Konstanz Linguistics Conference

BOOK OF ABSTRACTS

March 21-22, 2024
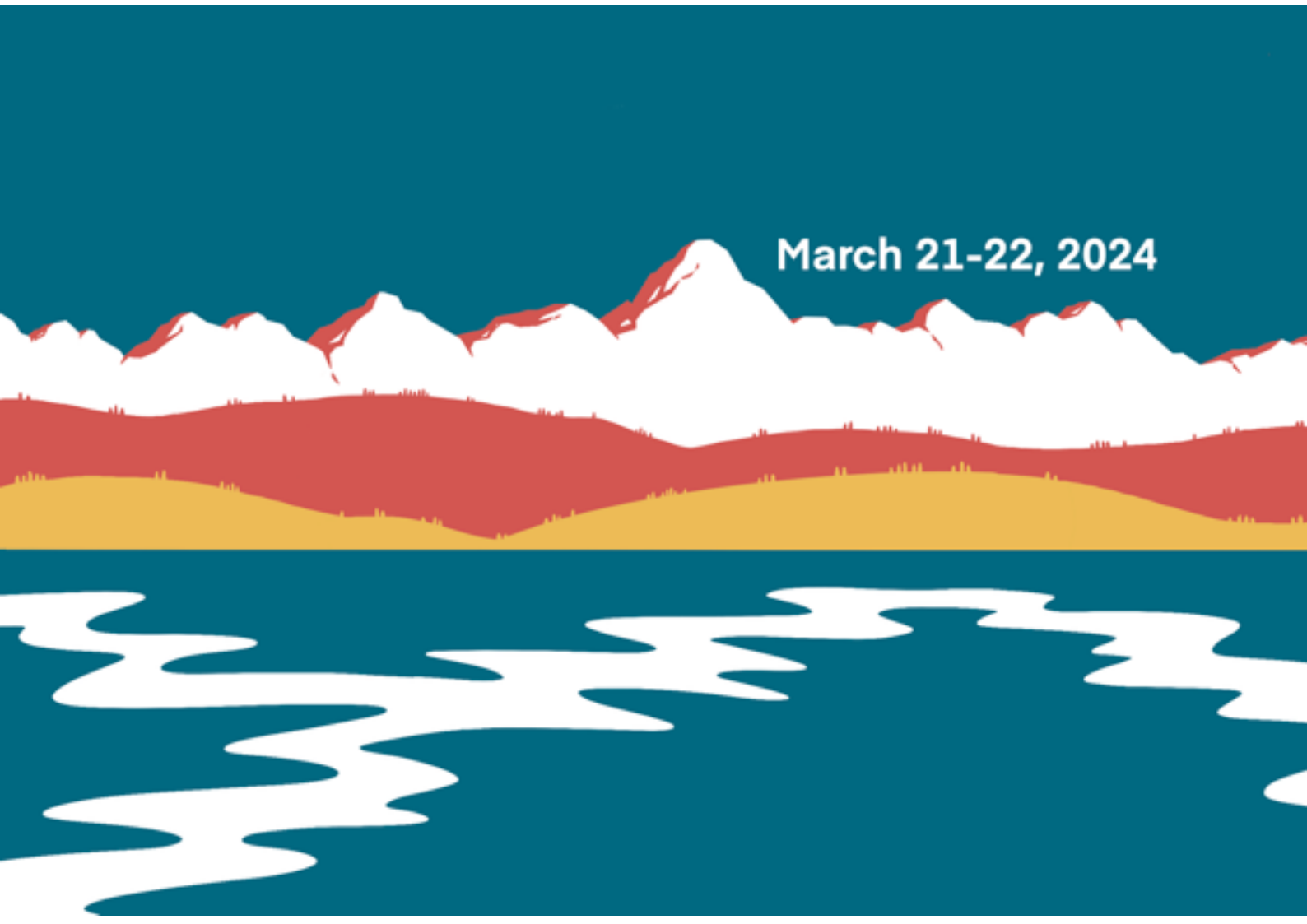
KLC Programme

Timeline	Day 1a	Day 1b	Day 2a	Day 2b
8:30 - 9:00	Registration			
9:00 - 9:10	Opening Remarks			
9:10 - 10:10	**Keynote - Katharina Zahner-Ritter** Addressing the dynamics in the second-language acquisition of intonation: Cross-linguistic influence, proficiency, and individual variation Chair: Marieke Einfeldt E 404		**Keynote - Lauren Fonteyn** Historical linguistics and data science: a match made in purgatory Chair: Massimiliano Canzi E 404	
10:10 - 10:40	Coffee Break		Coffee Break	
Session Titles	Syntax Chair: George Walkden E 404	Psycholinguistics Chair: Tamara Rathcke E 402	Semantics Chair: Raquel Montero Estebaranz E 404	Syntax II Chair: Miriam Butt E 402
10:40 - 11:05	**Prudence de Pontbriand** Word order variation in French Absolute Constructions	**Philine Link, Massimiliano Canzi, Tamara Rathcke** Measuring predictive processing with sensorimotor synchronization and pupillometry	**Maik Thalmann, Andrea Matticchio** No Hard Feelings if Hard Presuppositions Project	**Rajamathangi Shanmugasundaram** Sluicing-Like Construction in Tamil

11:05 - 11:30	**David Diem** Verb-first under Evaluatives and Psych Verbs in Alemannic German	**Despoina Chalyvidou, Andrea Weber** Role noun processing and gender stereotypes in Greek	**Chiara Marchetiello** From less to more: manco in Neapolitan at the syntax-semantics interface	**Enes Us** Verb-stranding VP Ellipsis in Turkish
11:30 - 11:55	**Florian Wandl** Pronominal clitics in the Slovenian dialect of Resia	**Maura Panozzo Chiomento, Maria Vender, Denis Delfitto** Linguistic and Implicit Learning Abilities for Parkinson's Disease Detection	**Leah Doroski** Introducing Pseudo-Neg-Raising	**Özhan Alp Şehit** Unexpected Scope in Turkish RNR
11:55 - 12:20	**Lieke Hendriks** Finding an analysis for discontinuous DPs: investigating binding principles	**Bianca Mădălina Zgreabăn** A systematic literature review of Vision and Language models' compositional ability	**Dominic Schmitz** Instances of genericity: A distributional semantic approach to generic and specific masculines' semantics in German	**Ayşenur Coşkun** The Investigation of Null Pro in Turkish
12:20 - 13:20	Lunch		Lunch	
Session Titles	Phonology Chair: Fernanda Barrientos E 404	General Linguistics Chair: Tianyi Zhao E 402	Language Acquisition Chair: Laura Hund E 404	Morphology Chair: Chiara Riegger E 402
13:20 - 13:45	**Naeimeh Afshar, Vincent J. van Heuven** Perceptual awareness and production of American English vowels by	**Diego Luinetti** Emergence of impersonal experiential constructions in Ancient Greek	**Angelika Golegos, Theodoros Marinis** Processing pronoun ambiguity in German – evidence for a	**Jiayi Zhou** Reduplication in the Formation of Manner Adverbials: A Case Study in Mandarin Chinese

	monolingual Persian and bilingual Azerbaijani-Persian learners of English as a foreign language		developmental path in primary school children	
13:45 - 14:10	**Michelle Vuong** Cross-generational differences of German underlying vs. derived diphthongs between two generations	**Andrea Matticchio, Maik Thalmann** How to be mistaken and still happy: On belief-relative presuppositions	**Veronica Bressan, Adriana Belletti, Cristiano Chesi** The local side of scalar implicatures: insights from the acquisition of Italian some	**Haiping Long, Lei Wang** Positional shift and prosodic independence in the grammaticalization of subjective adverbials: With examples of Chinese xìngkuī 'fortunately' and others
14:10 - 14:35	**Dana Serditova** PIN~PEN Merger in New Orleans English	**Chiara Riegger** Old Saxon Vowel Insertion	**Sara Cavaglià, Chiara Melloni, Maria Vender** Reading predictors in bilingual and monolingual preschool children	
14:35 - 16:00	<u>Poster Session + Coffee Break</u> **Andrea Szávó** Lexical and superlexical resultatives in Hungarian **Dániel Arató** The role of analogical pressure in the evolution of paradigmatic systems **Gautam Ottur** Linear patterns in the syntax of serialization		<u>Poster Session + Coffee Break</u> **Ayşenur Coşkun, Elif Yılmaz, Enes Us** Production of Conditionals in Turkish and English-Speaking Children **Ivan Rygaev** Reference in Communication **Lou Pepin** Language attitudes of cross-border commuters in multilingual Luxembourg	

	Gerardo Sánchez Argüelles The Loss of OV Orders in the History of English: A Re-Evaluation **Godfred Agyapong, Ernest Nyamekye** Verbal Nominalization in Kulango **Minsong He** The Paral Expressions with Plural Construction in Slovene **Rüveyda Şahyar** Modeling Morphological Learning: Tolerance Principle on Turkish past tense -DI **Zeqi Zhao** A new perspective to the mei-dou puzzle in Mandarin	**Matyáš Foltýn** Foreign influence on Modern Standard Yiddish zoonyms **Michał Piosik** ba as a marker of quotation in the speech of Swedish adults – a Construction Grammar perspective **Mila Freiseis** Semantic priming and prosodic structure: At the interface between language redundancy and acoustic salience **Mlada Kimto** Perception and distinction of American and British accents by French students learning English (L2 learners)
16:00 - 17:00	**Keynote - Antje Stoehr** How can orthography inform bilingual language acquisition and speech processing? Chair: Anna Shapiro E 404	**Keynote - Laura Rosseel & Eline Zenner** Children's evaluation of socially meaningful language variation: a three-dimensional perspective Chair: Judit Vari E 404

Historical linguistics and data science: a match made in purgatory

Lauren Fonteyn

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In this talk, I will share my journey from being a PhD student in historical corpus linguistics to working as a data scientist for the Dutch government. By surveying some research projects that have served as pivotal points in my academic career, I hope to highlight how a deep dive into a narrow and somewhat niche field may unexpectedly open doors to broader interdisciplinary pursuits.

The first project I wish to survey revolves around my research into individual-level grammatical variation, which I conducted together with Andrea Nini and Peter Petré. The second project I would like to focus on is the development of two Large Language Models called MacBERTh and GysBERT, which are historical variants of the Bidirectional Encoder Representations from Transformers model, also known as 'BERT'. I will talk about how this multi-disciplinary digital infrastructure project came to be, and will show what these historical BERT models can do by means of two small case studies.

Ultimately, working on these projects paved the way for my decision to leave academia and apply for a research job that focusses on reducing greenhouse gas emission in the European Union. At the end of this talk, I will briefly reflect on why I believe my background in Historical Linguistics and my new job are a match made neither in heaven, nor hell.

Children's evaluation of socially meaningful language variation: a three-dimensional perspective

Laura Rosseel & Eline Zenner

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In this talk, we address the core question of how and when young language users learn to recognise and evaluate socially meaningful language variation. We present three case-studies developed using the same cartoon superhero video, created particularly for this project.

Starman or Sterrenman: Case-Study 1 gauges 174 Belgian Dutch children's evaluation of two versions of the superhero: Sterrenman is a Dutch-only superhero, Starman instead regularly uses English loanwords. After evaluating the two guises, children took part in a series of post-test measuring language awareness and receptive knowledge of the words used in the script. Results show an incremental awareness of (the social meaning of) English words in Dutch, as well as gradually decreasing prestige for the Dutch-only guise.

Meteorman: Case-Study 2 aims to challenge these findings by replicating the Starman method for a different contact setting. Opting for a between- rather than a within-subject set-up, this case-study uses the Starman material to elicit 86 Swiss German children's attitudes towards ethnolectal variation. Results show how the indexical value of Swiss German ethnolect as attested in the adult community (urban, youthful, ethnic) is represented in a coarse-grained opposition in children's evaluation between "from around here" and "not from around here".

Starman goes advertising: Finally, Case-Study 3 explores the possibility to use Starman for applied research. Drawing from research on Foreign Language Display (Hornikx & van Meurs 2020), the study sets out to find out to what extent the use of English in Dutch commercials impacts perceived attractiveness of marketed products. Over 1600 Belgian Dutch children were presented with three versions of Starman as the mascot for a new cookie brand, one using only Dutch, one using English discourse markers and one using English nouns. Children were asked which version they liked best, which one they would select if they were creating the ad, and to explain their reasoning. Results reveal a preference for the English versions when children are asked for their personal attitudes, whereas the preference for the Dutch-only guise increases when children are asked to adopt the perspective of a marketeer.

We end the talk with a more fundamental discussion of the connection between evaluation and awareness, linking up with Preston's concept of 'noticing' (Preston 2011) and Bhatia's notion of 'genre' (Bhatia 1999), further expanding methodologically on the difficulty of developing a matched-guise based attitude measurement that allows for comparisons between disparate age groups seeking a balance between feasibility for the youngest and attractiveness for the oldest.

How can orthography inform bilingual language acquisition and speech processing?

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One crucial difference between first (L1) and second (L2) language acquisition is that L2 learners are often exposed to the L2's written forms from the onset of L2 learning. Yet, until recently, the effect of written forms on bilinguals' speech processing had been neglected and is still not considered in leading models in the field. By now, there is wide evidence that bilinguals' speech production in the L2 is affected by the rules for mapping sounds onto letters in L1 and L2 (e.g., the letter <z> corresponds to different sounds in Spanish and English; hereafter incongruent letter-to-sound mappings). By contrast, less attention has been paid to the consequences of these incongruent letter-to-sound mappings on L2 speech perception. Emerging evidence suggests that incongruent letter-to-sound mappings likewise affect L2 speech perception and that effects in perception may actually be stronger than in production.

In this keynote, I will provide an overview of research on orthographic effects in bilinguals' speech production and perception, focusing on the effect of incongruent letter-to-sound mappings between L1 and L2. I will address how orthographic forms affect both phonetic and phonological aspects of L2 production and perception at the sound and word levels. I will discuss data from a variety of learners, from early bilinguals to adult classroom learners, and from a variety of languages, ranging from well-studied languages such as English and Spanish to lesser studied languages, such as Basque. In addition, I will provide evidence that incongruent letter-to-sound mappings may not only affect the L2 but also the L1.

By summarizing the existing literature and recent findings from our lab on the effect of written forms on bilinguals' speech production and perception and outlining areas in which previous research findings diverge, this keynote will suggest new avenues for future research on orthographic effects in bilinguals' speech production and perception.

Addressing the dynamics in the second-language acquisition of intonation: Cross-linguistic influence, proficiency, and individual variation

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Prosody refers to aspects of spoken language above the segments and includes the melody of speech (intonation), aspects of duration, intensity, and timing. Getting the prosody right is one of the aspects speakers find challenging when learning second-languages (L2s), and even advanced learners often transfer native-language (L1) patterns to the L2 (cf. Mennen, 2015).

In my talk, I will present a number of production experiments that investigate how learners from different language backgrounds (including Syrian Arabic, Bulgarian, French, Italian, Mandarin) acquire both intonational form and meaning in L2 German. In particular, I will be looking at the acquisition of phonological and phonetic aspects of (contrastive) focus marking and the encoding of attitudinal meaning. Based in the experimental data, I will be showing that cross-linguistic influence (CLI) between the L1 and the target language may often account for the challenges that learners face, especially with regard to beginners. On the other hand, as I will argue, L2 productions are subject to considerable inter- and intra-individual variation that cannot always be readily explained by prosodic transfer or proficiency level. I will discuss implications that arise from these findings for L2 acquisition theory and, from a more practical perspective, for language teaching.

Perceptual Awareness and Production of American English Vowels by Monolingual Persian and Bilingual Azerbaijani-Persian Learners of English as a Foreign Language

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This study investigates the distinctions in mental representation and production of the simplex American English (AE) vowels among monolingual Persian speakers, early bilingual Azerbaijani/Persian learners of English, and native AE speakers. While Persian possesses six peripheral vowels, Azerbaijani adds three central vowels, resulting in a non-one-to-one mapping with the eleven AE vowels organized into tense vs. lax subsystems (Van Heuven et al. 2020; Afshar 2022 and references therein). Using perceptual identification of synthesized vowels and measuring formants and durations in vowel production, we examine the AE vowel system for twenty monolingual (English as L2) and twenty bilingual learners (English as L3), alongside twenty AE controls (English as L1).
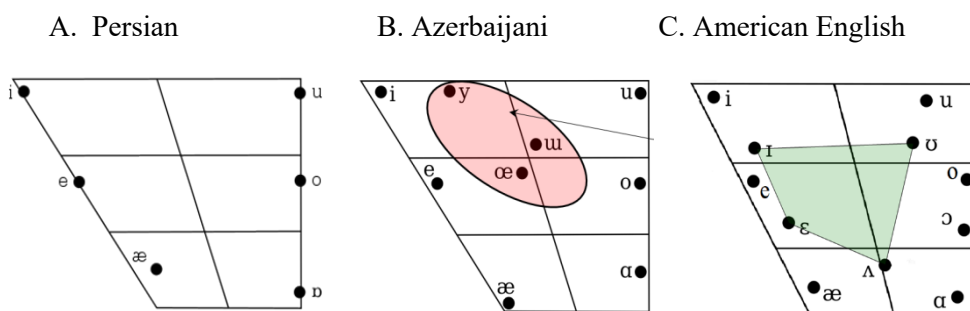

Figure 1. IPA vowel diagrams for the vowel inventories of Modern Persian (A, Majidi & Ternes, 1999), Azerbaijani (B, Ghaffarvand Mokari & Werner, 2016) and American English (C, modified from Manell, Cox & Harrington, 2009). The shaded ellipse marks the three central vowels in B. The shaded quadrilateral connects the four phonetically lax vowels in C.

In an earlier study, we collected perceptual assimilation data for the two EFL learner groups and established that the early bilinguals mapped the AE vowels differently onto the vowels of Azerbaijani than of Persian, and also differently than the monolingual Persian EFL learners did (see Figure 2). Consequently we expected differences in the perceptual awareness and production of the AE vowels for our monolingual and early bilingual learners.

Figure 2. Results of perceptual assimilation test (Afshar & Van Heuven 2022). AE vowels as perceived by monolingual bilingual EFL learners. Two AE vowels joined by a brace (reddish cells) denote a Same Category contrast; yellow cells denote a Category Goodness contrast.
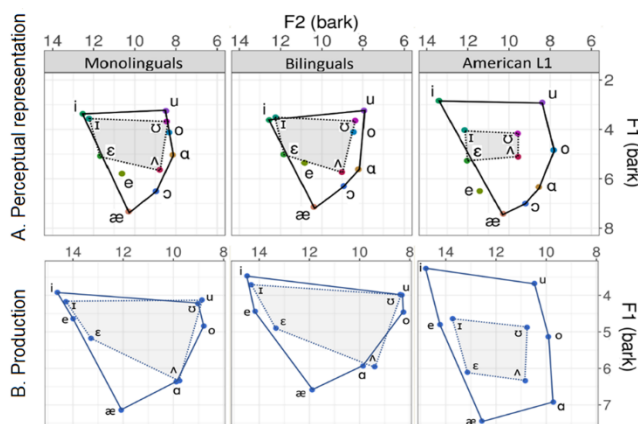

Figure 3. Perceptual representation (A) and production (B) of centroids in F1-F2 plane of 11 AE simplex vowels by monolingual Persian (left), early bilingual Persian/ Azerbaijani (centre) and American native speakers (right). Inner quadrilaterals join short/lax AE vowels.

Our results show that the perceptual awareness/organization and the acoustic vowel space in L2/L3 production data exhibit a high degree of isomorphism at the aggregate group level, with similar vowel centroid locations and degrees of perceptual confusion and acoustic overlap (spreading ellipses and duration data are not presented in this abstract) in production. However, correlations between perception and production data are not evident at the speaker/listener-individual level, making it challenging to determine whether perception leads to production or vice versa. Crucially, AE vowel systems appear highly similar between the two nonnative groups but differ markedly from the native control system. (See Figure 3; for details, e.g., spreading ellipses and duration analysis, consult Afshar 2022, Afshar & Van Heuven 2024).

We conclude that the three additional Azerbaijani vowels do not confer a Third Language Acquisition (TLA) advantage over Second Language Acquisition (SLA). Nonnative English learners tend to overemphasize the perceptual importance of vowel length in AE, contrasting with native English speakers, who prioritize subtle differences in vowel quality (formant structure). These findings carry implications for English language teaching in Iran and the development of English pronunciation materials.

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The role of analogical pressure in the evolution of paradigmatic systems

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Hungarian is an extensively studied Uralic language with a mostly agglutinating morphology. The suffixed forms of Hungarian nominals come in two kinds as to whether they insert a vowel (called a *linking vowel*) between the root or stem morpheme and the suffix, or not. It is easy to show that this process is not governed by the mere phonotactics of the Hungarian language alone: some forms that would still be perfectly permissible phonotactically after plain concatenation turn out to have a linking vowel (Siptár & Törkenczy, 2000).

The next most natural and intuitive explanation would be that vowel insertion is simply determined by the logical conjunction of a lexically stored feature of the two participating morphemes: both morphemes, independent of each other, get a single binary vote, and the resulting word form will have a linking vowel if and only if they both vote "yes" (illustrated in Table 1, based on Rebrus (to appear)). Closer inspection however reveals that the case is not so simple either: the presence or absence of an extra vowel is in fact a logical function in *two arguments* that is *not* reducible to a conjunction or disjunction of two separate one-argument subformulae; see Table 2, based once again on Rebrus (to appear), for an example.

