dialectal micro-variation is found.

In this study, we investigate variation and optionality in the expression of indefiniteness in the dialect and the local colloquial variety of Italian spoken in the province of Ferrara. We aim to describe the linguistic competence of Italo-Ferrarese bilingual speakers and test whether language dominance affects speakers' linguistic choices. The data were collected in October-December 2020 through an anonymous questionnaire, administered online, consisting in a battery of socio-demographic questions, a battery of questions adapted from the Bilingual Language Profile (Birdsong et al., 2012; BLP), and a Forced-Choice task with acceptability judgments.

The stimuli checked for the choice of indefinite determiners in object position depending on polarity (positive vs negative), noun type (mass vs. plural count), event type (habitual vs. episodic), and clitic type in Clitic Left Dislocation (accusative vs. partitive). In total, 43 questionnaires were collected. Data were analysed by means of mixed-effects logistic regression models.

Results show that both Italian and Ferrarese are provided with three core indefinites: the zero determiner (ZERO), the definite article (ART), and the partitive determiner (di+ART). In Italian, we find a higher frequency of ZERO than di+ART, which occasionally specializes for specificity or small quantity. Ferrarese instead prefers di+ART to ZERO and rarely realizes the above-mentioned semantic specialization. As for dislocated objects, both languages allow for nominal expressions with ZERO, di+ART, and the indefinite operator *di* to be resumed by the quantitative clitic *ne*. However, the dialect prefers di+ART, while in Italian, the other two options are more frequent. Finally, the accusative clitic *lo/la/le/li* resumes nominal expressions with ART in both languages.

Our data suggest that language dominance produces interference of the dialect into Italian or interference of Italian into the dialect. However, interference only involves the use of di+ART, and not of ZERO. Concerning mental grammar, we argue in favour of the micro-comparative approach (Benincà and Damonte, 2009). In fact, the two grammars display points of both divergence and convergence. However, convergence does not seem to favour neo-standard Italian properties, but rather those of the dialect. This outcome is unexpected, since the dialects spoken in micro-diglossic areas are said to easily lose their marked features under the pressure of Italian (Mioni and Trumper, 1977). We propose that in the province of Ferrara, this process has not reached completion in all domains of grammar.

Finally, true optionality between competing forms, which we find in both Italian and Ferrarese, could be explained by either assuming the existence of a complex hierarchy of parameters of the type proposed by Biberauer and Roberts (2012), or assuming a non-parametric model of UG, thus relegating variation to the externalization component of language (Berwick and Chomsky, 2011, Leivada, 2015).

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Fostering the heritage language Italian: Evidence from three educational contexts

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Heritage language and literacy development have been found to be influenced by a number of factors such as parental language use, socio-economic status, or home literacy experiences (Dixon et al., 2012; Hoff et al., 2012, 2014; Scheele et al., 2010; Willard et al., 2015). In addition, the language background and the educational context are relevant for the development of the heritage language (Chondrogianni et al., 2019; Polinsky and Kagan, 2007). In the current study, we investigate the lexical and literacy skills on children in three different educational settings.

The receptive and productive vocabulary (nouns / verbs) was examined in German and in Italian in children; (1) longitudinally in a bilingual Italian-German elementary school program, spanning grade 1-3 (n = 55), (2) cross-sectionally in Italian heritage language classes (n = 40), grade 1 and 2, and (3) cross-sectionally in a bilingual Italian-German daycare program using the Crosslinguistic Lexical Task (CLT) in German and Italian (Rinker and Gagarina, 2014; Roch, 2014) as well as reading tests in Italian and German (in the school settings). The children's language and sociodemographic background was assessed in a detailed parent questionnaire.

While preschoolers showed balanced receptive vocabulary skills when comparing German and Italian, both older groups show a larger German compared to the Italian vocabulary. During the first and second school year, all children show a large increase in their Italian vocabulary, particularly in noun development. Between grade 2 and 3, children in the bilingual classroom show an increase in verb and noun comprehension but not in production. With respect to reading, children in the bilingual program show slightly better results than the children in heritage language classes.