	-t 'ACC'	*-tól* 'ABL'			suffix class **a**	suffix class **b**
hajó 'ship'	*hajó-t*	*hajó-tól*	⇔ stem class **1**			**A**
haj 'hair'	*haj-**a**t*	*haj-tól*	stem class **2**		**B**	

Table 1

An upcoming paper by Rebrus (to appear) examines this complicated feature of the morphophonology of Hungarian nominals on the theoretical basis of analogy between surface word forms in a *paradigmatic system* (see Blevins (2016) about the Word and Paradigm framework and analogy in morphology). Rebrus points out that although the condition for vowel insertion may not be decomposed into one-argument terms, it is not completely haphazard either. In fact a clear pattern is visible when the root and suffix morphemes are arranged in the right order in a table as seen below: labeling the lack of a linking vowel "result A" and the presence of a linking vowel "result B", we find a single compact bunch of "B" cells in one of the table's corners, meaning all rows and all columns in the paradigmatic system are monotonous (in the same constant direction), see Table 2 (Rebrus, to appear). Such a pattern may have resulted from the gradual erosion through time of a hypothetical former conjunctive state of the system where "B" used to be active in a strictly rectangular area: a pattern indicating the logical conjunction of two subformulae (see Bybee (2006) about the diachronic implications of repeated usage). Supposing that neighboring cells in the system can influence each other's outputs, we may be seeing the long-term cumulative effects of analogical attraction (Rácz et al., 2018). Hence the article proposes that the present state of the paradigmatic system has come to be through the gradual and eventually persistent overapplication or underapplication by analogy of an inflectional pattern in a neighboring cell, giving rise to the characteristic staircase-like pattern now found in the system.

	suffix class **a0** *-k* 'PL'	suffix class **ai** *-n* 'SUE'	suffix class **aii** *-t* 'ACC'	suffix class **b** *-tól* 'ABL'
stem class **1i** *háború* 'war'	*háború-k*	*háború-n*	*háború-t*	*háború-tól*
stem class **1ii** *lassú* 'slow'	*lassú-ak* **(overappl.)**	*lassú-n*	*lassú-t*	*lassú-tól*
stem class **2i** *bár* 'bar'	*bár-ok*	*bár-on*	*bár-t* **(underappl.)**	*bár-tól*
stem class **2ii** *vár* 'castle'	*vár-ak*	*vár-an*	*vár-at*	*vár-tól*

Table 2

The naturally arising question then is how much of this empirical observation may be attributed to actual linguistic factors such as phonetic and semantic distance, and how much of it is due to the workings of plain analogy in general, irrespective of the concrete linguistic particularities. In an offshoot study of the paper mentioned above we concern ourselves with the extent of the latter: we consider the role of pure analogy, distanced from the actual morphophonological behaviors of the concrete language in question, in creating the kind of closed, compact staircase pattern displayed by the paradigmatic system of vowel insertion. In this sub-project we set out to study the apparent contributions of sheer analogical pressure to the slightly irregular patterns observed in the morphology of Hungarian nominals through a stochastic mathematical model that is meant to be intuitively analogous to real-life paradigmatic systems, only devoid of any substantial morphological or phonological factors. Cells, and the word forms in them, are assumed to have some degree of autonomous reality in the speaker's mind. All cells and word forms in the paradigmatic system are assumed to be equally common and prominent. In the model, all cells have a continuous momentary preference between 0% and 100% for the type A word form (no vowel insertion) and the type B word form (vowel insertion). These preferences are updated iteratively, simulating actual usage: a random cell is picked in each iteration, the preferences of the adjacent cells averaged with the cell's own preference, a discrete outcome (either A or B) selected stochastically based on this average, and the cell's preference is adjusted in the direction of the outcome. This way the preferences of neighbors tend to become similar over time. Repulsion between cells is not assumed.

We find that analogical attraction alone may be enough to explain some of the informal observations above, supporting the case for an analogy-based explanation of the linking vowel problem and potentially for other kinds of morphological phenomena that behave according to a non-conjunctive pattern.

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The local side of scalar implicatures: insights from the acquisition of Italian *some*

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Background. In the last twenty years, a large number of studies has focused on the acquisition of scalar implicatures (SIs), shedding light on the great variability and graduality that with which SIs develop in early grammars. In fact, while certain scales start triggering implicatures already in preschool years (numerals, ad-hoc scales), others do not, such that the <*some, all*> scale remains inactive until 6 (Horowitz et al. 2018; Foppolo et al. 2021). This state of affairs has suggested that inferential maturation alone is not sufficient to describe the phenomenon, and other factors should be considered to account for it (Falkum 2019). Similarly, a gradual trajectory of development emerges in the late acquisition of object relative clauses (RCs), where early appearance of subject RCs (and some early object RCs) shows that relativization alone cannot be the only cause for delay. Based on featural Relativized Minimality (fRM, Starke 2001; Rizzi 1990) this selective delay is attributed to intervention: lexical subjects of RCs may share a subset of the active features that trigger and guide the dependency at issue. When this happens, the subject intervenes in the object dependency and makes it unavailable to young children (Friedmann et al. 2009; Belletti et al. 2012 a.o.):

(1) The elephant [that [the lion is wetting <the elephant>]] .

       [+NP, +Rel]   [+NP] <[+NP, +Rel]>

Proposal and research question. This study extends the scope of fRM to SIs focusing on the morphosyntactic properties of the scalar trigger *some*. Following Chierchia (2013), SIs are described as the output of a covert syntactic dependency between an operator in the CP layer, Exh, and scalar lexical terms, both carrying a [scalar] feature (Chierchia 2013; Bressan 2022).

(2) $[_{ExhP}$ Exh$_{[scalar]}$ $[_{TP}$ Some$_{[scalar]}$ …]] $\rightarrow$ *Only some (and not all)*

The interaction between this configuration and the morphosyntactic properties of the scalar trigger *some* add up complexity to the structure. The specific, presuppositional reading of *some*, necessary to license the scalar enrichment, requires wide scope assignment from a high projection (RefP, as in Beghelli and Stowell 1997), thus yielding the structure in (3):

(3) $[_{RefP}$ Ref $[_{ExhP}$ Exh $[_{TP}$ [Some mice] are watching tv.]]

   [+presupp., +scalar]   [+scalar]   [+presupp., +scalar]

The configuration in (3) resembles the one in (1): a constituent (Exh) structurally intervenes in the derivation due to feature similarity. Hence, fRM predicts a delay in the acquisition of *some*-SIs and a correlation between development of *some*-SIs and object RCs.

Experimental set-up. A picture selection task was designed to assess the development of Italian object RCs and SIs triggered by *qualche* and *alcuni* (both translating *some*). Structure type (RC vs. SI) and affected argument (subject vs. object) were manipulated within subjects. Grammatical number of the arguments was manipulated between subjects: one list included SIs triggered by the singular determiner *qualche* and RCs with singular subject and object (all-singular list); the other list included SIs triggered by plural *alcuni* and RCs with plural subjects and singular objects (singular-plural list). A paradigm is shown below:

• La farfalla che indica la gallina / Le farfalle che indicano la gallina *[RC x subject]*

   The butterfly that points at the chicken / The butterflies that point at the chicken

• L'elefante che l'orso dipinge / L'elefante che gli orsi dipingono *[RC x object]*

   The elephant that the bear paints / The elephant that the bears paint

• Qualche cane abbraccia l'elefante / Alcuni cani abbracciano l'elefante *[SI x subject]*

   Some.SG dog hugs the elephant / Some.PL dogs hug the elephant

• La lumaca tiene qualche fiore / La lumaca tiene alcuni fiori *[SI x object]*

   The snail holds some.SG flower / The snail holds some.PL flowers

A list included 40 pre-recorded stimuli (16 experimental items, 24 fillers), each paired with 4 pictures. 142 Italian monolingual children were tested in the all-singular list (age range: 4;0-9;2, M= 6.9, SD= 1.49) and 138 children in the singular-plural list (age range: 4;0-9;2, M= 6.92, SD= 1.51). Adult controls were tested for both lists. Accuracy in picture selection was taken as an indicator of comprehension.

Novel evidence. Generalized linear mixed-effects models were adopted to model accuracy. A main effect of age (all-sing.: $\chi^2(5) = 108.64$, $p < 0.0001$; sing.-plur.: $\chi^2(3) = 79.343$, $p < 0.001$) and structure type (all-sing.: $\chi^2(12) = 28.714$, $p < 0.01$; sing.-plur.: $\chi^2(12) = 24.105$, $p = 0.02$) was observed in both lists, as well as their strong interaction (all-sing.: $\chi^2(4) = 51.752$, $p < 0.0001$; sing.-plur.: $\chi^2(4) = 29.981$, $p < 0.001$). Post-hoc analyses revealed no significant difference in the predicted accuracy of object RC and SIs from 4 to 6 years (4 years: $p > 0.8$; 5 years: $p > 0.9$; 6 years: $p > 0.1$) and a significant difference between subject RC and everything else ($p < 0.001$) in the all-singular list. Difference in the accuracy of object RC across ages is never significant. In the singular-plural list, instead, 4-year-olders only show no significant difference between the accuracy of object RCs and SIs ($p > 0.05$), while a barely significant difference between subject RC and object RC ($p = 0.0495$) characterizes all age groups.

Discussion. The similar rate of accuracy with object RCs and SIs in the all-singular list is compatible with the intervention hypothesis, which makes both structures unavailable to preschoolers due to feature overlap. In this vein, the fact that in the singular-plural list this correspondence in accuracy is much more limited, and that object RCs are overall better than SIs, can be interpreted as a mitigation of intervention (i.e., a facilitation) for object RCs only. Number mismatch between subject and object has been shown to reduce intervention complexity in Italian RCs (Adani et al. 2010), because it helps to disambiguate the relative head (the object) from the intervener (the subject). The same is not expected for SIs, where the intervener is a functional operator (Exh) and no role of phi-features is predicted. Our results support the idea that the gradual acquisition of SIs can be explained by syntactic interactions between SI derivation and scale-specific properties, and more generally they confirm the predictions of grammar-based approaches that locality should be relevant to SI derivation and acquisition.

Fig. 1: Estimated accuracy in the all-sing. list (left) and sing.-plur. list (right)
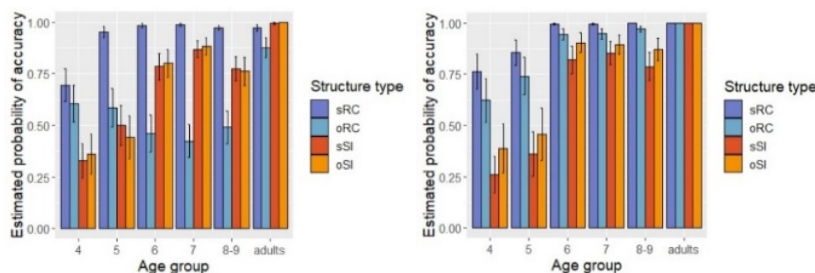
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Reading predictors in bilingual and monolingual preschool children: a didactic intervention on phonological awareness

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In the last few years, a growing interest in the interaction of bilingualism and language disorders has been observed (Erdos et al., 2014; Vender et al., 2019; Vender & Melloni, 2021). This is because the identification of language impairment in young bilingual children may sometimes be challenging, particularly when children are acquiring reading skills in their second language. As a matter of fact, it has been shown that the bilingual population may display difficulties comparable to those of dyslexic children, especially if the L2 is not fully mastered (Vender & Melloni, 2021). This may lead to a risk of over or under-diagnosis of dyslexia in the bilingual population. Studies have shown that tasks tapping phonological awareness can correctly identify bilingual children who have already received a diagnosis of dyslexia (Vender et al., 2019). However, if children at risk could be identified even at earlier stages, they could receive appropriate and adequate support when entering the school system.

The study aims to analyse the role of linguistic predictors of reading skills in Italian, including narrative abilities, vocabulary, phonological and morphological awareness in monolingual and bilingual Italian L2 preschool children. Additionally, the research explores the impact of a didactic intervention aimed at enhancing children's phonological skills. The general goal is to elaborate both a protocol that may help in the early screening of children at risk for dyslexia (irrespective of language), and a didactic intervention designed to support the development of sublexical abilities (phonological awareness).

The project is designed as a longitudinal study, covering 28 months and articulated into 5 phases. In phase 1, a sample of 77 of preschool children (44 Italian monolinguals, 33 bilinguals with Italian as L2) attending the last year of kindergarten was tested on linguistic predictors of reading abilities (narrative abilities, vocabulary, phonological awareness, morphological awareness). In phase 2, a selected group took part in a 9-hour didactic intervention focused on the enhancement of phonological skills. The activities were presented as group games and were structured in three levels: manipulation of words as a whole unit; syllable manipulation; phoneme manipulation. In phase 3, both groups were tested again on the tasks proposed in the first phase that tapped into phonological awareness, to evaluate the effectiveness of the didactic intervention on this skill. In phase 4, that will take place when the participants will be attending the end of the first year of primary school, all the children will be tested on reading skills via ReadLet, a finger-tracking web application that allows for the in-detail study of online reading processing (Ferro et al., 2018). This phase is still ongoing.

Preliminary data on the linguistic profile of both monolingual and bilingual children as well as on the effectiveness of the didactic intervention on phonological awareness will be presented.

In the next two years, the study will be composed of one more phase (5): the same children will be tested on reading abilities at the end of the second year of primary school, to evaluate the role of predictors on reading acquisition and the impact of the didactic intervention on reading achievements.

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Role noun processing and gender stereotypes in Greek

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Gender stereotyping is a prevalent occurrence in everyday life. Previous studies have shown that information about the stereotypical gender associated with role nouns is incorporated into the mental representation of these nouns and is activated as soon as a role noun is encountered (Carreiras et al., 1996; Oakhill et al., 2005). For instance, when hearing the word "nurse" or "electrician", information about the person being putatively female or male will be activated. Consequently, stereotypically incongruent information, for example, hearing about a female electrician or a male nurse, will slow down processing (Siyanova-Chanturia et al., 2015). In languages with grammatical gender, grammatical cues can also mark the gender of a character introduced by a role noun as male or female. While most Italian nouns are marked for gender, studies examining role noun processing in Italian have mainly employed bigender nouns with no gender marking, thus only the effect of stereotypes has been investigated for these nouns (Cacciari & Padovani, 2007; Siyanova-Chanturia et al., 2015). The present study aims to extend previous findings by examining role noun processing for the first time in Modern Greek using nouns of common gender that are morphologically marked for masculine gender, to investigate the interplay of grammatical and stereotypical information during processing. Native Greek adults were primed with Greek occupational nouns of common gender (i.e., nouns that are used for both male and female characters) with a masculine ending and a stereotypically male or female bias (e.g., iðravlikós 'plumber' and esθitikós 'beautician'), followed by a masculine or feminine pronoun target (aftós 'he' or aftí 'she'), forming stereotypically congruent (iðravlikós 'plumber'- aftós 'he', esθitikós 'beautician'- aftí 'she') and incongruent (iðravlikós 'plumber'- aftí 'she', esθitikós 'beautician'- aftós 'he') prime-target pairs. The participants' task was to decide the gender of the pronoun, and reaction times were being measured. An effect of congruency was found for masculine pronouns, with slower reaction times when the masculine pronoun had been primed with a stereotypically female role noun. No such effect of congruency was found for female pronouns. This suggests that not only gender stereotypicality but also the morphological noun form influenced processing in Greek role nouns. Specifically, apparent morphosyntactic cues, albeit being uninformative about referential gender, seemingly mitigated the impact of gender stereotypes associated with female-biased role nouns.

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The Investigation of Null Pro in Turkish

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The languages which do not require overt pronouns are called pro-drop languages (Chomsky, 1981). These languages have a property of "null subject." In this study, I investigate the properties of the null pro in Turkish. In particular, I am interested in whether this element has the properties that make it equivalent the overt pronoun (e.g., o 's/he/it') or to some other anaphor (kendisi 'self- 3SGAgr').

In the literature, there are some claims that the null pro in Turkish is the null version of overt pronoun (Erguvanlı Taylan 1984; Turan 1996; Öztürk 1999; Altan 2013). These studies state that there are differences in overt and null pronouns' requirements. Null subjects in Turkish are pure pronominal pro, as demonstrated by Kornfillt (1984). She demonstrates how, in line with the Principles of Binding Theory (Chomsky, 1981), null subjects and reflexives and reciprocals are in complementary distribution on the one hand. If pro were an anaphor, it would appear in precisely the same places as anaphors, according to Kornfilt (1984). Gürel (2002, 2004) does not agree with the idea that overt pronoun and null pronoun have the same properties, she says that "(...) there is a contrast between overt and null pronouns in both referential and bound variable antecedent contexts in Turkish." (Gürel, 2002, p. 73) Gürel thinks that kendisi can be the null pro which is syntactically prone to less requirements instead of the genderless pronoun "o" (s/he, it). Similarly, Dinçtopal-Deniz (2023) states that "the null pronominal pro and the overt pronoun o's […] distributions are the same only in (in)direct object positions; in possessive phrases and subject positions, they vary in their referentiality." (p. 82) The question of what the null pro is and how it operates in Turkish is still debated in the literature. In this paper, I will explain how the null pro is neither a counterpart of the overt pro nor the null version of an anaphor kendisi 'self-3SGAgr'

According to Gürel (2002, 2004), in Turkish, the null pro and kendisi 'self-3SGAgr' behave identically in particular aspects and both kendisi and null pro violate the Binding Principles (Chomsky, 1981) by having "anaphoric and pronominal" attributes. Her studies state that pro is the "null form" of the reflexive kendisi and not the overt pronoun o 's/he/it'. In (1), we see that the overt pronominal subject of the embedded clause cannot grammatically co-refer with the matrix subject, even though the two are in different clauses, and therefore, the Principle B of the Binding Theory should be satisfied. Examples (2) and (3) show that both a null pro and an overt anaphor kendisi are allowed in the same position.

(1) Elif$_i$ [o-nun$_{*i/k}$ kazan-acağ -ı] -nı söyle-di.

   Elif s/he-Gen win-NomFut -3sgposs -Acc say -Past

   'Elif$_i$ said (that) she$_{*i/k}$ would win'

(2) Elif$_i$ [pro$_{i/k}$ kazan-acağ -ı] -nı söyle-di.

   Elif   win-Nom-Fut -3sgposs -Acc say   -Past

   'Elif$_i$ said (that) pro$_{i/k}$ would win'

(3) Elif$_i$ [kendi-si-nin$_{i/k}$ kazan-acağ -ı]-nı söyle-di.

    Elif   win-Nom-Fut -3sgposs-Acc say -Past

    'Elif$_i$ said (that) (her)self$_{i/k}$ would win'   (Gürel, 2002, p. 73)

In short, Gürel (2002, 2004) states that there are distinctions between overt and null pronouns' coreferential possibilities when o is considered as the overt equivalent of the null pro. When overt pronouns and null pronouns are compared, they vary in their interpretive features since pro correlates with another overt pronominal, kendisi as shown in (3).

We would expect kendisi to have the same coreferential possibilities as null pro. The sentences in (4) and (5) presents data with the coreferential differences in the presence and absence of the anaphor kendisi. The sentence in (5) shows that when kendisi is not overt, the reflexive coreferential possibility is lost whereas (4) holds the reflexive coreferentiality.

(4) Kazım$_i$ [kendi-si-nin$_{i/k/j}$ kazan-ma   -sı]   -nı$_{*i/j}$ isti -yor.

    Kazım   self-Agr-Gen win   -mA -3SGAgr -Acc   want-3SG.IMPF

    'Kazım wants himself/him/her to win.'

(5) Kazım$_i$ [kazan-ma -sı]   -nı$_{*i/j}$ isti -yor.

    Kazım win   -mA-3SGAgr -Acc   want-3SG.IMPF

    'Kazım wants him/her to win.'

These sentences show us that kendisi can facilitate both referential & coreferential readings. Nevertheless, the absence of kendisi results in having only referential meanings excluding the reflexive meaning. Thus, we can say that the genitive kendisi does not hold as a null pro as the exclusion of it ends up in a different interpretation. I showed that kendisi cannot be the null pro based on the shifts in the referential & coreferential readings.

Hence, while Gurel's data represented (1), (2), and (3) show that null pro cannot be an exact equivalent of an overt pronouns, the data in (4) & (5) show that it cannot be an exact equivalent of kendisi. Then, null pro in Turkish must be a property that fits in various structures based on the meaning salient in the context. The question of what the null subject could be is in Turkish requires more investigation. In this study, the difference between overt pro and null pro is shown. In the current literature, the features of overt pronoun, null pronoun and pronominal kendisi is not fully investigated and reported. This study fills the gap in the literature and present properties null pronoun in Turkish.

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Production of Conditionals in Turkish and English-Speaking Children

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Conditional sentences are complex structures that involve two clauses, an antecedent clause in which the condition is expressed and a consequent clause expressing the result. These sentences are widely used in everyday communication to convey factual or hypothetical meaning. This study examines the production of conditional sentences in children, which might provide insights into their acquisition of complex morpho-syntactic and semantic features. Using child language corpora, the present study aims to investigate the developmental trajectory of indicative and subjunctive conditional sentences in English and Turkish-speaking children, providing cross-linguistic perspectives on conditional sentence acquisition.

Indicative conditionals denote "If p then q" statements. They assert that if the condition in q is satisfied, then q will be true as given in sentence (1).

(1) If you do not steal the money, someone else will steal it. (Indicative conditional)

However, subjunctive conditionals are statements that present events or conditions contrary to reality. They are hypothetical or made-up versions of events and actions that may have happened but did not in the real world (Starr, 2021). The sentence in (2) presents an example of a subjunctive conditional.

(2) If you did not steal the money, someone else would steal it. (Subjunctive conditional)

In both English and Turkish, indicative conditionals are used when the events are very likely to happen. Subjunctive conditionals are used when the situations are not actual and less likely to happen, so they require one to imagine what the word would be like, which referred to as counterfactual reasoning (Lewis, 2013). In addition to this, subjunctive conditionals also necessitate using various complex grammatical structures in different languages. For instance, past tense morphology is needed in forming a subjunctive conditional in English (von Fintel, 2012). On the other hand, Turkish, as an agglutinative language, attaches the subjunctive morpheme (*-sA*) to the bare verb root to form subjunctive conditionals. In Turkish, although not necessary in all instances, the past tense marker *-dI* might be also involved. When the conditional marker *–sA* precedes the past tense marker, the sentence is a subjunctive one. However, when the past tense marker precedes the conditional marker, it is an indicative conditional. Therefore, the morpheme order is a crucial aspect of encoding a conditional sentence in Turkish. Apart from the morpheme order, conditionals in Turkish is considered to be simpler compared to English, since Turkish does not require the use of if-complements, auxiliaries, modal verbs or participles (Yarbay-Duman et al., 2015).

Both languages illustrate that conditional sentences require children to acquire several different features. While Turkish-speaking children need to acquire and differentiate between the complex stacking of morphemes to form subjunctive and indicative conditionals, English- speaking children need to acquire if-complements as well as the back-shifting by getting a past tense morphology required by the subjunctive conditional sentences. According to Sezer (2001), there are three tense forms in Turkish composed of clitics and inflectional affixes, and they differ in complexity. It is argued that Turkish

subjunctive morpheme *(-sA),* used to form subjunctive conditionals, is morphologically simple, as it only attaches to bare verb roots compared to the indicative morpheme *-(y)sA*. On the other hand, the antecedents of English subjunctive conditionals contain past tense morpheme even though the morpheme does not convey past interpretation (von Fintel& Iatridou, 2023), which can be challenging for children. However, despite these morpho-syntactic differences, semantic, pragmatic, and cognitive mechanisms seem to remain the same. The research questions addressed in this study are as follows:

1. What is the number and frequency of indicative and subjunctive conditional types used by Turkish and English-speaking children?

2. Is there a significant difference between the Turkish and English-speaking children's first production of indicative and subjunctive conditionals?

To investigate these two questions, the data are collected on two samples taken from Child Language Data Exchange System (CHILDES) database (MacWhinney, 2000). We investigate the corpus of Kuczaj (1973) and Aksu-Koç (1972) for English and Turkish data respectively, using CLAN (Computerized Language Analysis). The Kuzcaj corpus covers the years between 2 years and 4 months to 5 years of a child named Abe. The Aksu-Koç corpus has multiple children recorded between the ages of 2 years to 4 years and 8 months. These corpora were specifically chosen for their comparable size relative to other corpora after calculating their lexical diversity using Moving-Average Type–Token Ratio (MATTR). The data were collected from the mentioned corpora in the comparable ages of 2 years to 5 years and analyzed using KWAL and FREQ programs.

Our initial results show that regardless of the structural differences, both English and Turkish- speaking children use indicative conditionals more frequently than subjunctive conditionals.

Even though the subjunctive marker is morphologically simpler than the indicative one (Sezer, 2001), both groups start to use indicative conditional sentences before the subjunctive conditional sentences. Considering these initial findings, we will argue that despite the structural differences, forming subjunctive conditionals is more challenging for both groups of children as they require the same universally complex semantic, pragmatic, and cognitive mechanisms.

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Foreign influence on Modern Standard Yiddish zoonyms

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The Yiddish language is the traditional language of Ashkenazim, a Jewish diaspora population formed in the early Holy Roman Empire that later migrated due to persecutions mainly to Eastern Europe. Nowadays, Ashkenazic Jews can be found throughout most of the Western world, many of them still retaining their language. It is a Germanic language, a descendant of Old High German, however, with quite significant Northwest Semitic and Slavic influence. The Semitic component – from Hebrew and to a lesser extent Aramaic – came from within the speakers' community rather early and gave rise to the differentiation between the diachronic development line traceable to New High German and the line leading to Yiddish via the intermediate step of ethno- or religiolect. In relation to this component, it is also apt to mention that Yiddish is written in modified Hebrew script. The Slavic component – predominantly Russian, but also Belarusian, Ukrainian, and Polish – came to be only after the wave of expulsions and migration in the first half of the 2nd millennium CE, it nevertheless still managed to extensively penetrate not only the lexicon of Yiddish, be that as it may that is what this paper focuses on. Both components were then firmly settled in the language by the first standardization efforts in the mid-19th century.

In the proposed poster presentation, the author aims to provide a descriptive overview of gathered Yiddish lexical data, specifically animal names, in terms of their affiliation to either of the main components, the presence or absence of synonyms in the language, incorporation, usage preference, etc. The zoonyms are also further divided into subcategories, primarily into four groups – terrestrial, aquatic animals (incl. amphibians), avians, and insects –, secondly based on their geographic distribution in relation to the geographic distribution of Ashkenazim at the time of the formation of the language (feature of exoticness), into farm animals, pets and other groupings taking from fields of zoology, history, and ethnography. The data has been taken mostly from one dictionary source, Weinreich's Modern English-Yiddish Yiddish-English Dictionary, but whenever any uncertainties occurred, it was also consulted with Finkel's online Yiddish dictionary. The etymological analysis of lexemes was conducted through the author's knowledge of Slavic languages, intra-language cues, and occasional consultation with Old High German, New High German, Russian, and Polish etymological dictionaries.

The data shows that while the Germanic base component is very strong, both of the main above mentioned foreign components have a number of representatives in this semantic field. Still, only the lexemes of Slavic origin can truly be found throughout it – e.g., *barán* "ram" (cf. Rus. *barán*), *vidre* "otter" (cf. Rus. *výdra*), *khamer* "donkey" (cf. Hebr. *khamór*) for terrestrial animals, *okun* "perch" (cf. Rus. *ókun'*), *venger* "eel" (cf. Pl. *węgorz*), *pyavke* "leech" (cf. Ukr. *p''jávka*) for aquatic animals, *katshke* "duck" (cf. Pl. *kaczka*), *meve* "seagull" (cf. Pl. *mewa*) for avians, and *murashke* "ant" (cf. Ukr. *muráška*), *komár* "mosquito" (cf. Rus./Ukr. *komár*) for insects. The examples shown present, in a quite simplified manner, the distribution of the two foreign components in this basic grouping with those originating in NW Semitic being almost exclusively found in the domain of land animals. What cannot be shown in the scope of this abstract is that in some of the subcategories, certain contextual links and regularities in the process of borrowing and further development of the borrowed lexemes can be observed, e.g., the Hebrew lexemes with a synonym often having a secondary meaning of abusive nature, for example *beheyme* "cow; fool" (cf. Hebr. *behemá* "livestock") & *ku* "cow".

The results to be presented in the proposed paper are part of the author's work-in-progress Ph.D. research focused on comprehensive lexical analysis of a few Jewish diaspora languages with the idea that there would be a noticeable regularity in borrowing in certain semantic fields that could hopefully be later utilized in filling the gaps in mapping lexica of other Jewish diaspora languages or even in revival efforts, should there be any, of the dying ones.

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Semantic priming and prosodic structure: At the interface between language redundancy and acoustic salience

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In a noisy environment, speakers tend to evenly distribute a signal to be understood by hearers. Linguistic elements that the speaker categorizes to be more difficult to understand, become more salient than linguistic elements that are believed to be understood more easily. Language redundancy, e.g. lexical frequencies, bigram frequencies, syntactic preferences, or information structure constraints, are thus assumed to form an inverse relationship with acoustic salience, i.e. less redundant items become more salient and vice versa. This inverse relationship between language redundancy and acoustic saliency is one of the assumptions of the Smooth Signal Redundancy Hypothesis (SSRH) proposed by Aylett (2000) and Aylett and Turk (2004). The other assumption is that prosodic prominence structure mediates the relationship between redundancy and saliency. Turk (2010) extended this assumption to prosodic boundaries.

Semantic priming is one of the measures of language redundancy. Semantic priming refers to the phenomenon of processing a word more quickly when it is preceded by a semantically related word (e.g. (Collins & Loftus, 1975; Hoedemaker & Gordon, 2017)). Following the SSRH, the edges of semantically primed (i.e., more redundant) words should be acoustically less salient than those of non-primed words. A production experiment tested whether this is true in terms of duration measurements. The experiment consisted of 22 German sentence pairs with two identical target words. Those target words were presented a) in a context where they were primed by two semantically related words (*priming context*) as well as b) in a context where they were not primed (*non-priming context*). Semantic relatedness of primes and targets was checked beforehand with a questionnaire. In addition, lexical frequencies of targets were determined with WebCelex's lexical database (Baayen et al., 2001) and Google to see if the results were further influenced by lexical frequency. Table 1 shows an example of a sentence pair. *Piloten* is the primed target in the first sentence, and *Piraten* is the primed target in the second sentence. In sentence 1, the target is preceded by the two (non-)primes *Flugzeug* ('plane') and *landen* ('(to) land'), which prime *Piloten*, but not *Piraten*. In the second sentence the target is preceded by the two (non-)primes *Frachtschiff* ('cargo ship') and *kapern* ('(to) hijack'), which in turn prime *Piraten*, but not *Piloten*.

Sentence 1: *Piloten* in a priming context, *Piraten* in a non-priming context									
Um	das	Flugzeug	zu	landen	muss-t-en	die	Pilot/Pirat-en	sich	beeilen
in.order	the.ART.DEF.N.SG	plane.N.SG	to	land.INF	have.to-PST-PL	the.ART.DEF.PL	pilot/pirate-PL	itself.REFL.3PL	hurry.INF
'In order to land the plane, the pilots/pirates had to hurry.'									
Sentence 2: *Piloten* in a non-priming context, *Piraten* in a priming context									
Um	das	Frachtschiff	zu	kapern	muss-t-en	die	Pilot/Pirat-en	sich	verbünden
in.ordner	the.ART.DEF.N.SG	cargo ship.N.SG	to	hijack.INF	have.to-PST-PL	the.ART.DEF.PL	pilot/pirate-PL	itself.REFL.3PL	team.up.INF
'In order to hijack te cargo ship, the pilots/pirates had to team up.'									

Table 1: An example of the target "Piloten" ('pilots') in a priming and non-priming context.

The 22 context pairs were divided into two experimental lists. Each target word only appeared once in each list, either in a priming or a non-priming context, resulting in 11 sentences with primed targets and 11 sentences with non-primed targets in each list. As a consequence, one member of each context pair occurred twice in one list (once as a priming context and once as a non-priming context), while the other member occurred twice in the other list. In each list, the priming context was always presented before the non-priming context to avoid the creation of a context for the non-primed target. The consequence would have been a weakening of the priming context for the primed target. At the same time, this design

allowed for the weakening of the non-primed context, which - for this experiment - was a desirable effect to ensure that the context was indeed understood as non-primed by the participant. All target words were plosive-initial and consisted of three syllables, with stress on the second syllable. 21 German native speakers were recorded in a soundproof studio, producing 462 sentences.

Linear mixed-effect models were fitted to examine the respective duration differences of intervals. Semantic priming and lexical frequency were used as fixed factors and subject and item as crossed random factors with the Satterthwaite approximation implemented in the R-library lmerTest (Baayen et al., 2008; Kuznetsova et al., 2017).

For the overall data results showed that primed target words were significantly shorter than non-primed ones ($p < 0.001$). Intervals of the onset, rhyme and second boundary also showed significantly shorter durations when primed ($p < 0.05$). This speaks in favor of the semantic priming effects at the prosodic boundaries. Additionally, an interaction between semantic priming and lexical frequency was established with reverse effects for word-initial and word-final intervals. For word-initial intervals (R_prev, O, B1), infrequent words were significantly reduced in duration when they were primed, whereas no significant difference was found for frequent words. Conversely,

Figure 1: Box plots of the primed data indicated opposite effects of lexical frequency in the word-initial onset and word-final rhyme.

for word-final intervals (R, B2), semantic priming effects were only attested for frequent and not infrequent words. Figure 1 illustrates the reversed effects of lexical frequency on the onset and the rhyme for primed target words.
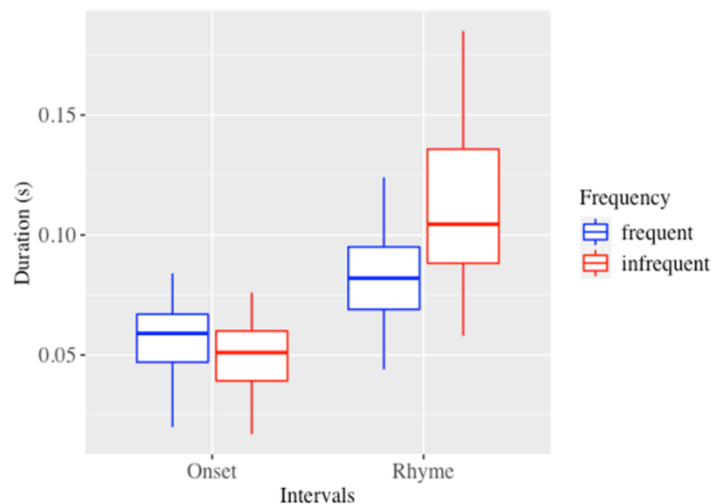
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Processing pronoun ambiguity in German – evidence for a developmental path in primary school children

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Pronoun resolution has been extensively studied for over three decades across languages. However, studies on pronoun ambiguity processing in German have mainly focused on adults. This phenomenon has been far less researched in children, and therefore, little is known about its developmental path. Our study aims at filling this gap, by investigating pronoun ambiguity processing in primary school children compared to adults.

In ambiguous contexts, German allows for two different third-person singular masculine pronouns to resolve ambiguity: the personal pronoun *er* and the demonstrative pronoun (henceforth d-pronoun) *der*, see Example (1).

1) Der **Tiger**$_j$ will den **Igel**$_k$ vorsichtig auf die Hand küssen. Aber **er**$_{(j)}$/**der**$_{(k)}$ kann nicht stillstehen.
   The tiger wants to the hedgehog carefully on the hand kiss. But he cannot hold still.

   'The tiger wants to kiss the hedgehog carefully on the hand. But he cannot hold still.'

Previous studies with adults have shown a strong preference to resolve the d-pronoun towards the object and a moderate preference to resolve the personal pronoun towards the subject, allowing for more flexibility (Bouma & Hopp, 2007; Schumacher et al., 2017). To date, only one study (Blything et al., 2021) has investigated processing of pronoun ambiguity in German-speaking 7 to 10-year-old children comparing them to adults. However, this eye-tracking study focused on disentangling cues children rely on, such as order of mention, grammatical role, and semantic role, and did not include final interpretation.

Our study aims at filling this gap by investigating differences between children and adults when resolving ambiguous pronouns in German. Moreover, we included an additional condition that has not been investigated before to test the role of prosody, i.e., whether stressing the personal pronoun *er* reverses the resolution preferences (Féry, 2017). Given that the unstressed *er* shows an overall preference for the subject, participants are predicted to resolve a stressed *er* towards the object.

The present study investigates 6 to 8-year-old monolingually raised German children (n=27) and compares them to adults (n=65). Data collection is ongoing aiming for 40 child participants. In an online picture selection task, participants listen to sentences that contain two competing characters, followed by an ambiguous third-person singular masculine pronoun (*er*, *der*, stressed *er*), see Example (1). While listening to the sentences, participants see three images on the screen, representing the competing subject and object as well as a distractor. After each sentence, participants are asked a comprehension question that forces them to interpret the pronoun towards one of the two characters (subject or object). Responses are given by clicking on the image of the respective character.

Overall, results show similar processing patterns in children and adults, see Figure (1). Both groups preferably resolve the d-pronoun towards the object and the personal pronoun towards the subject. However, the preferences in the child group are far less consistent and show more variability than the adult preferences. Even though overall children behave similarly to adults, at this developmental stage they differ significantly from them (for d-pronoun *der* x2=9.6, df = 1, p < 0.001, for personal pronoun *er* x2=8.1, df = 1, p < 0.005). Finally, for the stressed *er* condition there is no significant difference between adults and children: both groups show chance level resolution, and therefore, the data do not support the proposal that stress reverses the resolution preference.

Our study indicates that despite similar resolution preferences between children and adults, 6- to 8-year-old children do not yet resolve ambiguous pronouns in the same way as adults. This provides evidence of a developmental path: at the beginning of primary school processing of ambiguous pronouns is still developing.
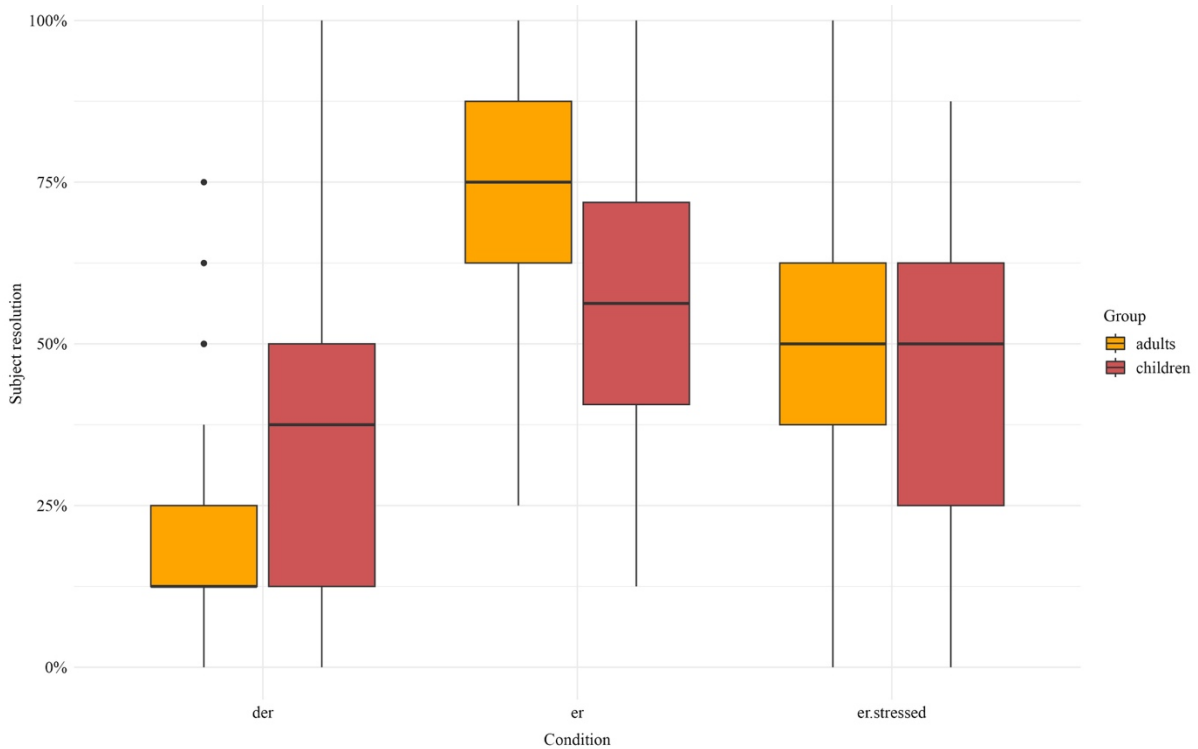

Figure 1: Subject resolution in children and adults for the d-pronoun *der,* the personal pronoun *er*, and the stressed personal pronoun *er*

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The Paral Expressions with Plural Construction in Slovene

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The paral expressions, such as eyes, trousers, or twins, display special features in the grammatical marking cross-linguistically, since they possess a more fundamental meaning and thus are more prone to irregularity. Slovene has the dual number, which remains in active use until today. Normally, in languages with the dual number, every two entities will be marked with dual. However, the paral expressions in Slovene turn out to be an exception: the plural marking is applied on them instead of dual. Fritz (2011) names it as "intrinsic dual", whereby both entities are seen together as a whole pair. In non-neutral contexts, such as emphasis or stylistic use, the dual marking then comes into use. These paired entities contain concepts ranging from body parts, clothing, and accessories to biological pairs, with a few paral expressions being pluralia tantum. Not only a synchronic presentation but also historical analyses will be brought forward here for the elaboration of this unusual phenomenon. Corpora of both contemporary and historical Slovene language are applied here for the collection of existing word forms of paired entities and their frequencies, as well as the demonstration of contexts of usage for different forms under one paired concept. Furthermore, the exploitation of etymological lexicons reveals more information about the diachronic development of some paral expressions, such as *oči* "eyes". The research demonstrates that the plural marking of paral expressions in Slovene is probably due to the generalising function of plural: for pairs, the number "two" is not that much essential, so a relatively unmarked plural number replaced the marked dual number for the expression of paral entities. Interestingly, it stands in contrast to several other Slavic languages, where obsolete dual forms are reserved for natural pairs and the dual number has otherwise fallen out of use. The pluralia tantum, however, are mostly derived from former collective forms, which strived to treat plural objects as whole entities and their paradigms became defective.

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Finding an analysis for discontinuous DPs: investigating binding principles

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Split DPs and their paradox

Based on binding insights brought by novel data from southern Dutch dialects in the Netherlands (henceforth: SoDNL), I put forward a DP-internal analysis of split DPs in terms of Relator Phrases (RP) (Den Dikken 2006). Split DPs (1) are constructions in which a constituent appears to have been broken up into two parts: one topicalized part (i.e., TOP) and one remnant (i.e., REM). Generally speaking, TOP must be indefinite and evokes a 'kind' interpretation whereas REM is freer in its make-up. Roughly, REM can consist of a quantifier, an adjective or a noun.

(1) *Franse boeken heeft hij {twee / twee oude / alleen oude} in de kast.*

   French books has he {two / two old / only old} in the cupboard

   'As for French books, he has {two / two old ones / only old ones} in the cupboard.' (SoDNL)

Split DPs have formed a long-standing problem to syntactic theory due to their paradoxical properties suggesting the DP being split and unsplit at the same time. 'Unsplit' here means there being no split at all: two autonomous DPs rather than one DP in the structure. On the one hand, split DPs are sensitive to island constraints and connectivity effects thereby indicating movement and a split (Fanselow & Ćavar 2002; Van Hoof 1997).

(2) **Franse boeken kent zij een man die al drie saaie gelezen heeft.*

   French books knows she a man that yet three boring read has

   'As for French books, she knows a man that has already read three boring ones.'   (SoDNL)

On the other hand, there are cases in which TOP and REM cannot be reconstructed into one underlying constituent due to REM containing no gap. For example, when REM contains a noun (3) (Fanselow 1988; Van Riemsdijk 1989), this indicates separate base-generation and no split.

(3) *Afwasmachines verkoopt die winkel echt veel Miele's.*

   Washing machines sells that shop really many Mieles

   'As for washing machines, that shop really sells many Mieles.'   (SoDNL)

Various attempts have been made at solving the split DP paradox. Previous analyses include subextraction (Tappe 1989; Van Riemsdijk 1989), Distributed Deletion (Fanselow & Ćavar 2002), combinations thereof (Fanselow 1988; Nakanishi 2005, 2007; Puig-Waldmüller 2006), and more recently an analysis in terms of Labeling Theory (Ott 2011). All these theories have focused on providing an analysis of the structural relationship between TOP and REM, but none of them concentrate on the DP-internal structure *within* TOP and REM.

Binding TOP and REM

This paper introduces novel data on SoDNL dialects that raise insights into the DP-internal organization. The fact that split DPs are subject to connectivity effects is crucial. The binding principles state that i) anaphors must be bound locally, ii) pronominals must be free locally, and iii) R-pronouns must be free *everywhere*. To briefly illustrate, take a close look at the indices in the simple cases. We observe that anaphors in TOP are bound by a noun that comes later in the linear order (4). Pronominals in TOP, on the other hand, cannot be bound by said noun, and the same holds for R-pronouns in TOP.

(4) *Verhalen over zichzelf$_i$ / hem$_{*i/j}$ heeft Piet$_i$ twee geschreven.*

   Stories about himself / him has Piet two written

   'As for stories about {himself/him}, Piet has written two.'   [SoDNL]

We can reveal more of the internal structure of TOP and REM by considering examples that contain more than one binding relation. The judgments in (5)-(8) hold for both SoDNL *and* German.

(5) *Verhalen over zijn$_{*i/j/k}$ vader$_i$ vertelde Jan$_j$ twee van zichzelf$_{*i/j}$.*
  Stories about his father told Jan two of himself
  'As for stories about his father, Jan told two of himself.'

(6) *Verhalen over Harry$_i$ vertelde Jan$_j$ twee van zichzelf$_{*i/j}$.*
  Stories about Harry told Jan two of himself
  'As for stories about Harry, Jan told two of himself.'

(7) *Verhalen over zichzelf$_{i/*j}$ vertelde Jan$_i$ twee van Harry$_j$.*
  Stories about himself told Jan two of Harry
  'As for stories about himself, Jan told two of Harry's.'

(8) *Verhalen over hem$_{*i/j/k}$ vertelde Jan$_i$ twee van Harry$_j$.*
  Stories about him told Jan two of Harry
  'As for stories about him, Jan told two of Harry's.'   [SoDNL]

The elements in TOP to which the binding principles apply cannot c-command REM as its anaphors cannot bind to and reflexive pronouns cannot refer to R-pronouns in TOP. To illustrate, in (5) *vader* 'father' cannot c-command *zichzelf* 'himself' and in (6) *Harry* 'Harry' cannot c-command *zichzelf* 'himself'. Likewise, the elements in REM to which the binding principles apply cannot c-command TOP as its anaphors cannot bind to and reflexive pronouns cannot refer to R-pronouns in REM. To illustrate, in (7) *Harry* 'Harry' cannot c-command *zichzelf* 'himself' and in (8) *Harry* 'Harry' cannot c-command *hem* 'him'.

Structural analysis of split DPs

This paper offers a more defined DP-internal structure for split DPs. The core element concerns Relator Phrases (RP) (Den Dikken 2006). An RP-based analysis enables us to capture the c-command relations that hold in (4)-(8). The proposed internal structure is displayed in the tree. Within the DP, there is an RP which requires its complement, TOP in our case, to move. By positing TOP down in the structure, it is eligible to be bound by nouns higher in the structure even though TOP ends up preceding these elements in the linear order. For example, TOP is c-commanded by the subject in its base-generated position.

 The RP in which TOP and REM are merged is a predication configuration in which TOP functions as the predicate because of its kind-denoting property, and REM functions as the subject to this predicate. TOP and REM consist of the same projections with the RP. This paper argues that the RP is merged above nP. The observation that binding-sensitive elements within TOP should not c-command REM and vice versa supports this claim. The binding-sensitive elements are in a PP adjoined to N. This position is too low to c-command out of the nP. So, even when TOP is moved to the left periphery, N-adjoined PPs are not high enough to c-command out of the nP.