The findings highlight the various educational and environmental factors that shape lexical and literacy development in bilingual speakers and exemplify how the heritage language Italian can be fostered in different educational contexts.

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A neurolinguistic methodological approach to third language acquisition by heritage language bilinguals.

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Several theories attempt to explain the patterns of previous language involvement and representations in third language (L3) acquisition. They differ in terms of degree (holistic or property-by-property transfer of the L1, L2 or both) and/or timing (initial stages versus development; see Rothman et al., 2019). In parallel, Heritage Language Bilingualism studies endeavor to understand the continuum of outcome variation noted in heritage speaker (HS) grammars (see Polinsky, 2018 for review). Because HSs are native speakers (Rothman and Treffers-Daller, 2014), albeit early bilingual ones (home minority language in a majority language context), the wide-range of individual variation they display can seem perplexing (but see Kupisch and Rothman, 2018). And so, HSs have much to offer to the nascent field of L3/Ln acquisition, although rarely featured in L3 research (see Iverson, 2009, 2010; Hopp, 2018).

Herein, we present a methodology that simultaneously fills several gaps by using neurolinguistic techniques (EEG/ERP) at the interface of heritage bilingualism and L3/Ln acquisition, where both such topics are understudied despite very compelling reasons to the contrary (see González Alonso et al., 2020). We argue that extending the L3/Ln literature by examining the neuronal correlates (ERPs: N400 and P600) in an L3/Ln acquisition environment with adult early bilinguals can reveal key insights for both L3/Ln acquisition and heritage language bilingualism.

The present ongoing study examines Italian-German HSs exposed to a controlled learning paradigm with a Latin mini-grammar, compared to monolingual German peers. Participants come to the

laboratory twice and are trained in a subset Latin lexicon and subsequently on the specific grammatical domains of choice (case and adjective position). After two exposure rounds, participants are tested via EEG/ERP to see the level at which their behavioral performance coincides with indices of processing suggestive of underlying morphosyntactic representations (P600 effects for violations). This behavior is juxtaposed, property by property, against which previous grammar could have provided the proper representation (e.g., case in German, adjectival position from Italian). The ERP results are expected, then, to indicate which of or if indeed both the previous grammars affect early L3 processing, by comparing them to monolingual counterparts.

Results show P600 effects for both groups in adjectival position. The fact that both groups show the same effect makes it impossible to determine if it is a sign of transfer or indicative of learning proper. In the case morphology context, only the heritage speakers seem to be reacting to the task via a P300-like component (early sign of allocation of attentional resources), despite both groups being dominant in German where Case could have been transferred from. The data seem to suggest that Case is not transferred for either group, but the difference between the two groups suggest that time spent in the bilingualism mode (HSs over monolingual/L2ers) might increase (implicit) language awareness. What we have captured, thus, could be a neurological measurement of the so-called advantage of subsequent language learning for early vs late bilinguals (Cenoz, 2003). We discuss the result in relation to current L3 and HLB theories and beyond.

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When apples are simultaneously oranges: Bilingual type matters for individual differences in the oscillatory dynamics of inhibitory control

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At least under specific conditions of individual-level experience/engagement with bilingual language exposure and use, managing multiple languages can lead to structural and functional adaptations in the brain. However, the effects of bi-/multilingualism on the neural underpinnings of executive function

(EF) remain understudied. Research using time-frequency representations (TFRs) has shown that EF tasks (e.g. Flanker task) modulate power within theta- and alpha frequency bands. These power modulations have been linked to a greater engagement of the executive control system (Cavanagh and Frank, 2014; Suzuki et al., 2018). Herein, we use EEG with a Flanker task to investigate how individual differences in language experience may modulate neurocognitive outcomes (specifically oscillatory dynamics).