 Though this paper focuses more on the DP-internal structure, an account of the actual split is in place as well. This paper claims that the DP is split because the Relator head endows its complement with a [TOP]-feature which needs to be checked elsewhere in the structure (similar to the [+Link]-feature by McNay 2005, 2007). Movement is not obligatory. However, considering that the base-generated structure of TOP and REM is *always* out, we argue that TOP can never occur in its base position for an
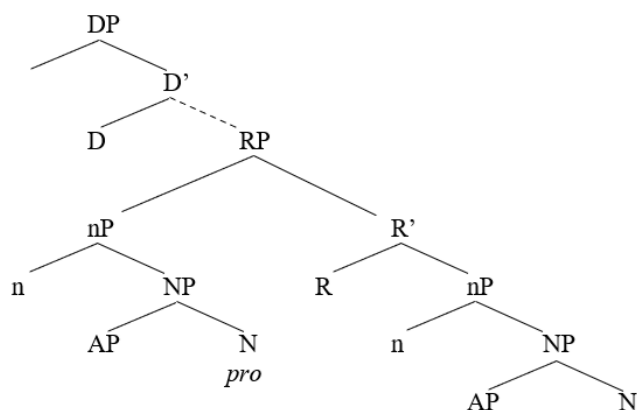
independent reason. TOP is necessarily generic. This property causes it to not be able to remain below the scope of quantifiers or numerals as this would render the sentence semantically ill-formed.

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Perception and distinction of American and British accents by French learners studying Englis (L2 learners)

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Scales et al. (2006) reported that only 29% of Chinese students were able to identify the General American accent whereas 62% of them stated that "their goal was to sound like a native English speaker". These results suggest that there might be a gap between students' language skills and their goals, motivation and expectations when acquiring English as L2. Based on this suggestion, we, therefore, decided to explore French students' capacity in distinction and recognition of two English accents and the role that motivation can play in second language acquisition. The aim of our study that was conducted as part of our master's degree was then to determine to what extent French undergraduate and graduate students majoring in English can distinguish the General American and Standard Southern British English accents, identify salient acoustic features for accent distinction, and analyse the impact of student motivation on accent recognition and thus on second language acquisition.

To answer these questions an online questionnaire comprised of three section was created. Each of the three sections was designed to control a specific variable of our study. The very first section of the questionnaire was dedicated to a listening task where our participants had to listen to 35 stimuli as many times as they wanted and determine whether they heard American or British accent. To create the listening task, we had two native American and two native British speakers record themselves while reading a short excerpt from a journal. The text used for the recording was selected according to parameters that have been salient in the distinction of the American and British accents by L2 learners as per Carrie & McKenzie (2017). The phonetic parameters are the GOAT and the THOUGHT vowels, the intervocalic / t / and the rhotic / r / opposed to non-rhotic / r /.

All the recordings used for the listening task were manipulated using PRAAT in order to equalize the loudness and modify speakers' voices to make them less recognizable.

Section 2 of the questionnaire had two main objectives: gather participants' impressions upon the completion of section 1 and ask them about the phonetic parameters that they payed attention to during the listening task to differentiate the two accents.

Section 3 contained 28 questions enquiring about participants' personal information such as age, gender, study level, but also about their attitudes towards English. The aim of this section was to find out more about their motivation, the reason they study English and how they would like to use their knowledge of English in the future (career, personal life) and then see how their linguistics skills and motivation correlates.

In sum 54 participants completed the questionnaire. All 54 participants were students either at Université Paris Est-Créteil or at Université Paris Diderot at the time of the study and their education level ranged from undergraduate to graduate.

The results revealed that 81,4% of the participants were able to correctly identify at least half of the 35 stimuli in the listening task. Although SSBE was cited as the preferred accent, GA was the most recognized one. Among all phonetics parameters selected for the study, only intervocalic / t / and postvocalic / r / proved to be salient cues in accent recognition. No strong evidence supporting that

French L2 learners paid great attention to the GOAT and THOUGHT vowels was found, suggesting that there might be a confusion on that point. Also, prosody was said to be salient in accent recognition.

The results also suggest that there is a correlation between a higher motivation and a better level of linguistics skills. As the matter of fact, students who make more efforts to study English (travel abroad, work on their pronunciation, plan to live in an English speaking country) better performed during the listening task.

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Compounds at the interface between form, meaning and use: a contrastive analysis of German and Russian

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In some languages, compounding is the main word formation mechanism used to name concepts. In German, most compounds are noun-noun constructions, e.g., *Reparatur*n*service*n ('repair service'), *Blumen*n*topf*n ('flower pot') or *Buch*n*geschäft*n ('book shop'). Even though compounding has been studied extensively so far, previous research mostly focused on gathering characteristics of compounds or on classifying them. Little attention has been paid to establishing a definition of compounds what would set them clearly apart from other similar word formation types such as derivation. Moreover, the semantics of compounds has been studied mostly monolingually. The fact that the relationship between the two components of compounds is not explicitly specified raises translation problems when translating into a language with fewer compounds.

In consideration of these neglected research questions, I conducted an empirical translation study. It is often said that there are typical translation correspondences between different constructions in particular language pairs. In Russian, German compounds seem to be mostly translated as collocations of a relational adjective and a referential noun, like *книжный*$_{rel.adj}$ *магазин*$_n$ ('book shop'), or as genitive constructions, like *букет*$_n$ *цветов*$_{n\text{-}gen}$ ('bouquet of flowers'). I collected a set of data of German nominal compounds which I borrowed from the project GermaNet (2011) of the university of Tübingen. I selected a data set of compounds which share the same head (e.g. *-nacht* as in *Ballnacht*) and accordingly the same non-head (e.g. *Nacht-* as in *Nachtcafé*). For this selected data set I set up a system of semantic categories. This categorisation should facilitate the handling and reveal generalisations of the data set. Translating German compounds into languages which do not possess this word formation mechanism to such an extent is challenging. The scope of this empirical study is to verify if compounds are indeed translated according to the above mentioned pattern. The categorisation should show if the Russian equivalents share the same semantics as the German compounds. Furthermore, any additional morphological characteristics of German compounds revealed by the study should serve as a basis for designing a universally applicable working definition of compounds.

When comparing different languages, linguistic phenomena can be seen from a different angle and new insights can be gained in order to give this word class a clearer position in the scientific debate. Thus, analysing compounds from a contrastive point of view could not only support the morphological and semantic analysis of compounds in selected languages but also be a benefit for translational purposes even though it is only possible within the scope of such a study to analyse a selected data set.

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Measuring predictive processing with sensorimotor synchronization and pupillometry

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Background. Predictive processing is a theoretical framework that states that the brain functions as an active prediction machine (Clark, 2013), as it anticipates sensory signals and uses prediction errors, i.e., differences between predictions and perceived sensory input, to revise and adjust previous predictions. While predictive processing asserts that prediction affects all modalities of sensory processing (Hohwy, 2013), its precise role in the processing of language remains a matter of debate. Previous literature has called the applicability of prediction to language processing into question as individual differences affect the comprehenders' prediction abilities (Huettig & Janse, 2016).

Current study. We studied the effects of individual variability on prediction in language processing using two methodologies: sensorimotor synchronization (SMS), measured by finger-tapping, and pupillometry, using an auditory oddball paradigm. This combination was used to determine potential underlying mechanisms for responses in both tasks. Previously, participants have been shown to produce anticipatory synchronizations, called negative mean asynchrony (NMA) in SMS tasks, which can be interpreted as a prediction of the upcoming stimulus (Repp & Su, 2013). Previous research using pupillometry linked pupil dilation in response to an unexpected stimulus to prediction violations (Zhang et al., 2018). We investigated if deviants of different stimulus types in an oddball paradigm would elicit different pupil responses (RQ1) and if a participant's performance on the SMS task could give indication about their pupillary responses to auditory stimuli in an oddball paradigm (RQ2).

Methods and Materials. All participants (N = 41, 23 female, mean age: 23.17 years) completed an SMS task and a pupillometry task. The SMS task required participants to synchronize finger tapping to an external auditory stimulus consisting of tones (400 Hz, 700 Hz), nonwords (*kep*, *tep*), and words (*Kick*, *Tick*). The pupillometry task measured participants' pupil responses in a passive listening task using an auditory oddball paradigm with similar tone (500 Hz, 800 Hz), nonword (*kup*, *tup*), and word stimuli (*Top*, *Pop*). The difference between stimulus types is especially relevant for the auditory oddball paradigm, as variations in pupil reactions were expected to vary according to differing complexities of the stimulus types (linguistic vs. nonlinguistic stimuli) and prominence of the difference between baseline and oddball stimuli.

Results. Results from the SMS task indicated individual differences in the anticipation of an upcoming stimulus as well as differences in synchronization accuracy to the stimulus onset between the different stimulus types. The best-performing model of pupil data included the NMA data from the SMS task. The plotted smooths of this model can be seen in Figure 1. All participants exhibited an increase in pupil size in response to deviants, with the strongest pupil dilation elicited by tone deviants, closely followed by word deviants. Nonword deviants elicited the smallest pupil response. Additionally, performance on the SMS task was found to predict participants' pupil dilations for tone deviants, as can be seen in Figure 2, with participants who exhibited an asynchrony between -75 and -130 before stimulus onset showing the most prominent changes in pupil dilations in response to tone deviants. Similar effects could not be found for the baseline (Figure 3) or other stimulus types.

Discussion. We confirmed that different stimulus types elicit distinct pupil responses in the auditory oddball paradigm (RQ1). Tone deviants triggered the largest pupil response, supporting the hypothesis stating that the prominence of the difference between baseline and oddball stimuli causes larger pupil responses. Additionally, the analysis of SMS and pupil data combined shows that participants' NMA

from the SMS task gave indication about their pupil responses to deviants in an oddball paradigm, although this effect was limited to tone deviants (RQ2).

Conclusion. This study's results align with the findings of Huettig and Janse (2016), demonstrating the existence of individual variability in prediction abilities. Moreover, the outcomes indicate that these individual differences extend across modalities, spanning from synchronization to auditory perception. This suggests a potential underlying predictive mechanism, supporting Hohwy's (2013) assertion that prediction plays a role across all modalities.

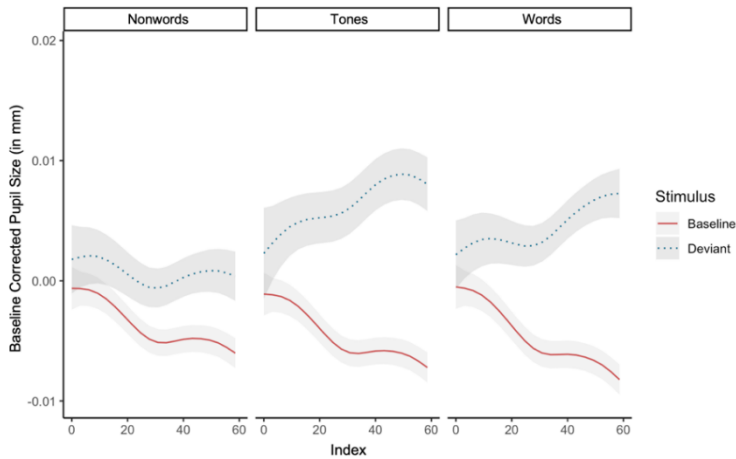Figure 2. Plotted smooths of the signed asynchrony model comparing pupil sizes between baseline (red) and deviant (blue) stimuli of different stimulus types
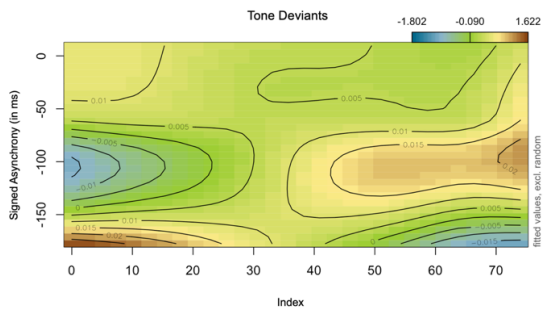

*Figure 3. Heat map plot of pupil sizes as a function of signed asynchrony and time (index, 1 = 20 ms) for **tone deviants**.*
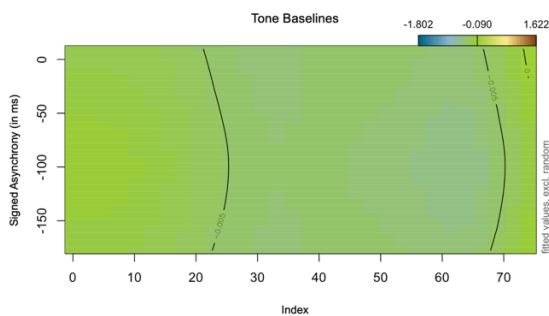
*Figure 4. Heat map plot of pupil sizes as a function of signed asynchrony and time for **tone baselines**.*

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Positional shift and prosodic independence in the grammaticalization of subjective adverbials: With examples of Chinese *xìngkuī* 'fortunately' and others

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Chinese subjective adverbial *xìngkuī* can occupy both a clause-initial and a clause-medial position, as shown in (1). According to the Media Language Corpus (MLC), the ratio of clause-initial *xìngkuī* to clause-medial *xìngkuī* is approximately 12:1.

(1) ***Xìngkuī*** *nǐ lái le. / Nǐ* ***xìngkuī*** *lái le.*

 fortunately you come PFV/ you **fortunately** come PFV

 '**Fortunately** you came. / You **fortunately** came.'

 The source construction of *xìngkuī* was a superordinate clause with the form of [ADV + *kuī*]. It was used to express the subjective attitude of the speaker; see (2).

(2) ***Xìng*** ***kuī*** *le Guānyīnpúsà shōu tā qù, jiùchū wǒ shī.*

 fortunately owe PFV Bodhisattva take him away rescue my master

 Fortunately, (we) owed to Bodhisattva who had taken him away and rescued my master.'

 [*Xīyóu Jì*, Dì Wǔshíjiǔ Huí (Journey to the West, Chapter 59), the late 16th century]

 A superordinate clause *xìngkuī* grammaticalized into a subjective adverbial at the clause-initial position (see (3)) and later moved to the clause-medial position (see (4)).

(3) ***Xìngkuī*** *Bǎochāi shì xīnxífù.*

 fortunately Baochai COP bride

 Fortunately, Baochai is a bride.' [*Hóng Lóu Mèng*, Dì Jiǔshíbā Huí (A Dream of Red Mansion, Chapter 98), the mid-18th century]

(4) *Zhè gè xiǎo nánhái* ***xìngkuī*** *gěi qiǎngjiù guòlái le.*

 DEM CLF little boy **fortunately** PASS rescue come.back PFV

 The little boy was **fortunately** rescued.' [MLC]

Throughout the changes, *xìngkuī* was prosodically integrated with the clause that it occurred with. The hypothetical initial-to-medial pathway is supported by the diachronic changes of several Chinese subjective adverbials, including *nándào* 'it could be (that)', *nánguài* 'no wonder (that)', *kěxī* 'pitifully', *bùfáng* 'may as well', and others; see Long et al. (2022). Throughout the changes of these subjective adverbials, they were all prosodically integrated with the clauses that they occurred with.

From the perspective of grammaticalization, this study argues that: (i) subjective adverbials developed in a clause-initial position may later occupy a clause-medial position; (ii) the development of subjective adverbials does not necessarily entail that they should gain prosodic independence.

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Emergence of impersonal experiential constructions in Ancient Greek

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Experiential verbs, in the languages of the world, are known for exhibiting marking patterns which differ from the ones employed by the prototypical transitive verbs, due to their peculiar semantic structure (Aikhenvald & Dixon 2001). Ancient Greek has a number of verbs which occur with an experiential meaning in an impersonal construction (Cuzzolin 2006), i.e., a construction where the verb is conjugated in the third person singular, and the argument structure contains an oblique-marked argument (dative or accusative) and a subordinate clause: in terms of semantics, the oblique-marked argument has the Experiencer role, while the subordinate clause has the Stimulus role; from the syntactical point of view, there is no agreement between the verb and any of the arguments (Dahl 2014; Dahl & Fedriani 2012). *E.g.*:

ταῦτά	σοι	συμβαίν-ει	λέγ-ειν
this.ACC.N.PL	2SG.DAT	come_together.PRS-3SG	say.PRS-INF
	Experiencer		Stimulus
'You happen to say this' (Plat. *Phaedo* 92b)			

οἱ	ἐπῆλθ-ε	πταρεῖν	τε καὶ	βῆξ-αι	μεζόνως
3SG.DAT	reach.AOR.PST-3SG	sneeze.AOR.INF	and	cough.AOR-INF	more
Experiencer		Stimulus			
'He happened to sneeze and cough more' (Hdt. 6.107.3)					

We have analyzed some 70 verbs which allow an impersonal experiential construction in Ancient Greek, and we noticed that the number of verbs of this kind is not constant in the diachrony of Ancient Greek: notably, in Homeric Greek considerably fewer verbs allow the impersonal experiential construction; the impersonal experiential construction of most verbs are attested only from post-Homeric Greek onwards, although some of these verbs are already found in Homeric Greek despite having personal constructions without the experiential meaning. This situation denotes that most of the times the experiential meaning is developed secondarily through a metaphorical process departing from an original concrete meaning. Moreover, we can notice that all the verbs that already allow the impersonal experiential construction in Homeric Greek are unprefixed, while the vast majority the other ones are prefixed. This morphological distinction witnesses the existence of two potentially different patterns of emergence of impersonal constructions: the one involving prefixation can be fully tracked throughout the diachrony of Ancient Greek, while the other one must be reconstructed by means of language comparison.

In this talk we will outline the development process of the impersonal experiential construction of prefixed verbs, which is paralleled by a progressive loss of subject properties by the nominative-marked argument (Seržant & Kulikov 2103). The starting point of the metaphorical drift is a personal construction with a concrete active meaning, such as the one shown in the example:

ὁ	δ'	ἔπειτα	ἑ-ὴν	εἰσήλυθ-εν	εὐνή-ν
ART.NOM.M.SG	PTC	then	3SG.POSS-ACC.F.SG	reach.AOR.PST-3SG	bed(F)-ACC.SG
Actor					Undergoer
'He then reached his bed' (δ, 338 = ρ, 129)					

Subsequently, it occurs a swap between the semantic properties of the arguments, that brings the [+human] trait from the nominative-marked argument to the oblique-marked one; this triggers a shift of the discourse relevance towards the oblique-marked argument. This step is usually accompanied by a metaphorical use of the base verb. *E.g.*:

ἰδόντ-α	δὲ	τὸν Κροῖσο-ν	γέλως	ἐσῆλθ-ε
see.AOR.PTCP-ACC.SG	PTC	DET Croesus(M)-ACC.SG	laughter(M).NOM.SG	reach.AOR.PST-3SG
Undergoer			Actor	
'Having seen (this), Croesus felt like laughing' (Hdt. 6.125.5)				

Then, when neuter pronouns take the place of the nominative-marked argument, we observe some changes on the morphosyntactic level: on the one hand, neuter pronouns lack the morphological distinction between nominative and accusative case, on the other hand, they do not trigger the agreement with the verb in the category of the number. Consequently, the nominative-marked argument loses two features of the Ancient Greek subject (Dahl 2022), leading to a less prototypical construction. *E.g.*:

ἡμῖν	οὖν	εἰσῆλθ-έ	τι	τοιοῦτον
1PL.DAT	PTC	reach.AOR.PST-3SG	INDF.NOM.N.SG	such.NOM.N.SG
Experiencer			Stimulus	
'It came to our mind something like this' (Plat. *Theaet.* 147d)				

In the final step, when the nominative-marked argument has already been deprived of its original functions, it can be easily substituted by a noun clause, originating a fully impersonal construction. *E.g.*:

ἐσῆλθ-ε	γάρ	με	λογισάμεν-ον	κατοικτῖραι	ὡς [...]
reach.AOR.PST-3SG	PTC	1SG.ACC	reckon.AOR.PTCP.MID-ACC.M.SG	feel_mercy.PRS-INF	COMP
		Experiencer		Stimulus	
'While reflecting, I was moved to compassion that [the whole human life is short]' (Hdt. 7.46.2)					

Summing up, we argue that impersonal experiential constructions of Ancient Greek emerge in two phases: a possibly pre-Greek first one and a language internal second one, involving mainly prefixed verbs. We reconstruct this second process of development of impersonal constructions, which entails semantic as well as morphosyntactic factors.

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New insights on *manco* in Neapolitan at the syntax-semantics interface

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Introduction and background. The formal treatment of negation in the languages spoken in southern Italy has received very little attention. Nonetheless, recent literature (Calabria: Ledgeway 2016; Apulia: Ledgeway 2016; Basilicata: Garzonio & Poletto 2014) has shown that the languages spoken in this area exhibit interesting patterns of variation, which remain at this point unexplored. These previous studies suggest that *manco* is a negative reinforcer that can mark several types of negation (i.e., sentential, emphatic, and constituent negation), also in negative concord structures. Specifically, in Neapolitan it has proposed that *manco* is a scalar negative adverb similar to Standard Italian *nemmeno* 'not even' and, as such, it can occur either in preverbal or postverbal position (Rohlfs 1969; Ledgeway 2009). Capitalising on data from primary experimental fieldwork, in this talk I describe and analyse *manco* 'not even / also...not' in Neapolitan at the syntax-semantics interface. In particular, I show that Neap. *manco* lexicalizes two different functions: whereas the scalar negative reading 'not even' is assumed to be generated in NEG1P (Ledgeway 2016), it seems that in the additive reading 'also...not', *manco* can be licensed in a lower position. Particularly, because of its intimate anchoring to the conversational context, I suggest it is realised in in the specifier position of a Focus phrase in the lower left periphery (Belletti 2004; i.a.).

Methodology and data. To investigate the use of Neap. *manco*, I conducted an acceptability judgment task with 21 native speakers of Neapolitan collected with to the 'friend of a friend' approach (Milroy 1987) in Naples. Neap. *manco* was tested as a plain negator, as a negative concord item, as a standalone in negative fragment answers, as a constituent negator and as sentential scope negator. Participants were asked to rate a specific answer using a Likert scale from 0 (= unnatural) to 5 (= natural). For instance, in (1), we can see an example of a test item used to probe *manco* as plain standalone negator in negative fragment answer. Specifically, in the given conversational context, the speakers were asked to choose between a response involving standalone *manco* (1a) vs one where the response only includes its unmarked counterpart *no* 'no' (1b).

(1) Neapolitan
Context: Ciro is studying hard because tomorrow he has an exam, so he doesn't want to go out. His friend Giuseppe doesn't know it, so he asks him if he wants to play football tonight. Ciro replies:

a. Manco.
   manco

b. No.
   no

'No (I don't want to play football).'

Preliminary analysis. The results from this preliminary fieldwork provide a refined understanding on the use of *manco* in Neapolitan. On the one hand, the results challenge previous findings in the way that a plain, unmarked reading of *manco* is not possible in Neapolitan. In fact, Ledgeway (2016) notices that Neap. *manco* may function as a plain/sentential negator as the canonical preverbal negator *nun* 'not', as well as cases of constituent negation and its use in isolation in negative fragment answer (Ledgeway 2016: 108). This is corroborated by our initial findings. On the other hand, the results provide a clearer

distinction between scalar *manco* 'not even' and additive *manco* 'also...not' and its syntactic distribution. Although they behave quite similarly, in case of constituent negation, I found that Neap. *manco* is more accepted in a post-nominal position when it conveys an additive reading 'also...not', whereas it is totally ungrammatical if it has a scalar negative reading 'not even'. Both readings are available when *manco* 'not even/ neither' is used as standalone in negative fragment answers, but only in one specific case, namely a context-licensing condition in which the addressee's knowledge about the propositional content is involved.

Analytically, these preliminary results suggest that *manco* is a negative focalizer adverb: while the scalar negative reading 'not even' seems to be generated in NEG1P (Ledgeway 2016), when *manco* has an additive reading, its first-merge position seems to be in another position. Specifically, since the additive reading must be anaphorically anchored to the conversational context, I tentatively propose that in additive reading *manco* lexicalises a specifier position in the Focus phrase in the low left periphery (Belletti 2004; Cruschina 2016; i.a.). I discuss the details of this analysis in the talk.

Conclusions. This work contributes to a better understanding of *manco* at the interface between syntax and semantics. During the talk, I will also mention evidence from the visual-gestural modality. Interestingly, I show how particular instances of *manco* can only be accompanied by particular gestures in Neapolitan (and not by, for instance, head nods of the kinds that can accompany plain negators). Following recent literature on the syntax of gestures Colasanti (2023), I show how the particular set of gestures that accompany *manco* in Neapolitan utterances allows us to better understand *manco*'s semantic interpretation and its syntactic distribution.

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Linear patterns in the syntax of serialization

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Background. Serial verb constructions (SVCs) involve a series of verbs combining without linking elements to express an event or series of events, and obligatorily sharing the same tense, aspect, mood, and polarity values (Haspelmath 2016). Varying syntactic accounts have emerged for constructions which match this profile in individual languages. Despite disagreements about what kinds of structures are involved, these constructions been shown in one way to be largely crosslinguistically consistent: the linear order of verb phrases in SVCs appears to be insensitive to surface head directionality across serializing languages. This phenomenon has been called Muysken's Anomaly (Muysken 1988 via Carstens 2002), and is demonstrated by examples from the Gungbe (head-initial) in (1a), and the Malayalam (head-final) in (1b).

(1) a. *Sɛsínú ná kùn mótò cè   sɔ́ àdó*
        Sesinou FUT drive car   1SG.POSS hit wall
        'Sesinou will drive my car (and) hit the wall.'   (Gungbe; Aboh 2009:5)
     b. *Rāmaṉ eṉte   vaṇṭi ōṭiccŭ   matil iṭikk-um*
        R.   1SG;GEN vehicle drive.STEM wall hit-FUT
        'Raman will drive my car (and) hit the wall.'   (Malayalam)

Here, the relative order and interpretation of the verb phrases is consistent between the two languages, whereas the relative order of a verb and its object seems to be language-specific.

The Kaynian analysis. Carstens (2002) takes Muysken's Anomaly as strong evidence for Kayne's (1994) claim that all languages underlyingly have a left-headed syntax. To demonstrate why, she shows that SVCs in Ịjọ, a surface head-final language, and those in Yoruba, a surface headinitial language, can be generated using the same base structure. For a prototypical series of two transitive verbs, she proposes the structure in (2).

(2) $[_{vP_1}$ SU v_1 $[_{VP_1}$ O$_1$ V$_1$ $[_{vP_2}$ ec$_{SU}$ v_2 $[_{VP_2}$ O$_2$ V$_2$ $]]]]$

Here, both verbs are part of the clausal spine. Carstens accounts for apparent differences in head-directionality by positing that head-initial languages have two instances of V-to-v movement (shown by the dashed arrows), producing the surface order VOVO (e.g. 1a), whereas head-final languages lack this movement, producing the order OVOV (e.g. 1b). vP_2 is the complement of V$_1$, meaning the relative order of the verbs will be the same regardless of whether the V-to-v movements take place. In Carstens' analysis, Muysken's Anomaly is a natural consequence of deep left-headedness. She motivates this structure by showing that objects of a given verb can quantificationally bind those of a following verb within a series, as shown in (3).

(3) *arí kẹnị tọ́bọụ kẹnị tọ́bọụ akị-nị   wo   yengi pịrị-mị*
     1SG one child one child take-PRT 3SG.POSS mother give-PST
     'I gave each child$_i$ to his$_i$ mother.'   (Ịjọ; Carstens 2002:16)

For Carstens, this proves that there is a c-command relation between those arguments (i.e. 'each child' c-commands 'his mother' in 3). She concludes that such binding relations disqualify other potential

structures for SVCs, e.g. those where one verb adjoins to another (see Déchaine 1993, Veenstra 1996), and instead necessitate an underlyingly left-headed structure.

Conflicting data. Malayalam, another surface head-final serializing language, replicates the binding effect in (3), confirming that Carstens' data are not exceptional.

(4) *ñāṉ ōrō kuṭṭi-ye-yum   eṭuttŭ   atinṟe   amma-ykkŭ koṭuttu*
     1SG each child-ACC-CONJ take.STEM 3SG.N;GEN mother-DAT give.PST
     'I took each child$_i$ and gave (it) to its$_i$ mother.'   (Malayalam)

While such data provide prima facie support for Carstens' analysis, I argue that her conclusion is premature. I demonstrate that the structure proposed by Carstens is actually incompatible with the Malayalam data, which in turn casts doubt upon the claim that Muysken's Anomaly can be attributed to deep left-headedness.

The kind of structure she proposes makes two important predictions independent of the binding facts. First, it necessarily means that only the final verb phrase is a constituent, and second, it implies that it is possible to extract arguments out of any verb in a series (as is possible, for example, in Gungbe, Aboh 2009:5-6). I show that neither of these predictions are borne out in Malayalam, as illustrated by three key pieces of evidence.

First, non-final verb phrases can be fronted while the final verb remains in situ, as shown in (5b). This is unexpected under Carstens' analysis, as the former verb phrase would not be a constituent on its own, and hence both the verb phrases would be expected to front together.

(5) a. *Rāmaṉ* [*vaṇṭi   ōṭiccŭ*]   [*matil iṭiccu*]
        R.   vehicle drive.STEM wall hit.PST
        'Raman hit a wall driving the vehicle.'
     b. [*vaṇṭi   ōṭiccŭ*]   *Rāmaṉ*[*matil iṭiccu*]
        vehicle drive.STEM R.   wall hit.PST
        'Driving the vehicle, Raman hit a wall.'

In principle, if both verbs were part of the clausal spine, (5b) might be derived using remnant movement, i.e. *matil iṭiccu* is scrambled first and *vaṇṭi ōṭiccu* fronts afterwards. This would predict that both VPs become islands. Here, a second piece of evidence becomes relevant. *Wh*-objects may be extracted from the final verb in cleft constructions (Aravind 2018) as in (6a), but object extraction from non-final verbs is disallowed (6b).

(6) a. *ent-ine$_i$=yāṇŭ   Rāmaṉ vaṇṭi   ōṭiccŭ   ____$_i$ iṭicc-atŭ*
        what-ACC=be.PRS R.   vehicle drive.STEM   hit.PST-NMLZ
        'What was it that Raman drove the car and hit?'
     b. **ent-ine$_i$=yāṇŭ   Rāmaṉ ____$_i$ ōṭiccŭ   matil iṭicc-atŭ*
        what-ACC=be.PRS R.   drive.STEM wall hit.PST-NMLZ
        'What was it that Raman drove and hit a wall?'

This shows that while the non-final verbs seem to be islands, the final verb is not. This asymmetry is buttressed by a third piece of evidence: non-final verbs in a series can be coordinated, but the final verb cannot be coordinated with the preceding verbs:

(7) a. *avarŭ paṭhicc-um   paṭhippicc-um jōli ceyt-um   jīvikk-unnu*
        3PL   study.STEM-CONJ teach.STEM-CONJ work do.STEM-CONJ live-IPFV
        'They live studying, teaching, and working.'   (Asher & Kumari 1997:144)
     b. **avarŭ paṭhicc-um   paṭhippicc-um jōli ceyt-um   jīvikk-unn-um*
        3PL   study.STEM-CONJ teach.STEM-CONJ work do.STEM-CONJ live-IPFV-CONJ
        'They are studying, teaching, working, and living.'

In summary, non-final verbs in Malayalam SVCs are constituents which may be fronted or coordinated, but are islands for extraction; this establishes that they are merged as adjuncts to the final verb and not as part of the clausal spine as in (2).

Binding revisited. The binding facts seem to conflict with this picture. One solution is to abandon the idea that quantificational binding universally requires c-command (see Barker 2012, Bruening 2014, pace Reinhart 1983). There is independent evidence for this, as binding out of subordinate clauses is tolerated in Malayalam (8), where c-command presumably cannot apply:

(8)   *ñāṉ ōrō kuṭṭi-ye-yum   eṭukk-um=bōḷ atinṯe   amma ōṭi   var-um*
      1SG each child-ACC-CONJ take-FUT=when 3SG.N;GEN mother run.STEM come-FUT
      'When I pick up each child$_i$, its$_i$ mother will come running.'

If this is the case, quantificational binding cannot be used as evidence for a particular structure without additional evidence that it entails c-command in a given language.

Conclusion. This demonstrates that surface data consistent with those found in Carstens (2002) may in fact be incompatible with the kinds of structures that she proposes. While further work is needed to discern whether alternative structures may better fit her data, the claim that deep left-headedness accounts for Muysken's Anomaly appears to be incorrect.

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Language attitudes of cross-border commuters in multilingual Luxembourg

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Around 212,000 cross-border workers from France, Germany, and Belgium commute to Luxembourg daily (STATEC, 2021). The often monolingual cross-border commuters face a complex multilingual situation arising through institutional, societal, and individual multilingualism, which mainly involve Luxembourgish, German, French and English (De Bres & Franziskus, 2019; Mathä & Pulina & Ziegelmeyer, 2022; Purschke & Gilles, 2023). To discuss possible consequences of this constellation, this project addresses two research questions: First, this study aims to identify what attitudes cross-border workers hold towards multilingualism and the individual languages used in Luxembourg. Second, this research interrogates the reasons that motivate the attitudes.

Investigating language attitudes is paramount to understanding social cohesion within the taxonomy of sociolinguistics (Kircher & Zipp, 2022). Previous research in Luxembourg mainly concerned itself with language ideologies of cross-border commuters and underlines the diversity of these, ranging from monolingual nationalist ideologies to multilingual ideologies (De Bres & Franziskus, 2019; Franziskus, 2017). These lines of research mostly employed qualitative approaches and found that cross-border workers feel discriminated and excluded by Luxembourgers' language choice and language use (De Bres & Franziskus, 2019; Franziskus, 2017). However, the perception varies depending on the country of residence (Franziskus & De Bres, 2015).

With Purschke's (2015) pragmatic-constructivist attitude framework, this project aims to gain insight into cross-border commuters' perception of the sociolinguistic situation in Luxembourg. Besides, the influence of social and biographical variables is investigated. As method, language attitudes were measured and analysed using an online questionnaire. Semi-structured interviews were conducted subsequently for a closer analysis of the elicited attitudes by inquiring about reasons motivating their attitudes and deconstructing discourses about languages and their speakers. The results mainly suggest strong attitudes towards Luxembourgish and multilingualism in general. Nevertheless, there is a conflict between French and Luxembourgish regarding multilingual practices as well as a social desirability bias towards Luxembourgish.

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ba as a marker of quotation in the speech of Swedish adults – a Construction Grammar perspective

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Since the 1970's, the Swedish adverb *ba(ra)* ('only', 'just') has been increasingly used as a marker of quotation in the speech of Swedish adolescents, formally realized almost completely in its reduced form *ba.* This new function of *ba(ra)* has been observed by many interactional linguists and discussed from different linguistic perspectives, among others as a case of ongoing grammaticalization in modern Swedish (e.g. Eriksson 1995). Nevertheless, none of the studies conducted so far investigates in depth if and how the quotative marker *ba* is used nowadays in the speech of adults. The current presentation closes this research gap. The study is based on a corpus of 13 YouTube-videos (format: *story time*, with a total duration of 3:44:50) published by six known Swedish youtubers 19 to 33 years old. The material was transcribed using GAT2-conventions (Selting et al. 2009) and the annotation software FOLKER (Schmidt/Schütte 2010). Referring to Interactional Construction Grammar approach (Imo 2007, 2015), a detailed analysis of formal, semantic, and pragmatic characteristics of constructions with *ba(ra)* is given. I analyzed both *ba*'s frequency compared with other common lexical quotation markers in Swedish (i.e. *säga* ('say'), *känna* ('feel') and *tänka* ('think')) as well as the types of quotative content the respective markers introduce. I found out that *ba* is the most frequent quotative marker in my material, mainly due to the fact that the content introduced by *ba* is – in contrast to *säga*, *känna* and *tänka* – not restricted by the specific semantics of the marker in question. *ba* can hence be used to introduce utterances, thoughts, paralinguistic signals and last but not least to demonstrate somebody's behaviour. Against the assumption of Eriksson (1995: 45) that „*ba* will remain for a time in the speech of adolescents and then eventually disappear", I argue that *ba* as a quotative marker has become a full-fledged and frequent construction in spoken Swedish, commonly used even by adult speakers. I therefore consider this construction as a part of the Swedish constructicon and contribute with this study to its more detailed description.

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Word order variation in French Absolute Constructions

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Introduction: Absolute constructions (AC) are small clauses composed of a core participle and its argument (a subject with which the participle agrees). In the Romance languages (Italian, Spanish, Portuguese), the word order adopted in these structures is verb-subject (VS), reflecting the fact that the subject of the AC is a patient, and therefore the internal argument of the verb in the AC (due to semantic restrictions on the construction itself). Contrary to most of the Romance languages, modern French does not allow the VS order but instead uses a subject-verb (SV) order. The opposite orders (SV for e.g. Spanish and Italian, and VS for French) are ungrammatical.

(1) a. **Chiamato Gianni**, Maria parte.

   b. *****Gianni chiamato**, Maria parte.

      'Called John / *John called, Mary leaves.' (It.)

(2) a. *****Appelé Jean**, Marie part.   (VS)

   b. **Jean appelé**, Marie part. (SV)

      '*Called John / John called, Mary leaves.' (Fr.)

Starting problem: One exception for French is when the absolute construction (AC) is introduced by a temporal marker like *une fois* 'once', or *sitôt / aussitôt* 'immediately'. In this case, both SV and VS orders are possible. These markers are an innovation of the modern language and start introducing AC in the 19th century (Blanche-Benveniste, 1998).

(3) a. **Une fois le jugement rendu**, le tribunal se vide. (SV)
      a time the verdict given the tribunal REFL empties
     'Once the verdict is given, the tribunal empties.'
  b. **Une fois né l'enfant**, les parents ne dorment plus. (VS)
     a time born the=child the parents NEG sleep NEG
     'Once the child is born, the parents no longer sleep.'

This variation in word order can be linked to a difference in registers, with VS orders belonging to a higher register than SV orders. Additionally, a slight focus on the participle is possible with the VS order, but no strong emphasis (e.g. contrastive focus on the participle). With both SV and VS orders, the emphasis is on the completion of the action denoted by the verb in the AC.

The presentation aims at analysing the kind of inversion triggered by the temporal markers in French. This, in turn, will lead to a novel account of word order variation in modern French AC. Very few works on the topic of AC in French deal with the word order variation (e.g. Grévisse and Goosse, 2008 and Abdoulhamid, 2009 both list the different word orders), and none actually consider the syntactic structure of these constructions. The presentation will propose two distinct structures which yield the different orders observed in the constructions.

Analysis: In this paper, I argue for a novel analysis of the temporal markers, which, on top of instinctively making sense for native speakers, can also very naturally explain the word order variation in French. The temporal markers which can introduce AC are:

    (i)   **<u>reduced complementizers</u>** of the underlying form: *une fois / sitôt / aussitôt **que*** 'once, immediately that', with the *que* 'that' requiring a [+finite] feature which prevents it from

appearing in non-finite clauses (for a similar analysis of temporal markers in Romance, see Suñer, 2016 for Catalan)

This analysis of the adverbial introducers as complementizers is supported by various observations: first, it is argued that introduced AC are simply non-finite equivalents of finite clauses introduced by a complementizer. The AC in (3) can then be reformulated as in (4)

(4) Une fois que le jugement est rendu, … / Une fois qu'est né l'enfant, …
 One time that the judgement is given … / One time that=is born the=child, …

Second, it is also possible for the marker to have scope over more than one AC (as would be the case for their finite counterparts): [*une fois [le jugement rendu et l'enfant né]*] 'once the judgement is given and the child is born'.

Due to the fact that they are complementizers, these temporal markers are then able to trigger stylistic inversion (SI) (Kayne and Pollock, 1978, 2001): in embedded contexts in French, subject inversion can be triggered when the clause is introduced by a [+wh] word (e.g., *quand*, *lorsque* 'when', relative *que* 'that'). Given that the finite forms of the temporal markers can trigger SI (see (4)), it would stand to reason that this trigger is also available for AC.

Combining Kayne and Pollock's analysis of SI and Rizzi's (1997) account of the split-CP, I argue that,

(5)
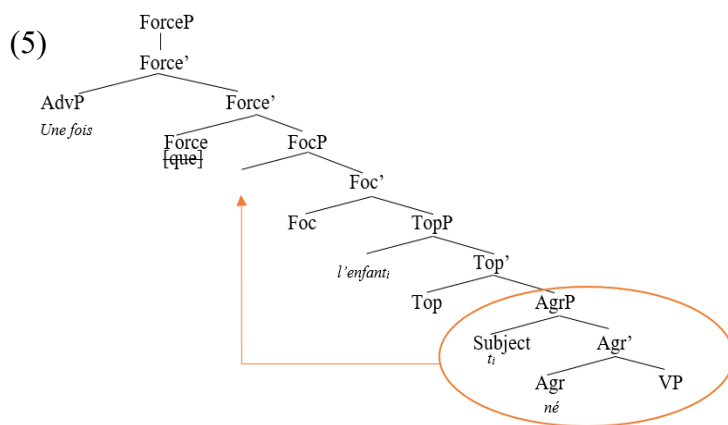
for introduced AC with VS order, the complementizer is in Force (with the AdvP for e.g., *une fois* adjoined to it), the subject moves out of the AgrP to the SpecTopP below focus, and the AgrP without the subject then moves to SpecFocP (see structure in (5)).

On the other hand, an introduced AC with SV order simply displays the unmarked word order for French, with no additional movement out of the AgrP (see structure in (6)).

(6)
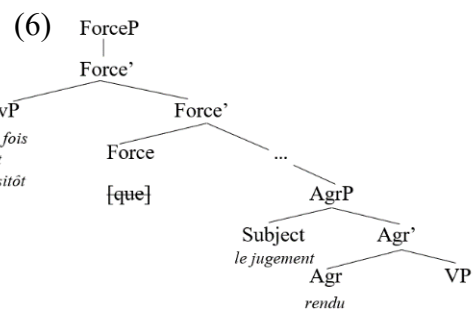
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Old Saxon Vowel Insertion

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The aim of this paper is to reanalyze vowel insertion in Old Saxon using the Articulatory Phonology framework. Old Saxon (OS) exhibits vowel insertion, a process whereby a vowel is inserted between a liquid and a following consonant after a short stem vowel:

(1) a. *burg ~ bur**u**g*   'city'
     b. *bifelhen ~ bifel**a**han*   'to recommend/confide'

The process is highly variable, and differences occur within and across manuscripts. Due to this inconsistency, the phenomenon is underresearched. Hitherto, the process has been classified as phonological vowel epenthesis, whereby the inserted vowel is used as a strategy to dissolve marked liquid-consonant (-LC-) clusters (Howell 1991, Suzuki 2004). Furthermore, it is hypothesized that vowel insertion prevents post-nucleic liquid reduction by causing resyllabification of the liquid, moving it to the onset of the new syllable:

(2) a. $(berht)_\sigma \sim (be)_\sigma(raht)_\sigma$ 'bright'
     b. $(tharf)_\sigma \sim (tha)_\sigma(raf)_\sigma$ 'need/lack'

Although previous treatments provide descriptions of the phenomenon, they fail to account for several restrictions of the process, i.e., that it predominantly occurs in heterorganic -LC- sequences, that the rhotic triggers the insertion more frequently than the lateral, and that the process occurs infrequently. Moreover, one factor which thus far has not been explained is the quality of the inserted vowel, which is either identical to a neighboring vowel (1a) or represented by the graph ⟨a⟩ (1b). A corpus-based analysis of the three major Old Saxon manuscripts, manuscript M, manuscript C, and fragment V, was conducted to provide a clearer picture of the phenomenon and to resolve some contradictory descriptions of the process.

The results of the corpus analysis suggest that the process in OS represents vowel intrusion rather than phonological vowel epenthesis. Intrusive vowels are phonetic transitions, not segments. Hence, they do not constitute syllable nuclei and consequently do not alter the syllable structure (Hall 2006). My analysis is based on the Articulatory Phonology framework (Browman & Goldstein 1986 et seq.). In Articulatory Phonology, each segment is associated with a gesture. Each gesture has a time and space dimension, allowing gestural overlap. Moreover, consonantal gestures are assumed to be superimposed on vocalic gestures (Öhman 1966). The perception of a vowel can arise from two arrangements of articulatory gestures: either a perceived vowel is uniquely associated with a vocalic gesture, or a vocalic sound is perceived due to the retiming of existing gestures. Whereas phonological epenthetic vowels are associated with a distinct vocalic gesture, intrusive vowels result from low consonantal gestural overlap. This causes the underlying vowel gesture to surface and results in the perception of a transitional vowel without adding a vocalic gesture (Steriade 1990).

When two adjacent consonantal gestures show a low degree of overlap, the inserted vowel sounds schwa-like. I argue that the OS scribes resorted to using the graph ⟨a⟩ for these cases. This is paralleled with Schmidt's (1875) analysis of intrusive vowels in Sanskrit having the quality of an "/a/-like schwa sound". Furthermore, since phonetic transitions are not vowel segments, their acoustics can vary and do not necessarily match the acoustics of vowel segments (Hall 2006). Hence, it is possible that the Old

Saxon scribes used the graph ⟨a⟩ to represent the non-phonemic schwa-like vowel. Examples of this are shown in (3) below:

(3) a. *fera̱gos*   'to supplicate'
     b. *bera̱ge* 'mountain'

Whenever the neighboring consonantal gestures do not overlap, the underlying vowel gesture surfaces between the consonantal gestures. The inserted vowel sounds like an adjacent vowel as they constitute a single vowel gesture:

(4) a. *ha̱ramo* 'harm'
     b. *hueri̱gi̱n* 'somewhere'

The analysis of the OS phenomenon as vowel intrusion is not only supported by cross-linguistic characteristics of vowel intrusion (Hall 2006), but it can also explain factors (e.g., vowel quality, infrequency) not considered in previous discussions. An analysis of the phenomenon in OS as vowel intrusion has already been tentatively suggested by Iosad & Maguire (2018) but without presenting arguments in favor of this analysis. The data collected in this study provides the necessary evidence for their claim and offers clarification on several unresolved issues.