EEG and behavioral data were collected from 60 bilinguals (28 early bilinguals; 32 late-acquired L2 learners). Participants also completed the Language and Social Background Questionnaire (LSBQ; Anderson et al., 2018). TFRs were computed for both the incongruent- and congruent trials, and the difference between the two (Flanker effect vis-à-vis cognitive interference) were then 1) compared between the early- and later acquired bilinguals (via cluster-based permutations analysis) and 2) modeled as a function of individual differences in language experience using continuous measures of bilingualism derived from the LSBQ. At the group level, we predicted greater brain engagement in early compared to late bilinguals, specifically increased theta activation followed by alpha suppression for the Flanker effect. Furthermore, we hypothesized degree of active bilingualism would predict changes in alpha and beta bands in both early and late bilinguals. Finally, we predicted a correlation between reaction times (RTs) and power modulation within the alpha- and theta bands.

Incongruent trials incurred significantly slower RTs than congruent trials, higher theta power in central electrodes 300-600ms post-stimulus onset, and decreased alpha power in centro-parietal electrodes 600-950ms post-stimulus onset. No significant differences were observed between groups for either behavioural or neural responses. However, individual differences analyses revealed significant correlations between age, age of acquisition, and usage of the non-societal language at home with alpha and beta band activity for late bilinguals, whereas only age effects were found in early bilinguals. Furthermore, when correlating alpha power with RTs, early bilinguals showed a negative correlation while later bilinguals show a positive correlation. Taken together, the results indicate adaptations towards differential brain recruitment to deal with the cognitive demands associated with variation in language experience.

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How effective are Polish dyslexic and non-dyslexic learners of English using EFL textbooks and what can be done to help: an eye-tracking perspective

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Recent eye-tracking studies involving dyslexia mainly concentrate on reading and writing in children with dyslexia. These studies show that dyslexics suffer from deficits in the area of language processing, an issue which is reflected in their eye movements. However, dyslexics and non-dyslexics use the same textbooks at school.

Modern textbooks are tools of multimedia teaching and learning as they contain both text and illustrations. They also have very attractive layouts and visuals, which very often are not suitable for dyslexics. Because of that we decided to try to answer the question of how relevant, when it comes to teaching, some parts of the graphic layout of EFL textbooks are for foreign, i.e., non-English-speaking, students (here: Polish), who might be dyslexic or non-dyslexic. To do it we used an eye tracker.

In this study we examined the eye movement patterns of 120 Polish teenagers (60 dyslexic and 60 non-dyslexic) working with 3 sets of materials imitating pages of an EFL textbook. We hypothesised that it is possible to influence and stimulate the way school students, both dyslexic and non-dyslexic, work with school textbooks by designing their layout in a proper way and one adjusted to their needs. As a consequence, it is possible to improve students' results. We analysed 4 oculographic parameters, i.e., first fixation duration, fixation count, dwell time, revisit count, as well as one parameter unrelated to eye movements, i.e., answer correctness.

The results of our study show that with the use of proper layouts and designs, textbooks can minimise differences in the effectiveness of the work done, and results achieved, by dyslexic students compared to non-dyslexic ones.

We conclude that wise planning can stimulate the final results of dyslexic students especially, making them become as successful as non-dyslexic ones. This is a crucial conclusion of immense social value.

The postmonolingual condition? The use of Polish and Czech as a lingua receptiva in comparison with English as a lingua franca by the students from the Polish – Czech border area

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Europe seems to be a plurilingual continent with a number of officially monolingual countries (Bartelheimer et al., 2019). Statistical evidence suggests that Poland and the bordering Czech Republic are single-ethnic and monolingual countries. According to the last national census of 2011, Polish is the mother tongue of 98% of the country's population. Similarly, Czech as the first language is spoken by 96 % of the Czech. However, the observation of communication practices employed by the inhabitants residing close to the Polish–Czech border shows that multilingual practices have been developed by people living in that area. Language users maintain the leading position of their first

language, yet they also take advantage of multilingual modes to achieve mutual intelligibility, i.e., Polish and Czech as a *lingua receptiva* or/ and English as a *lingua franca* (Nieporowski et al., 2020).