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Reference in Communication

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The notion of reference, understood as a relation of certain types of expressions (called referential expressions) to objects in the real world, has been a subject of thorough study for philosophers since Frege and Russell. Yet the mechanisms of reference (how exactly a referring expression gets attached to a particular object) remain a controversial topic and there is no general agreement between researchers. Some scholars hold negative views on reference as either inherently indeterminate (Quine 1960) or theoretically vacuous notion (Davidson 1984).

On the other hand, dynamic semantics theories (Kamp 1981; Heim 1982; van der Sandt 1992) showed that the purpose of referring expressions is to identify a previously established discourse referent, or, stating it in more general terms, a mental referent in the hearer's mind (Kamp 2015). Yet these insights were not seen as a solution for reference puzzles and, although in the recent years the interest in reference issues within pragmaticists increased (Korta and Perry 2011, Recanati 2012, Kamp 2015, Maier 2016), they largely stay in the externalist paradigm.

In this paper, I will try to show that the very nature of a referential expression is to identify a mental referent and no relation to the real world is required for the success of communication. Moreover, no trace of such a relation can be found either in the agent's mind or in the external world.

I assume there are mental representations in our minds that stand for objects which we have been (or believe to have been) causally connected to. Kamp (2015) suggests a good candidate for such a representation in the context of Discourse Representation Theory. Those mental representations are created and updated when we a) perceive an object, b) are told about it or c) infer new information. Those are three types of causal sources of our beliefs.

There is no direct link in our mind that connects a mental referent to an actual referent in the world. For such a link to exist there should be some entity that represents the actual referent in the mind. However, that entity is the mental referent itself. It could be only a circular self-reference link, which is useless. For similar reasons, there is no such a permanent link in the external world.

However, there are temporary causal links from reality to our mental referents. Perceiving an object or being told about it evokes a certain mental referent in our mind. In some sense, reference works the other way around. It is not my mental referent who refers to reality, but rather reality refers to my mental referent by causing its activation. Different events evoking the same mental referent can be seen as acts of coreference.

Some such events can lead to erroneous information due to misinterpretation and misunderstanding, yet they are still causal sources. Whether they cause information or misinformation is no big difference for the agent as soon as she can maintain a coherent mental database.

When I communicate a thought about an object I take information from its mental representation in my mind and use it to produce a referential expression that I believe would be useful for the hearer to identify the corresponding mental referent in her mind. The expression refers to a mental referent in the hearer's mind, not to an object in the world.

One of the advantages of this paradigm is a natural solution for double vision puzzle, when the hearer has two distinct representations of what the speaker knows to be the same object ('Hesperus is

Phosphorus' problem). Mental referents (unlike normal referents) split and merge as the agent's mental state changes. If we know they are split we can refer to each split part separately without telling tautologies.

Another straightforward consequence is that it dissolves the puzzle of reference to fictional characters or unreal objects that the hearer believes to exist. As soon as she possesses mental representations of them, reference works in the same way. No need to treat them differently. For the success of communication, it does not matter in which relation the message stands to reality, but rather in which relation it stands to the beliefs of the hearer. If the hearer accepts the information from the message as true and adds it to her beliefs then the communication is successful.

I conclude that reference should be seen as a relation to a mental referent in the hearer's mind, not to an object in reality. This view leads to a natural solution for a number of reference puzzles. What matters for the success of communication is the relation of the sentence to the beliefs of the hearer, not to the actual world.

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Modeling Morphological Learning: Tolerance Principle on Turkish past tense -DI

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This paper tests Belth et al.'s learning model Abduction of Tolerable Productivity (2021) on the Turkish past tense suffix -DI. The model is a greedy search algorithm that recursively generates a decision tree based on Yang's Tolerance Principle (2016), a proposed predictor of linguistic productivity based on the number of words within the scope of a rule and exceptions to it. Belth et al. note that as the principle is based on the number of exceptions to the proposed rule, it allows for productive rules with limited vocabularies and therefore presents a good model of early acquisition (2021).

Turkish -DI presents an interesting case for a learning model of morphology as it has 8 allomorphs conditioned by voice assimilation and vowel harmony with regards to frontness and roundness (Göksel & Kerslake 2005).

(1)	gel	-di	(3)	ısır	-dı	(5)	oku	-du	(7)	gör	-dü
	come	-DI		bite	-DI		read	-DI		see	-DI
They(sg.) came.			They(sg.) bit.			They(sg.) read.			They(sg.) saw.		
(2)	git-ti		(4)	yap	-tı	(6)	somurt	-tu	(8)	düş	-tü
	go-DI			do	-DI		frown	-DI		fall	-DI
They(sg.) went.			They(sg.) did.			They(sg.) frowned.			They(sg.) fell		

In the acquisition literature, the morpheme -DI is reported as being productively used by Turkish-acquiring children as early as 1;5 of age (Aksu-Koç & Ketrez, 2003) with very little error (Aksu-Koç & Slobin 1985). This success can be attributed to the fact that vowel harmony and voice assimilation rules apply consistently for all verbal stems. Crucially, Aksu-Koç & Ketrez report a Turkish-acquiring child as young as 1;3 to use the -tü allomorph when the child has less than seven verbs in their speech (2003). This allomorph displays frontness and roundness harmony as well as voice assimilation and is the least frequent form of the morpheme to appear in the combined corpus for this study. We are therefore presented with an interesting challenge where the suffix has many allomorphs that are completely rule-driven, and even the least frequent form is acquired by children very early. Given that TP formulates rules that minimize the number of exceptions, we would predict the model to be successful with these phonologically conditioned allomorphs that exhibit no irregularity. If we account for the high number of allophones, each with different frequency in the input, however, we expect a lower success rate from the model. Furthermore, we must note that although this rule-based allomorphy might be trivially explained using assimilation and vowel harmony, it represents a significant challenge for the model at hand. Belth et al's model tests the final segment of a lemma for a given suffix against the Tolerance Principle, then the final two segments in case it is not productive under TP, and so forth. The allomorph of -DI for a given verb can depend on as much as three final segments (ex. 6), or as little as one (ex. 5). This would mean that in absence of abstraction the model would have to consider, at worst, to estimate roughly disregarding phonotactic constraints, 21 consonants in Turkish orthography + 21 x 21 + 8 vowels in Turkish orthography x 21 x 21 = 3990 possible rules for each allomorph of -DI against TP. In testing the model's performance in Turkish -DI morpheme, we are therefore evaluating its ability to learn complex yet regular rules with limited occurrence, the exact strength of Tolerance Principle as claimed (Belth et al. 2021).

The present study uses a combined corpus of Turkish verbs inflected with -DI to train the ATP model. The dataset comprises of 751 Turkish verbs inflected with -DI. 328 verbs from child-produced and child-directed speech from CHILDES Turkish corpora (280 from Aksu (Slobin, 1982), 192 from Altinkamis (Altinkamis, 2003)) as well as 900 most frequent verbs in Universal Dependencies Turkish Penn 2.10 Treebank (Kuzgun et al., 2020) that were manually checked and cleaned, then combined by removing overlapping instances. Verbs found in Turkish CHILDES corpus were extracted using UDPipe 2.0 (Straka, 2018) tool, while the data from UD-Turkish Penn 2.10 was queried through PML Tree Query (Štěpánek & Pajas, 2010). Both tools were accessed through the LINDAT/CLARIAH-CZ Research Infrastructure (https://lindat.cz), which was supported by the Ministry of Education, Youth and Sports of the Czech Republic (Project No. LM2018101). The verb roots were then inflected with the relevant forms of -DI morpheme, using a Context-Free Grammar with Natural Language Toolkit for Python (Bird et al., 2009). The train/test split was done using the relevant method from the Scikit Learn Python library (Pedregosa et al., 2011) with 563 verbs for training and 188 for testing.

	Features in experiment	Precision	Recall	F1
Experiment 1	[+ / - V O I C E]	1.0	1.0	1.0
Experiment 2	[+ / - B A C K]	0.955539	0.934803	0.943099
Experiment 3	[+ / - R O U N D]	0.734524	0.650497	0.675638
Experiment 4	[+ / - V O I C E] [+ / - B A C K]	0.951042	0.942859	0.946500
Experiment 5	[+ / - V O I C E] [+ / - R O U N D]	0.867888	0.777437	0.805699
Experiment 6	[+ / - B A C K] [+ / - R O U N D]	0.906071	0.891674	0.893532
Experiment 7 **(Turkish forms)**	[+ / - V O I C E] [+ / - B A C K]	0.883886	0.888727	0.880219

To help clarify the effect of rule complexity and frequency of each allomorph on model performance, seven experiments are carried out to test the model's performance with regards to each phonological feature. Each experiment is evaluated with regards to its decision trees as well as precision, recall and F1 analyses for the test data. Additionally, a wug-test (following Berko, 1958) of 8 nonce words is performed to evaluate performance on each allomorph. As decision trees explicitly demonstrate the rules formulated by the model, they allow for an in-depth discussion of the factors effecting performance. The results are compared with findings from acquisition literature both in terms of acquisition of morphology and of voice assimilation and vowel harmony. Considering the input for the model only reflects type frequency, the results are further discussed with reference to the effect of type versus token frequency in children's acquisition.

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The Loss of OV Orders in the History of English: A Re-Evaluation

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As relative clauses can be expected to be relatively unaffected by the stylistic and discourse factors that impact the word order of main clauses (Bybee, 2002), the competition in the directionality of preposition stranding in Early Middle English relative clauses is a pointer to a significant change. The Early Middle English period of 1150–1250 shows a roughly 50%-50% split between OV (preverbal strandings) and VO (postverbal strandings) in our investigation of the PPCME2 (Kroch & Taylor, 2000[A]) corpus but, for the next century (1250–1350), where we resort to the new PLAEME (Truswell et al., 2018) corpus in view of the well-known data gap in PPCME2 (Truswell et. al., 2019, p. 21), we unexpectedly find higher rates of OV: a 74.5%-to-25.5% preference for OV relative clauses. This unexpected high rate for OV orders in PLAEME can be explained by: a) register (verse versus prose); b) a higher proportion of southern texts (known to be conservative in their syntax; Kroch & Taylor, 2000[B]); and c) the existence of Old English model texts for some of our Early Middle English works: whilst the choice for OV orders seems to be highly conditioned by these factors, VO orders, on the other hand, are not affected by these constraints and their use sharply increases from the 1250–1350 period onwards.

Identifying a precise date for the loss of OV orders in English has so far proven elusive. Studies such as van Kemenade (1987), Pintzuk (1999), and Hinterhölzl (2014), date this loss to the 13th century, whilst analyses such as van der Wurff (1997) and Moerenhout and van der Wurff (2000, 2005), do not date the loss of OV until well into the 16th century. Taking the stranding facts to be a proxy of underlying OV and VO, our careful scrutiny of the Early Middle English data supports the view that unconstrained OV orders drastically decline in frequency after the first period of Early Middle English (1150–1250), and that the loss of OV can be confidently dated to the 13th century.

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Instances of genericity: A distributional semantic approach to generic and specific masculines' semantics in German

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Generic masculines in German have long been thought of as gender-neutral. Take, for example, the grammatically masculine role noun *Chemiker* 'chemist', which can be used to refer to either a male chemist or, in its generic usage, to a chemist of any gender. However, despite their intendedly gender-neutral usage, mostly psycholinguistic research of the last decades has repeatedly shown that the comprehension of generic masculines apparently is not gender-neutral but biased towards a masculine reading (e.g. Gygax et al., 2008; Schunack & Binanzer, 2022). Recently, Schmitz (2023) and Schmitz et al. (2023) came to similar conclusions using novel computational instead of psycholinguistic approaches. However, their approaches have two major issues. The aim of the present paper is to introduce an alternative approach, circumventing these issues.

The first issue is that the method used for the computation of semantic vectors by Schmitz (2023) and Schmitz et al. (2023), naive discriminative learning (Baayen et al., 2011), leads to a strong association of the semantics of 'generic' and the grammatical masculine. Thus, finding a strong semantic connection between 'generic' and masculine forms is little surprising.

The second issue is related to the computation of a 'generic' and a 'specific' vector as done by Schmitz (2023) and Schmitz et al. (2023). Their computations put genericity on a level with inflectional functions such as number or grammatical gender. Inflectional functions, however, show exponents in their realisation, e.g. different plural suffixes. Genericity, on the contrary, does not. Hence, the question arises whether treating genericity as inflectional feature is feasible.

To address these issues, the present paper makes use of so-called instance vectors (Lapesa et al., 2018). Instance vectors are vector representations for individual instances of words rather than of lemmas. For their computation, a window of n context words around a given target word is considered. The pertinent instance vector is the average of these *n* context words. Using instance vectors for the present investigation, no genericity vectors are computed and, thus, genericity is not treated as inflectional function.

Instance vectors were computed for 3,020 target word attestations. 75 target words and their corpus attestations were adopted from Schmitz (2023); new attestations were sampled from the Leipzig Corpora Collection's news sub-corpus (Goldhahn et al., 2012) where too few (i.e. fewer than 10) attestations were contained in the corpus by Schmitz (2023). Instance vectors were computed with $n = 2$, $n = 5$, and $n = 8$ to see whether the amount of context included made a semantic difference. Finally, the resulting semantic vectors were compared using cosine similarity, a measure regularly used to compare vector similarity. Cosine similarities were computed within a target word for the following comparisons: generic masculine vs. specific masculine; generic masculine vs. specific feminine; specific masculine vs. specific feminine.

Introducing beta regression in generalised additive mixed models using the mgcv package (Wood, 2017) in R (R Core Team, 2021), it was tested whether cosine similarity was significantly different for the

three comparisons. Number, stereotypicality, word-form frequency, and overall frequency were included as control variables.

Across all window sizes, it was found that the generic masculine was semantically more similar to the specific masculine than to the specific feminine. Indeed, the highest degree of similarity was found for the two masculine forms, the generic and the specific masculine. Depending on window size, the least similar forms are either the generic masculine and the specific feminine ($n = 2$, $n = 5$) or the specific masculine and the specific feminine ($n = 8$).

The results of the present study are in line not only with a large body of previous psycholinguistic research on the nature of the generic masculine in German, but also support the findings by Schmitz (2023) and Schmitz et al. (2023), regardless of their aforementioned issues. The implications of the present study are twofold. First, the masculine bias in generic masculines in German is stable across a variety of methods. Second, computational methods appear to be a meaningful complement to psycholinguistic approaches in research on genericity.

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Unexpected Scope in Turkish RNR

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Introduction. This paper investigates Turkish Right Node Raising (RNR) sentences which contain a so-called "morphological mismatch": the verbs in the two conjuncts assign different cases to their objects. At the same time, the sentences give rise to an inverse scope reading (unlike their non-RNRed counterparts), suggesting that the pivot (the direct object of both verbs) may c-command the existential subjects in both conjuncts. The inverse scope reading is unexpected in sentences with morphological mismatches because the latter require the PF-deletion analysis of RNR constructions while the inverse scope requires the multiple dominance (MD) analysis of RNR (Barros and Vicente 2011). In order to account for this unexpected combination of properties, I argue for a multidominant analysis of morphologically mismatched RNR constructions in Turkish by proposing that in such constructions, quantifiers and NPs may be non-bulk shared by the two conjuncts.

Data. An example of an RNR construction with a mismatch in Turkish is given in (1).

(1) Bir hemşire iğne yap-tı, ve bir doktor tedavi et-ti her hastay-ı.
   A nurse$_{NOM}$ shot gave-$_{PST}$, and a doctor$_{NOM}$ cure do-$_{PST}$ every patient$_{ACC}$
   'A nurse gave a shot to every patient, and a doctor cured every patient.'   ∃>∀, ∀>∃

In (1), the RNRed pivot *her hastayı* 'every patient.acc' bears accusative case. In non-RNRed (2), the verb of the first conjunct *iğne yaptı* 'gave shot to.3sg' which assigns dative case to its object (*her hastaya* 'every patient.dat') while the verb in the second conjunct *tedavi etti* 'cured.3sg' assigns accusative case to its object (*her hastayı* 'every patient.acc'). The interesting aspect of (1) is the fact that it allows for an inverse scope reading, unlike its non-RNRed counterpart (2).

(2) Bir hemşire her hastay-a iğne yap-tı, ve bir doktor her hastay-ı tedavi et-ti.
   A nurse$_{NOM}$ every patient$_{DAT}$ gave shot-$_{PST}$, and a doctor$_{NOM}$ every patient$_{ACC}$ cure do-$_{PST}$
   'A nurse gave a shot to every patient, and a doctor cured every patient.'   ∃>∀, *∀>∃

Problem. In order to obtain the inverse scope reading, the pivot, *her hastayı* 'every patient.acc', must be in a position that allows it to c-command the existential subjects in both conjuncts. A way for the ellipsis analysis of RNR to allow for the inverse scope reading we observe in (1), is given in (3), where the object in the second conjunct *her hastayı* 'every patient.acc' moves rightwards, to adjoin &P – a position from which it c-commands both subjects. However, this movement would violate the Coordinate Structure Constraint (Ross 1967). If we propose a conjunct-internal movement of *her hastayı* 'every patient.acc', as in (4), the object could only move to the edge of that conjunct, and would only c-command the subject of that conjunct *bir doktor* 'a doctor', but not *bir hemşire* 'a nurse'.

(3) [$_{CP}$[$_{\&P}$[$_{TP}$Bir hemşire [$_{VP}$~~her hastaya~~ iğne yaptı]], ve   [$_{TP}$ bir doktor [$_{VP}$ t$_i$ tedavi etti]] her hastayı$_i$]].

(4)   [$_{\&P}$[$_{TP}$Bir hemşire[$_{VP}$~~her hastaya~~ iğne yaptı]], ve [$_{TP}$[$_{TP}$ bir doktor [$_{VP}$ t$_i$ tedavi etti] her hastayı$_i$]]].

The pivot can c-command both subjects on the multidominance analysis of RNR (Bachrach and Katzir 2009). However, an MD analysis is not possible when there is morphological mismatch between the

two conjuncts (Bošković 2004; Barros and Vicente 2011). Therefore, the existence of the inverse scope interpretation of (1) is unexpected under either of the analyses RNR.

Analysis. I propose the analysis in (6) to derive the inverse scope in RNR examples with morphological mismatches.

(5) Bir hemşire iğne yap-tı, ve bir doktor   tedavi et-ti her   hastay-ı.
    A   nurse$_{NOM}$ gave shot-$_{PST}$, and a   doctor$_{NOM}$ cure   do-$_{PST}$ every patient$_{ACC}$
    'A nurse gave a shot to every patient, and a doctor cured every patient.'

(6)
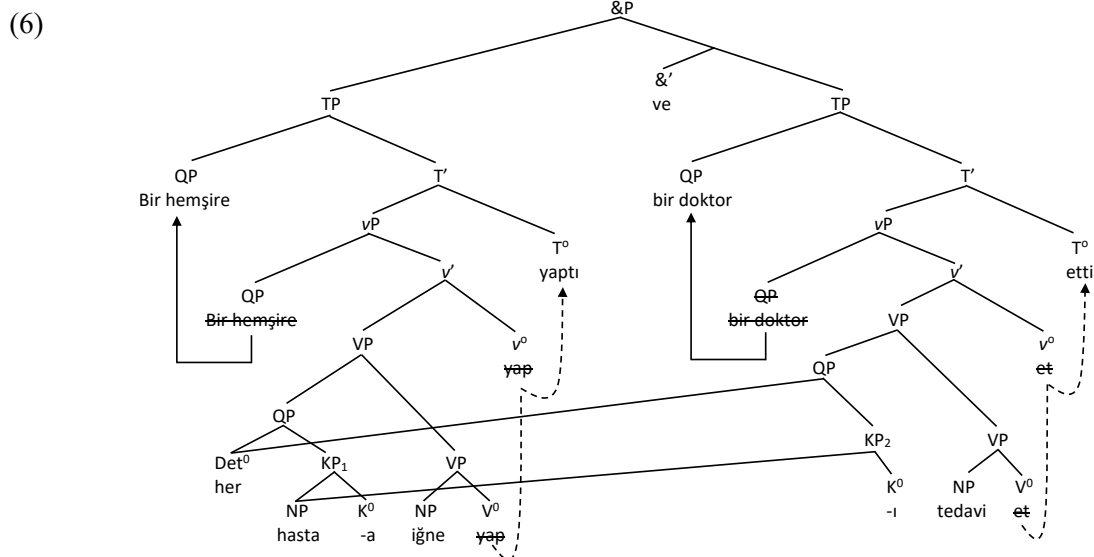
The analysis capitalizes on the existence of a Kase phrase (KP) in the functional projection of the NP (Sigurodsson 1993). This allows the two KPs (the dative KP$_1$ and the accusative KP$_2$) in different conjuncts to *share* a single object NP *hasta* 'patient', as shown in (6). The determiner *her* 'every' is also shared by the two quantifier phrases. The K heads, which contain the different case markers, are, however, not shared, which allows for the morphological mismatch that is not possible for English. The structure in (6), thus, solves the co-occurrence of a morphological mismatch and the inverse scope in RNR, while meeting the requirements of a multidominant structure (Gračanin-Yuksek 2007; Bachrach and Katzir 2009). The inverse scope reading of a multiply dominated element obtains because a multiply dominated node is exempt from the spell-out and the locality constraints it is otherwise subject to until it becomes completely dominated (Bachrach and Katzir 2009). Therefore, in (6), NP *hasta* 'patient' and the determiner *her* 'every' will only be spelled out once they are completely dominated, i.e., when &P is built, yielding inverse scope.

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PIN~PEN Merger in New Orleans English

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The PIN~PEN merger is a salient Southern feature that has never been studied in the context of New Orleans English before. The merger is part of the Southern Shift, in which both vowels are rising and shifting to the peripheral track, subsequently developing inglides (Labov et al. 2006). The feature has spread beyond the US South, but tendencies towards a demerger have been attested for in urban centers in Texas and Georgia (Tillery and Bailey 2004; Koops, Gentry, & Pantos 2008). It has been suggested that the merger is losing its prestige in the US South (Austen 2020), and the aim of the talk is to demonstrate whether the data from New Orleans supports this.

In this presentation, I will delve into the current state of the merger in New Orleans, drawing on a socially balanced and representative dataset of 115 speakers. The feature was studied in the framework of a project grounded in experimental sociolinguistics, with a focus on concepts like salience, indexicality, and enregisterment.

Methodologically, I employed both the Pillai scores and Bhattacharyya's affinity to measure the merger, and in the course of the talk, I will explain why I favored the latter for the statistical analysis. Utilizing linear models, I will predict the Bhattacharyya scores (and, therefore, the degree of merging) for New Orleanians, taking into account various social factors, as well as linguistic factors such as voicing, manner and place of articulation. Additionally, I will highlight the contrasts between urban speakers from the city of New Orleans and suburban participants from the Chalmette neighborhood, located east of the city.

Some of the most compelling findings include younger speakers in the city being less merged than their older counterparts. The opposite is true for the suburbs, where young people show a distinct tendency towards the merger. Younger females appear to be less merged than older females and significantly less merged than younger males. Phonetically, beyond the expected pre-nasal environment, laterals influence the merger. Since /l/-vocalization is a common phenomenon in New Orleans (also studied as part of this project), the dark /l/ has an additional effect on the preceding vowel, which I will discuss in detail during the talk. Besides laterals, affricates also condition the low F2 for the preceding /ɪ/ (but not /ɛ/; $p < 0.05$) due to coarticulation. The same phenomenon causes the lowering of the F2 values for both vowels in the pre-labial environment, while preceding palatal consonants condition the increase of the F2 values for /ɪ/ ($p < 0.05$). Therefore, it is evident that the merger extends beyond the traditional PIN~PEN dichotomy in New Orleans, influencing other phonetic environments as well. During the presentation, I will attempt to trace the coarticulatory effects that explain these phenomena.

To contextualize within a broader sociolinguistic framework, I will compare the findings from New Orleans with the state of the merger in other urban centers in the US South and beyond that have been showing tendencies towards the demerger. Ultimately, I aim to offer a comprehensive analysis of the PIN~PEN merger in New Orleans English, paving the way for deeper insights into regional linguistic variations.

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Sluicing-Like Construction in Tamil

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Ross (1969) is the first to discover the *Sluicing* phenomenon in English which he describes as "This rule has the effect of deleting everything but the pre-posed constituent of an embedded question, under the condition, that the remainder of the question is identical to some other part of the sentence, or of a preceding sentence." Example (1) is an instance of sluicing in English.

(1) Somebody just left – guess who [just left].

Merchant (1999 & 2006) argues that languages that have *wh*-movement also necessarily exhibit the sluicing phenomenon. But there are works such as Manetta (2013), Gribanova (2013), Balusu (2016), and Leung (2018) on *wh*-in-situ languages which also remarkably exhibit similar construction (Sluicing Like Construction, hereafter SLC) to the English ones.

In Tamil (*wh*-in-situ language), Leung (2018) distinguishes two kinds of sluicing namely case-marked (CM) sluicing and non-case-marked (NCM) sluicing. In the CM type, the *wh*-remnant obligatorily bears a case marker identical to its correlate in the antecedent, as in (2a), whereas in the NCM type, no case-marking on the *wh*-remnant is allowed, as in (2b).

(2a) so:mu   jar-aij-o:$_i$ santi-tt-a:n. ja:r-ai$_i$-nu [*e*] soll-u.
Somu.3sgm.nom who-acc-disjmeet-pst-3sgmwho-acc-compeptell-imp
´Somu met someone. Tell who (Somu met).' (CM)

(2b) so:mu   jar-aij-o:$_i$ santi-tt-a:n. ja:r$_i$-nu [*e*] soll-u.
Somu.3sgm.nom who-acc-disjmeet-pst-3sgmwho-comp ep tell-imp
´Somu met someone. Tell who (it is).' (NCM)

Leung (2018) proposes NCM type be a slightly different variety of Dutch *spading* (sluicing plus a demonstrative). I differ with Leung's analysis because he interprets *adu* (a homophonous morpheme in Tamil) as a demonstrative. However, in this context (NCM type), it is a third person pronoun that could inflect for all genders as in (3).

(3) ... ja:r **adu**/aʋan/aʋaɭ-nu sollu.
 …who.nom.3sgn/3sgm/3sgf-comptell-imp
 ´who it/he/she (is).'

I claim that NCM sluice has a null copula in the present tense and so it is an instance of equative or predicational copular clauses. Hence, I follow Gribanova (2013) in analysing the NCM sluice as an instance of a reduced equative copula clause rather than an instance of sluicing/SLC. She shows that in Uzbek, neither equative nor predicational copular clauses can bear accusative case on the pivot. The predicational copular clause differs from the equative however in allowing inherently case-marked nominal and APs.

The Tamil NCM type examples in (4) show that the *wh*-remnant can only bear nominative case in (4b).
(4a) ra:mu   ja:r-kk-o:paɳam koɖu-tt-a:n.
 Ramu.3sgm.nom who-dat-disj money give-pst-3sgm
 ´Ramu gave money to someone´.

(4b) (adu) ja:r-a:g-a   iru-kk-um-nu ena-kku terij-um.
 (3sgn)who.nom-become-inf be-fut-3sgn-comp 1sg-dat know-hab
 ´I know that who it is.'

(4c) (adu) ma:du-a:g-a   iru-kk-um-nu ena-kku terij-um.
 (3sgn)Mathu.nom-become-inf be-fut-3sgn-comp 1sg-dat know- hab
`I know that it is Mathu.'

Further support for this comes from the fact that the Tamil NCM constructions parallel the Uzbek RCC in other aspects. Gribanova notes that the Uzbek RCC, not being an SLC at all, is expectedly not restricted to just *wh*-remnants, which is true in Tamil also as shown in (5).

(5) Speaker A: ra:mu   ja:r-kiʈʈaij-o:pe:si-n-a:n.
Ramu.3sgm.nom who-with-disj talk-pst-3sgm
´Ramu talked to someone.'
Speaker B: so:mu   kiʈʈai-nu ena-kku terij-um.
Somu.3sgm.nom with-comp 1sg-dat know-hab
´I know that (it's) with Somu.'

Finally, Gribanova observes that in Uzbek, an important restriction holds for CM sluicing: in such constructions, the *wh*-remnant cannot co-occur with a pronounced pronominal subject in the embedded clause. This condition does not however hold for the Uzbek RCC. Tamil also patterns with this Uzbek fact as the *wh*-remnant cannot be accompanied by an overt subject in the embedded clause in Tamil CM sluices, but freely allows the two to co-occur in the NCM ones.

Following the above-discussed facts, I propose that the Tamil NCM type is best analyzed as Reduced Copular constructions.

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Lexical and superlexical resultatives in Hungarian

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Introduction: In the literature on lexical aspect in Hungarian the properties of two inner aspectual markers, verbal particles and resultative secondary predicates, have long been of interest to linguists both for their syntactic and semantic properties (Csirmaz 2008, É. Kiss 2008, Kardos 2016). Most recently Kardos & Farkas (2022) argue that particles like *meg* in sentences such as *Kati megsütött egy csirkét* 'lit. Kati PRT-fried a chicken' and the result phrase *ropogósra* 'lit. onto crispy' in *Kati ropogósra sütött egy csirkét* 'Kati fried a chicken crispy' both telicize the sentences they appear in and crucially, they need to appear in a preverbal position, unlike their English counterparts to be able to exert their telicizing function. Additionally, they propose that particles are base-generated in the [Spec,AspP] position between *v*P and VP, while result phrases are base-generated in [Comp,VP] and move to [Spec,AspP] to check the [+telic] and [+maximal] features of the Asp head. There is also a possibility, however, for particles and result phrases to cooccur (see also Jurth 2013 and Hegedűs 2013), e.g., *Kati megsütött egy csirkét ropogósra* 'lit. Kati PRT-fried a chicken crispy', in which case the result phrase remains in [Comp,VP], while the particle occupies the [Spec,AspP] position.

Data: Apart from canonical result phrases such as *ropogósra* 'lit. onto crispy', *laposra* 'lit. onto flat', or *tisztára* 'lit. onto clean' which bear the *-ra/-re* sublative suffix, Hungarian also has result phrases which are marked by the *-vá/-vé* translative suffix, e.g. *porrá* 'lit. to dust' or *rommá* 'lit. to ruin.' Both types of result phrases can have a fully transparent, referential meaning but some result phrases marked either with the sublative or translative suffix can have a nonreferential meaning, functioning as adverbial, intensifying elements.

(1) a. Kati egy perc alatt /*egy percig porrá alázta Jánost.
     Kati one minute under one minute.TERM dust.TRANS humiliated John.ACC
     'Kati completely humiliated János.'
   b. Mari egy perc alatt /*egy percig pacallá ázott az esőben.
     Mari one minute under one minute.TERM tripe.TRANS soaked the rain.INE
     'Mari got completely soaked in the rain.'
   c. Obamáék egy perc alatt /*egy percig rommá díszítették
     Obama.APL one minute under one minute.TERM ruin.TRANS decorated
     a FehérHázat.
     the White House.ACC
     'The Obamas decorated the White House from top to bottom.'

In these sentences, the interpretation is not that János turned into dust as a result of the humiliation or that Mari turned into tripe as a result of getting soaked in the rain. Instead, these result phrases seem to add an adverbial-like, intensifying meaning to the sentences, specifically that the event denoted by the verbal predicate took place to an excessive degree. It is also shown with the *in/for x time* adverbial test that these sentences are telic with the result phrases in preverbal position.

Aims and claims: My goal in this paper is to argue for an expanded typology of result phrases in Hungarian and show that the result phrases illustrated in (1) are unlike canonical result phrases regarding their function and thus, should receive a distinct syntactic analysis. Given the fact that these result phrases are devoid of referential, lexical meaning, I take them to be grammaticalized aspectual elements and assume that they are base-generated in [Spec,AspP], similarly to verbal particles. In this respect, they differ from canonical, referential result phrases which are base-generated in [Comp,VP] and may move to [Spec,AspP] for feature checking purposes in the absence of a verbal particle.

Analysis: With the analysis that I propose here, I aim to draw a parallel between the syntax of Slavic prefixes and Hungarian result phrases. Svenonius (2004) argues that the distinction between lexical and superlexical prefixes in Slavic languages is ultimately due to their different base-generation positions in their syntax. Lexical prefixes that are usually associated with lexically transparent, resultative meanings are argued by Svenonius to be base-generated inside the VP, in a small clause, as the head of a Result Phrase in a Ramchandian event decomposition (Ramchand 2008). By contrast, superlexical prefixes are

base-generated above VP in the specifier of AspP. Superlexical prefixes have been argued to function as adverbial, aspectual elements, adding quantificational meaning to the predicate, which also appears to be the function of the result phrases in (1) above.

Additionally, it has been observed before by Forgács (2004) that some elements such as *agyon*-which is a grammaticalized verbal particle in modern Hungarian, meaning 'over' or 'to death'*,* can be traced back to a case-marked locative phrase with compositional meaning, literally 'on the brain,' in, e.g., *agyonlő* 'shoot to death' or *agyonver* 'beat to death.' Jurth (2013) also notes that *halálra* 'lit. onto death' seems to have lost its lexical content in, for example, *János halálra dolgozta magát* 'János worked himself to death' and instead expresses that János has done an excessive amount of work. She also points out that *halálra* was not instantiated in her corpus search in cooccurrence with canonical verbal particles, and briefly hypothesizes that this may be due to *halálra* itself functioning as a verbal particle.

In my syntactic analysis, I follow the proposal of Kardos & Farkas (2022) that particles are base-generated in [Spec,AspP] and canonical result phrases are base-generated in [Comp,VP], which allows for their cooccurrence. If we assume, however, that result phrases such as *halálra*, as well as the result phrases instantiated in (1) are merged in [Spec,AspP], then we can predict that their cooccurrence with verbal particles such as *meg* or *fel* is ruled out. This is borne out in (2).

(2) a. *Kati meg-alázta Jánost porrá.
    Kati PRT-humiliated János.ACC ruin.TRANS
    Intended: 'Kati completely humiliated János.'
  b. *Mari meg-ázott pacallá az esőben.
    Mari PRT-soaked tripe.TRANS the rain.INE
    Intended: 'Mari got completely soaked in the rain.'
  c. *Obamáék fel-díszítették a Fehér Házat rommá.
    Obama.APL PRT-decorated the White House.ACC ruin.TRANS
    Intended: 'The Obamas decorated the White House from top to bottom.'

Since the sentences in (2) are ungrammatical, it appears that these result phrases are not base-generated in [Comp,VP] and that both elements – the particle and the result phrase – are targeting the same position, which is [Spec,AspP], thus disallowing their cooccurrence.

Conclusion: It appears to be the case that Hungarian has two distinct kinds of resultative elements – canonical change-of-state resultatives, which are base-generated in [Comp,VP], and purely aspectual resultatives base-generated in [Spec,AspP]. My analysis of purely aspectual result phrases is in line with Svenonius's analysis of superlexical Slavic prefixes in the sense that I also assume purely aspectual result phrases to be base-generated in the specifier of AspP and to be associated with adverbial, quantificational meaning. Verbal particles have been argued to be base-generated in this position as well, which seems to be in line with the empirical facts – verbal particles and aspectual result phrases do not cooccur in the same clause. On the other hand, canonical, lexical result phrases are base-generated in the complement of VP and can cooccur with verbal particles. My data also further illustrate the diachronic grammaticalization of some result phrases through which they take on a function similar to that of verbal particles.

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How to be mistaken and still happy: On belief-relative presuppositions

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Emotive factives like be happy generally lead to infelicity when the truth of their complement clause is not entailed by the common ground, as in (1a). However, there is a class of contexts in which emotive factives give rise to a weaker-than-usual presupposition that is merely relative to the attitude holder's beliefs rather than the common ground (see Egré 2008), (1b). We claim that belief-relative presuppositions with emotive factives are part of a more general pattern: given appropriate contextual settings, the combination of attitude predicate (*believe*) and presupposition trigger (*both*) licenses a comparable inference, (2b).

(1) a. Taro is happy that Aditi found the kite. ⤳ Aditi found the kite.
  b. Taro mistakenly believes that Aditi found the kite, and <u>he's happy that she did</u>.
    ⤀ Aditi found the kite; ⤳ Taro believes that Aditi found the kite.
(2) a. Taro believes that both of Aditi's crayons are new. ⤳ Aditi has two crayons.
  b. Taro mistakenly believes that Aditi has two crayons, and <u>he believes that both are new</u>.
    ⤀ Aditi has two crayons; ⤳ Taro believes that Aditi has two crayons.

The pattern arises whenever a presupposition trigger is embedded in an intensional context that is interpreted relatively to an attitude holder. Emotive factives are special because they are both presupposition triggers and attitude predicates. This generalization has the main advantage that it keeps the *soft* or *hard* nature of the presupposition (in the sense of Abusch 2010) separate from the possibility for presupposition interpretation relative to a context of mistaken beliefs. Therefore, emotive factives can be treated as hard triggers, capturing that local accommodation cannot apply to them—see (3)—, even if readings like (1b) are possible. The same holds for other canonical hard presupposition triggers (like *too*), whose presupposition can be belief-relative when embedded under an attitude predicate.

(3) # I don't know if Aditi found the kite, but if Taro is <u>happy</u> that she did, he will celebrate.

(4) a. # I don't know if anybody else came, but if Eleni came <u>too</u>, the party was nice.
  b. Taro mistakenly believed that Aditi showed up, and then he believed that Eleni came <u>too</u>.
    ⤳ Aditi came.

Considering cases of mistaken-beliefs contexts like (1b), Karttunen (2016) concludes that emotive factives are not real presupposition triggers and that the only factive predicates are those that take clausal subjects like *be odd* and *count*. We will show that the same generalization also applies to these predicates once an **attitude holder** for these predicates is overtly introduced in the syntax.

(5) Taro mistakenly believes that Aditi lost the kite, and it's <u>odd</u> **to him** that she did.
    ⤳ Aditi lost the kite.

So far, we have shown that the belief-relative presupposition in the cases of belief reports and emotive factives share fundamental similarities to the point that they require a common treatment. We argue that the generalization we stated points towards an asymmetry between the two inferences, which is supported by the fact that the belief-relative presupposition cannot be canceled in the same way the factive inference can, as shown in (6). We take this as evidence to assume that the belief-relative

presupposition is calculated by the semantics (as for example in Heim 1992), whereas the factive inference results from an additional pragmatic principle.

(6) # Taro doesn't know that Aditi likes linguistics, and/but he's happy that she does.

Unless the mistaken belief context is made explicit, the presupposition projects globally in all these cases, yielding the classical factive presupposition we saw in (1a). This gives rise to two questions: (i) how is the factive inference derived and (ii) how, if the common ground CG entails only p but not the corresponding attitude holder's belief, can we make sure that a belief-relative presupposition is still satisfied? We propose a pragmatic solution that relies on a principle we call *Echochamber*:

(7) **Echochamber:** Unless suggested otherwise, assume non-participants agree with the CG. $\forall x \in D, \forall \phi[\phi \Rightarrow Bel_x \phi]$ for some relevant D

This pragmatic principle immediately explains why, once a proposition p is in the CG, it is possible to accommodate a presupposition that requires that an attitude holder x believes that p holds. It captures the fundamental pragmatic idea in Kay (1992) and Geurts (1999), but unlike "importation," it assumes that the presupposition generated by the semantics is the belief-relative one. Therefore, the underlying semantic idea resembles "exportation" (Heim 1992), but it does not face the challenge that "we do not, in typical circumstances, automatically inherit the beliefs of the people we talk about" (Abrusán 2022: 586).

We will also show that via *Echochamber*, we can capture the fact that a proposition equivalent to the factive inference seems to be able to filter the presupposition of emotive factives in cases like (8). Pragmatically suspending *Echochamber* makes the filtering of (8) fail.

(8) If Eleni likes linguistics, Taro is happy that she does.

On a notion of *global accommodation* as the minimal update to the common ground to make a sentence carrying a presupposition utterable, we argue that the factive inference is derived as the only possible result of *global accommodation* under *Echochamber*. If the common ground does not contain p prior to uttering a sentence presupposing $Bel_x p$ for some x, accommodating the belief-relative presupposition instead of p would return a common ground that ascribes inconsistent beliefs to x, and is therefore undesirable. This is because under *Echochamber*, a common ground that entails ($\diamond p \wedge \diamond \neg p$) also entails that x believes that $\diamond \neg p$, which conflicts with the globally accommodated presupposition.

In this way, the factive inference is derived as the minimal result of *global accommodation*. This account relies on a distinction between presuppositions as requirements that sentences impose on the common ground and of *global accommodation* as the source of the inference that speakers get when they hear sentences carrying presuppositions (see also Fox 2013).

As a final point, given that the belief-relative presupposition is semantically generated in our proposal, we do not have to rely on discourse-pragmatic strategies (such as protagonist projection in Abrusán 2022), which make it impossible to account for the syntactic predictability of belief-relative presuppositions, which can co-vary with the attitude holder as in (9).

(9) *The math teacher falsely informed the class that no test was a fail,*
 and every kid$_i$ was happy that the others$_i$ had passed too.

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No Hard Feelings If Hard Presuppositions Project

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Not all presuppositional inferences behave the same: some can be canceled in specific contexts; e.g., both *win* and *too* normally come with an inference that projects past entailment-canceling operators, but only in the case of win can this inference be canceled with an explicit ignorance statement. Similar contrasts have motivated a distinction between soft and hard presupposition triggers (Abusch 2002).

Some cases where presuppositions seem not to project or arise concern factive predicates, which normally presuppose the truth of their complement. A heterogeneous group of verbs are subsumed under this category since Kiparsky & Kiparsky (1970). Karttunen (1971) distinguishes a subclass of semi-factive predicates (*discover*), which, unlike "real" factives (*regret*), can lose their factivity in contexts like questions, conditionals, or under modals.

Abrusán (2016) assimilates the distinction between semi-factives and true factives to the one between soft and hard presupposition triggers. However, other works do not make a clear distinction between the two classes (Egré 2008), also on the basis of the fact that the inference that the complement is true can be suspended in some cases even with true factive verbs (Egré 2008: 14):

(1) John wrongly believes that Mary got married, and <u>he regrets that she is no longer single</u>.
⤷ John believes that Mary is no longer single.; ⤸ Mary is no longer single.

Karttunen (2016) reconsiders factive verbs and concludes that verbs of discovery in principle do not presuppose the truth of the embedded proposition in non-assertive contexts. According to him, with true factives, what is normally called a presupposition is actually an implicature; only certain predicates with *that*-clause subjects (*be odd*, *count*) are presupposition triggers.

Here, we present experimental evidence that explores the difference between semi-factives and emotive factives. We hypothesized that semi-factives pattern with soft triggers and emotive factives with hard triggers. The pattern, where a soft trigger and a semi-factive are felicitous and where both *too* and *regret* lead to degradedness, is exemplified in (2).

(2)   a.   I don't know whether the duck participated in a race, but if she won, she is probably drunk now.
      b.   I don't know whether the duck participated in a race, but if the panda discovers that she did, he will be furious.
      c.   # I don't know whether anybody else was ill, but if the duck was ill too, she needed rest.
      d.   # I don't know whether the panda is ill, but if the duck regrets that he is, she will bring him cookies.

We carried out an Acceptability Judgment Task (Likert scale 1...7) in Italian with 40 participants. The first sub-experiment tested cases of presupposition failure (4×2 design) and manipulated the factors PREDICATE (additive particle, true factive vs. semi-factive vs. non-factive; between items) and CONTEXT ($\neg p$ "not p" vs. $\neg Bx(p)$ "I don't know whether p"; within items), totalling 24 items. It also explores the effect of mistaken belief contexts–(1)–for emotive factives and semi-factives in a second sub-experiment
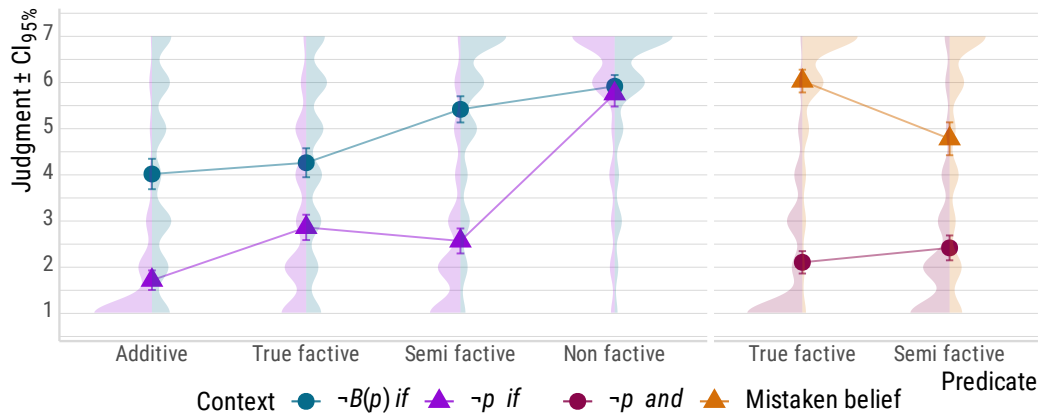
Figure 5: Results of the experiment. The shaded areas represent the counts for the Likert scale elements

(2 × 2 design): PREDICATE (true factive vs. semi-factive; between items) and CONTEXT (¬p and "not p and" vs. mistaken belief "x mistakenly believes that p and"; within items); 16 items. (3) exemplifies these latter manipulations. The results are shown in Figure 1.

(3) a. The panda didn't make the roses die, but the duck is angry that he made them die.
  b. The duck mistakenly believes that the panda made the roses die, and is angry that he made them die.
  c. The frog didn't break the toy train, but the panda, after examining it, realized that the frog broke it.
  d. The frog didn't break the toy train, but the panda, after examining it, mistakenly realized that the frog broke it.

Discussion The experimental evidence we provide is in line with the hypothesis that semi-factives are soft triggers, whereas emotive factives are hard presupposition triggers as they pattern with additive particles. We take issue with the alternative hypothesis that emotive factives are not real or hard presupposition triggers and only predicates like be *odd* are really factive (cf. Karttunen 2016). On the basis of contrasts like (4), we argue that a specific pattern of non-projection arises when a presupposition trigger interacts with an attitude predicate in a context of mistaken belief (cf. Heim 1992). The source of non-projection for (1) is the double nature of emotive factives as both presupposition triggers and attitude predicates, and the phenomenon does not speak against the behavior as hard triggers displayed by emotive factive predicates. This is confirmed by the experimental results.