Therefore, the present study aims to investigate the effectiveness of Polish and Czech as a *lingua receptiva* (LaRa) in comparison with English as a *lingua franca* (ELF) between Polish and Czech students (living along the Polish-Czech border) when making semi-spontaneous dialogues. To do so, a task fostering negotiation and decision-making was prepared by the research team. Different types of research instruments were used to provide qualitative and quantitative data: 1) video recordings of the students performing the task, 2) the checklist including key statements necessary to evaluate if the task was performed successfully, 3) video recordings of retrospective comments made by participants, 4) transcripts.

The present research is inspired by Bulatović's et al. (2019) who investigated the effectiveness of LaRa and ELF between Croatians and Slovenes. The study investigated listening skills and showed that the mean of intelligibility was high irrespective of the mode. Our presentation aims to expand prior research with reference to spoken interactions between Polish and Czech students. In particular, the study examines the significant role of communication strategies (CSs) and intercultural communicative competence (ICC) in achieving intelligibility in the two multilingual modes. This way, it may indicate some useful pedagogical implications and techniques for teaching in the multilingual and multicultural classroom environment.

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"Where do I come from?" From a monolingual mind to a multilingual heart: An autoethnography

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With increasing numbers of emergent multilinguals in classrooms around the world, there is a burgeoning interest in centralizing the role of language teacher identity (LTI) to enhance teachers' preparedness and competence in multilingual settings. While LTI has been conceptualized as complicated, conflicting, fluid, and socio-culturally constructed (Barkhuizen, 2016; Rudolph et al., 2020; Varghese et al., 2005), language ideology tends to play a mediating role in valorizing language hierarchization and legitimating identity options (Pavlenko and Blackledge, 2004; Yazan, 2019). Drawing on Woolard and Schieffelin's (1994) concept of language ideology, this paper narrates and analyses the author's ideological transformation from a monolingual orientation to a multilingual advocacy and her identity construction and negotiation across three socio-cultural contexts: Mainland China, Hong Kong, and Norway. In the process of composing an autoethnography (Canagarajah, 2012; Ellis et al., 2011), the author employs the construct of dominant language constellation (DLC) (Aronin and Ó Laoire, 2004) as a real-life model of her language uses to study her multilingual practices (Aronin, 2019, 2020). In the autoethnography, three features of the author's DLCs were investigated,

namely constitution, configuration, and alternations (Aronin, 2016). The author's reflexivity was guided by the following three research questions: 1) What languages constitute the author's DLCs along her life trajectory? 2) To what extent is the alternation of the author's DLCs shaped by the broader socio-cultural structures in her life? 3) How is the author's identity construction and negotiation intertwined with the evolution of her DLCs in transnational settings?

In light of relevant literature, narrative analysis (Clandinin and Connelly, 2000; Riessman, 1993) was conducted which revealed six stages along the author's linguistic trajectory: 1) Upbring in monolingual ideologies, 2) Becoming an EFL teacher, 3) Wrestling with the ideology of "non-nativeness", 4) Taking the multilingual turn, 5) Confronting an identity crisis, and 6) Rebirth into a hybrid identity. A DLC map was delineated to illustrate each stage as both a product of specific socio-cultural structures and an outcome of the narrator's identity construction and negotiation. The evolution of the DLCs not only resembles the writer's ideological transformation journey but also epitomizes the profound influence of socio-cultural power on individual's identity search and development. Confronting the multilingual turn in education and echoing the call for centralizing identity in language education, this self-study exemplifies autoethnography as an empowering method to shift ideologies from perceiving *language(s)-as-problem* to advocating *language(s)-as-resource* (Wright and Boun, 2016). The study also illustrates how the paradigm of DLC can be deployed as a tangible model of multilinguals' ever-evolving linguistic trajectories.

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