(4) a. # Taro mistakenly believes that Eleni likes linguistics and it's awkward that she does.

  b. Taro mistakenly believes that Eleni likes linguistics and he believes it's awkward that she does.

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Verb-stranding VP Ellipsis in Turkish

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Overview. Turkish allows null object constructions, and these constructions show certain properties, suggesting the presence of ellipsis operation. Previous analyses argue that these properties follow from Argument Ellipsis, but I argue that Verb-stranding VP analysis is present in Turkish. Providing evidence from the ellipsis of predicates, null adverb interpretations, and light verbs, I propose that VP internal constituents are not elided independently but rather they go unpronounced as part of the deletion of larger constituents (VPs).

The Puzzle. Turkish is one of the languages that allows both object drop and subject drop. Sentence (1) illustrates a null-object construction in which the transitive verb *eleştir* 'to cricitize' with no overt object appears in the second conjunct.

(1) Can   [pro baba-sı]-nı   öv-dü,   Ali-yse   eleştir-di.
    Can   [pro father-3SG-ACC] praise-PAST, Ali-however criticize-PAST
    'Can praised his father, Ali however criticized.'

The object in sentence (1) is missing and it results in two possible readings:

1. a. Can praised his own father and Ali criticized Can's father too.   **Strict Reading**

   b. Can praised his own father and Ali criticized his own (Ali's) father.   **Sloppy Reading**

The fact that there are two possible readings suggests that the null object construction in (1) is an example of an ellipsis (Şener& Takahashi 2010; Gribanova 2020). Another piece of evidence for ellipsis comes from the quantificational readings. However, there are two different analyses explaining the null object constructions which receive ambiguous readings: the argument ellipsis (AE) and the verb-stranding VP ellipsis (VVPE) analyses. While the former proposes that the verb is generated outside the elided constituents and only the internal arguments are elided, the latter proposes that the verb moves out of the verb phrase and the remnant VP undergoes ellipsis. Argument Ellipsis analysis for Turkish has been put forward by Şener and Takahashi (2010). However, in this paper I provide arguments to show that these sentences can be analyzed through VVPE analysis.

Turkish Verb-stranding VP Ellipsis. Şener and Takahashi (2010) argue that Turkish has Argument Ellipsis and does not have VVPE. They come to this conclusion by employing the "adverb-including reading" test and conclude that adverbs cannot be interpreted in Turkish. Recent research has shown that judgements can be facilitated when certain expressions are used. I argue that this is also the case in Turkish. In sentences like (2) the interpretation of adverbs might become more accessible.

(2) Filiz sorun-u   hızla çöz-dü,   ama Ali [hızla]   çöz-me-di.
    Filiz problem-ACC quickly solve-PAST, but Ali [quickly] solve-NEG-PAST
    'Filiz solved the problem quickly, but Ali, did not solve it quickly.'   6/7=✓

The adverb in sentence (2) is judged to be present by six out of seven native speakers of Turkish that I consulted. It might show that the adverb reading in Turkish can also be facilitated if a different connective is used. However, this also shows that "the adverb-including reading" might not be a reliable

diagnostic to test VVPE. Therefore, other diagnostics are needed to argue for the presence or absence of VVPE in Turkish. AE is known to drop arguments independently, but not predicates. By using the diagnostics developed by Gribanova (2020) relying on this reasoning, I show that predicates cannot be elided on their own, but as long as they are part of larger constituents, they can be elided. Sentences in (3) illustrate object depictives in Turkish. The reason why the predicates in sentence (3a) cannot be elided is that the other VP internal constituents are still pronounced. However, in sentence (3b), eliding predicates is possible as the other arguments of the verbs also go missing.

(3) a. Ali Mehmet'i   üzgün gör-dü.   Elif de Cansu'yu   gör-dü.
    Ali Mehmet-ACC sad   see-PAST Elif too Cansu-ACC see-PAST
    'Ali saw Mehmet sad. Elif saw Cansu too.' (≠ sad)

   b. A: Elif Cansu'yu   üzgün gör-dü   mü?
       Elif Cansu-ACC sad   see-PAST Q?
      'Did Elif see Cansu sad?'
    B: Evet, gör-dü.
      Yes, see-PAST.
      'Yes, saw.' (= she saw her sad)

Also, in sentences like (4), only the light verb *et-* 'make/do' remains while VP internal constituents are elided.

(4) A: Ayşe araba-yı   park et-ti   mi?
     Ayşe car-ACC park make-PAST Q?
    'Did Ayşe park the car?'
   B: Evet, et-ti.
     Yes, make-PAST.
    'Yes, she parked the car.'

As seen in sentence (4), even when all VP-internal constituents are elided, they are still interpreted in the ellipsis site. VVPE strategy can account for these sentences as the verbs are stranded while VP-internal arguments disappear. This is possible because the verb moves to T and escapes deletion, while internal arguments are elided in VP.

Verbal Identity Requirement. VIR is one of the characteristics of VVPE. The requirement is argued to be present in Irish (McCloskey 2017) and Hebrew (Goldberg 2005). However, there are also several languages in which VIR does not hold but VVPE is argued to be present: Russian (Gribanova 2013), Greek (Merchant 2018), and Persian (Rasekhi 2018). VIR does not hold in Turkish, either. Following Merchant (2018), I argue that the reason why the VIR is violated in Turkish is that main verbs can host narrow focus.

Conclusion. In this paper, I propose that Turkish has Verb-stranding VP ellipsis contrary to what Şener and Takahashi (2010) argue. To eliminate the possibility of AE analysis, I use the "adverb-including reading" test, the diagnostics developed by Gribanova (2020), and light verb constructions and argue that VVPE is the mechanism that is involved in deriving these elliptical sentences. Finally, as the VVPE is the only possible mechanism in the relevant examples, I investigate whether VIR holds in Turkish. However, Turkish violates the requirement, but this is not surprising as the main verbs can host narrow focus in Turkish.

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Cross-generational differences of German underlying vs. derived diphthongs between two generations of Cantonese L1 speakers

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German features distinct diphthongs /aɪ̯, aʊ̯, ɔɪ̯/, and diphthongs derived from /ʁ/-vocalization in codas (e.g., *vier* [fiːɐ̯], 'four'; *Uhr* [uːɐ̯], 'clock'). This study examines the production of these diphthongs (underlying [aɪ̯], [aʊ̯] and derived [iːɐ̯], [uːɐ̯]) by two generations of Cantonese L1 speakers. Cantonese possesses ten diphthongs (/ei̯, ai̯, aːi̯, ɔi̯, ui̯, au̯, aːu̯, iu̯, ou̯, œy/). It lacks opening diphthongs and /ʁ/-vocalization but shares phonemic /ai̯/ and /au̯/ with German (Chan 2000). Additionally, research suggests that L2 orthographic forms influence L2 phonology acquisition (Vokic 2011). The underlying diphthongs are represented in German orthography ([aɪ̯]: "ei", [aʊ̯]: "au"), while the grapheme-phoneme correspondence of [iːɐ̯] and [uːɐ̯] is more opaque (e.g. [iːɐ̯]: "ier", "ir", "ihr"). Hypothesis 1 predicts larger differences between generations in derived diphthongs due to markedness, lack of orthographic representation, and potential negative transfer. Hypothesis 2 predicts more similarities between a German control group (GER) and heritage speakers of Cantonese with majority language German (Gen 2) than between GER and first-generation immigrants (Gen 1). Heritage speakers are often indistinguishable from monolinguals in the majority language, although they may sound foreign-accented to some extent (Kupisch 2014).

Thirty L1 speakers of Cantonese in Germany were tested (see Table 1): six male and six female first-generation immigrants who learned German as a foreign language (Gen 1, mean age 56.0, SD = 2.7 years) and seven male and eleven female heritage speakers of Cantonese, born and raised in Germany with German as majority language (Gen 2, mean age 27.0, SD = 4.2 years). Eight L1 German speakers (no L2 before the age of six) were added as controls, matched in age and gender (GER 1, GER 2). Six non-word proper names were constructed per diphthong, e.g., *Peiper* [ˈpaɪ̯.pɐ] for the underlying and *Turper* [ˈtuːɐ̯.pɐ] for the derived diphthongs. In a delayed imitation experiment, participants listened to a sentence, e.g., *Er hat Peiper gesagt* ('He said Peiper'), three times and imitated it after 2 s silence and a 500 ms sine tone. After this delay, the phonetic trace has decayed and participants need to access phonological representations (Baddeley 2003).

F1 and F2 trajectories of 912 target vowels were analyzed using general additive mixed models (Wood 2007). Results show significant differences between generations in F2 of the underlying diphthongs: for [aɪ̯] in 0.17-0.28 and 0.61-1 of the normalized time, and for [aʊ̯] in 0-0.08 and 0.66-0.85 (see Figure 1). Derived diphthongs show differences in both F1 and F2 and for longer time intervals than in the underlying ones. Significant differences in [iːɐ̯] occur in 0.31-0.81 of the normalized time for F1, and between 0.08-1 for F2. Significant differences in [uːɐ̯] were found in 0.75-0.86 for F1, and between 0.06-0.77 and 0.98-1 of the normalized time for F2 (see Figure 2). Comparisons between Figures 1 and 2 suggest that generational differences are larger in derived than in underlying diphthongs. These findings align with the absence of derived diphthongs in Cantonese and their cross-linguistic markedness. Positive influence from Cantonese on German closing diphthongs is also possible, as German [aɪ̯] and [aʊ̯] may be similar to Cantonese /ai̯, aːi̯, au̯, aːu̯/. Hypothesis 2 anticipated greater similarities between Gen 2 and GER. This trend could not be observed consistently across all formant trajectories: Gen 2 contours were more similar to GER in five formant trajectories, whereas Gen 1 was closer to GER in three trajectories. In the remaining eight contours no pattern was found, possibly due to a small GER sample size. In perception, Gen 1 productions of derived diphthongs often sounded like

the monophthongs [i] and [u], supporting Hypothesis 2. This observation will be tested in a perception experiment where participants rate the foreign-accentedness of Gen 1, Gen 2, and GER productions.
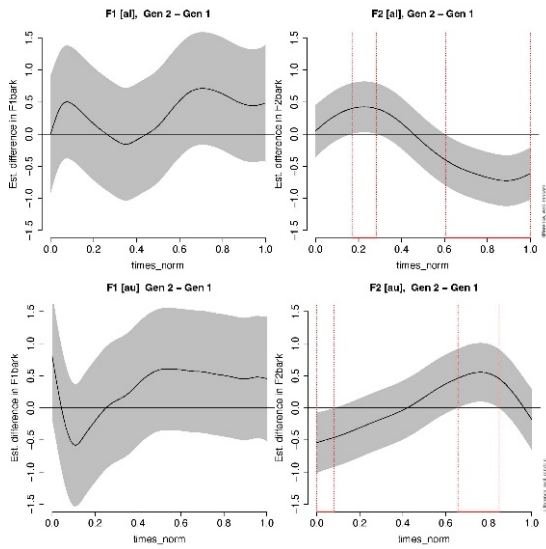

Figure 1: Underlying diphthongs [aɪ] (top) and [aʊ] (bottom). Red areas mark significance.
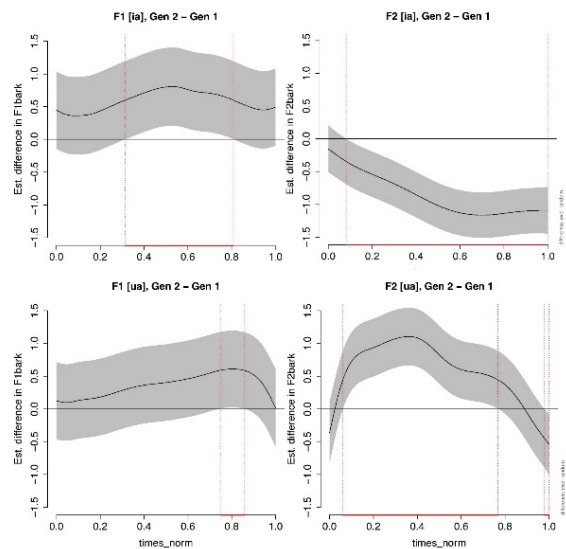

Figure 2: Derived diphthongs [iːɐ] (top) and [uːɐ] (bottom). Red areas mark significance.
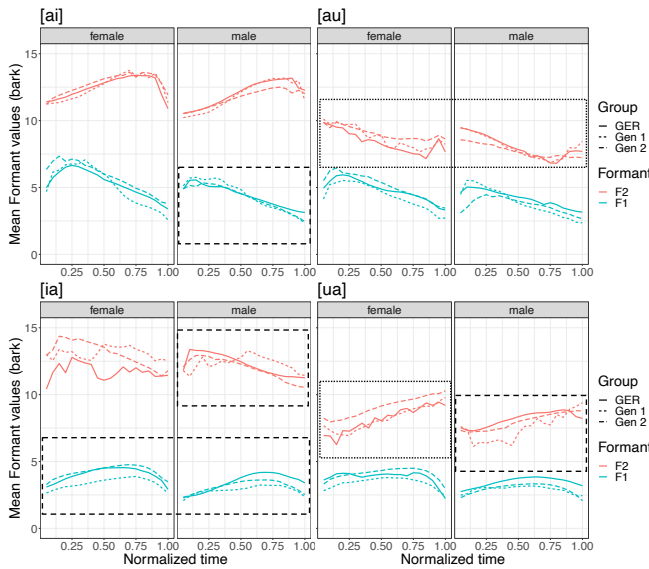

Figure 3: Comparison of Gen 1, Gen 2, GER: [aɪ] and [aʊ] groups. (top), [iːɐ] and [uːɐ] (bottom).
Squares with dashed lines: Gen 2 closer to GER (n = 5).
Squares with dotted lines: Gen 1 closer to GER (n = 3).

Table 1: Distribution of participants across

Group	Female	Male	Total
Gen 1 Mean age 56.0, SD = 2.7 years	6	6	**12**
Gen 2 Mean age 27.0, SD = 4.2 years	7	11	**18**
GER 1 (control) Mean age 54.25, SD = 1.92 years	2	2	**4**
GER 2 (control) Mean age 21.5, SD = 2.1 years	2	2	**4**
Total	17	21	**38**

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Pronominal clitics in the Slovenian dialect of Resia

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Slavic languages have long served as an important resource for studying different types of clitics (cf. from Jakobson 1961[1935] to Franks & King 2000, Spencer & Luís 2008 and others). As a result of this continuous interest, the clitic systems of the major Slavic languages are comparably well understood. However, when it comes to smaller languages or dialects, the situation is much different. Studies specifically dealing with the clitic systems of smaller varieties are still rare (e.g., Danylenko 2012 and Fellerer 2022 on Rusyn, Escher 2021 and Živojinović 2021 on Torlak, Michałk 1965 on Sorbian). Investigating these systems is, however, important since they often contain curious phenomena which are absent from the major Slavic languages. Therefore, in this paper, I intend to give a detailed description of the system of pronominal clitics in the autochthonous Slovenian dialect spoken in the Resia valley located in northern Italy.

Like standard Slovenian, Resian exhibits clitic variants of the genitive, dative, and accusative forms of the personal pronouns and it additionally developed clitic variants of the nominative forms. In the literature, the Resian clitic system has mostly been discussed in contributions with a more general scope (Benacchio 2002, Steenwijk 1992, Skubič 1997). Studies specifically addressing issues related to pronominal clitics are scarce (e.g., Šekli 2010, Runić 2018), and some basic characteristics of the clitic system still remain to be determined. In this study, I therefore aim at a detailed description of the placement and order of pronominal clitics in the Resian clause. As a resource, I use the recent translation of *Le petit prince* into Resian (de Saint-Éxupery 2021). While having some disadvantages, working with a translated text proves useful in distinguishing doubling constructions from cases of left- and right-dislocation (cf. Coveney 2005).

I find that subject clitics always precede the verb while object clitics precede the verb in declarative and interrogative clauses but occur subsequent to the verb in imperative clauses (cf. also Benacchio 1984). In periphrastic verbal constructions, subject clitics precede the entire verbal complex while object clitics are proclitic to the lexical verb (1). Both subject and object clitics can occupy the first position in the clause.

(1)	**Ja**	mëšon	**je**	ni	pušlüšat
	I.sc	have.imperf.1sg	they.oc	neg	listen.inf
	'I should not have listened to her!'				

Due to the fact that subject clitics and object clitics are oriented towards different parts of the verbal complex, they do not form a clitic cluster. However, according to the investigated data, object clitics and reflexives do cluster. As expected from a general Slavic perspective (cf. Franks & King 2000), dative clitics precede accusative clitics. The placement of reflexives, on the other hand, shows some variation.

As indicated above, Resian exhibits clitic doubling of both subjects (2a) and objects (2b) (Skubič 1997, Steenwijk 1992, Šekli 2010, Runić 2018).

(2)	a.	**Te**	**mali**	**prïncip**	**an**		nï	rišpundäl	nikar
		def	little	prince	he.sc		neg.aux	answer.pst.ptcp	nothing

'The little prince made no reply.'

	b.	anö	jüdi	**me**	lövijo	**mle**.
		and	people.nom	I.oc.acc	hunt.prs.3pl	I.acc

'and the people hunt me'

With regard to the placement of pronominal clitics, the investigated data suggest that there is no difference between clauses with doubling and clauses without doubling. Accordingly, subject clitics precede the verb also in clauses with subject-verb inversion. Thus, while subject clitics follow the subject in clauses with unmarked word order, they precede the subject in inversion.

The Resian system of pronominal clitics has characteristics that make it stand out within Slavic (e.g., subject clitics, subject doubling). By offering a detailed description of the placement and ordering of the Resian pronominal clitics I intend to provide a basis for further studying these phenomena. For instance, features such as the use of subject clitics and subject doubling are usually explained as the result of language contact with the neighboring Romance varieties (e.g., Bencacchio 2002, Šekli 2010). The provided description will allow for a more detailed comparison of the Resian clitic system and the clitic systems of these varieties which has the potential to shed some light on the origin of these phenomena in Resian.

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Compositionality Without Language: a Systematic Literature Review of Vision and Language Models

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Compositionality is common and important to both human language and vision, enabling us to differentiate between an image representing 'A dog kissed by a woman' and 'A woman kissed by a dog'. When applied to computational linguistics, compositional ability proves important for Vision and Language models (V&L) when matching the corresponding caption to an image, extracting information from an image or performing text-to-image generation (Ma et al. 2023).

However, despite its relevance in the aforementioned tasks, V&L models' compositionality is an understudied topic, as remarked by Yuksekgonul et al. (2022). When studied, it is operationalized as the ability to differentiate between captions for images that differ minimally (Parcalabescu et al. 2022; Thrush et al. 2022; Ma et al. 2023; Hsiesh et al. 2023, among others), tested by different tests, named 'compositional evaluation benchmarks' were created, such as ARO (Yuksekgonul et al. 2022), VALSE (Parcalabescu et al. 2022), Winoground (Thrush et al. 2022), CREPE (Ma et al. 2023), or SUGARCREPE (Hsiesh et al. 2023). Results of such benchmarks show that models perform poorly. For example, models CLIP (Radford et al. 2021) and LXMERT (Tan and Bansal 2019) obtained around 60% to 70% below human performance on Winoground, and around 40% to 60% on VALSE language tasks.

However, though useful for evaluating compositionality, the aforementioned evaluation benchmarks are not without their faults. In practice, minimal differences between captions are operationalised in many ways, i.e. swaps between minimal components of the sentence (Yuksekgonul et al. 2022; Ma et al. 2023), a difference in word order (Parcalabescu et al. 2022), among others. Minimal components of the sentence can also be operationalized differently, as attributes, relationship and objects (Yuksekgonul et al. 2022), or concepts and attributes (Hsiesh et al. 2023), among others. While such different definitions increase diversity of the benchmarks, they also implicitly make the comparison of their results more difficult. Additionally, such choices, and their definitions are arbitrarily chosen by the authors, with little to no linguistic justifications. This lack of systematicity in choosing definitions not only leads to inconsistency across studies, but also increases the chance of including less important aspects in definitions of compositionality.

Though comparing the current compositional evaluation benchmarks seems necessary, no previous study was dedicated to it. To bridge this gap, the current article is a systematic literature review on all V&L compositional evaluation benchmarks up to date (i.e. seven of them), that describes and makes comparisons between them, as well as studies that are not evaluation benchmarks, but use similar methods (i.e., Wu et al. 2023; Zonneveld et al. 2023). The search strategy presupposed searching keywords such as 'compositionality benchmarks', 'compositionality vision language' using engine platforms (e.g. Google Scholar, arXiv), as well as verifying the papers that cited found benchmarks, in a process repeated two times. The found evaluation benchmarks are VALSE, Winoground, CREPE, SUGARCREPE, Cola (Ray et al. 2023), ARO, and ColorSwap (Burapacheep et al. 2024).

We found that these benchmarks either create sentences based on 'adding', 'replacing', 'swapping' words or mixing these strategies. We observed that out of all benchmarks, only one had minimal sentence components more linguistically motivated (though arbitrary chosen), but that also in six out of

seven benchmarks, compositionality is minimized to the ability to differentiate minimal differences in sentences, only one benchmark taking a more linguistic-oriented approach. Out of all the phenomena these sentences cover, swapping of thematic arguments, attributes of objects and actions are common to three of them. Overall, for all benchmarks, sentences that target linguistic phenomena, such as thematic argument swapping, are defined in a close relationship to the image, while visual phenomena (the symbolic aspect of images) are framed as more independent of the text. This presentation especially stresses how the linguistic phenomena that are discussed in relation to compositionality benchmarks are arbitrarily chosen, and how the textual modality is neglected, despite it being particularly important.

This presentation also argues against the predominance of the textual modality in some V&L models, allegedly revealed by their evaluation on compositional datasets (Wu et al. 2023), by highlighting that training on compositional datasets simply improves the textual modality, without creating a disequilibrium in the use of the two modalities. We also review papers dealing with the predominance of one of the two modalities (i.e. language or vision) in multimodal models, given poor compositional ability might be influenced by it, as well as the methodology and searching strategy of finding all the aforementioned papers.

Our main contribution is offering a general view and a critical linguistically-oriented systematic evaluation of compositionality benchmarks. We identify trends within the field, weaknesses and our main point of discussion is whether terms used in computational linguistics and natural language processing have linguistic relevance and what are the consequences in performance and overall in research if they do not.

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A new perspective to the mei-dou puzzle in Mandarin

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1. Introduction

Mandarin *mei* has been glossed as the English *every*. One puzzle is *mei*-NPs in pre-verbal positions have to co-occur with the multi-functional adverb *dou*; no such constraint exists in English.

(1) Every child (*all) went to the park.

(2) mei-ge haizi dou   qu-le   gongyuan

   mei-cl child DOU go-ASP   park

   'Every child went to the park.'

This constraint has many exceptions. The most widely discussed exception involves numerals in the verb phrase (Huang 1996): With a predicate like "drew one picture" in (3), *dou* appears to be optional.

(3) mei-ge haizi   dou   hua-le   yi-fu-hua

   mei-cl child   DOU drew-ASP one-CL-picture

   'Every child drew one picture.'

Most previous accounts treated (3) with/without *dou* as semantically equivalent, except for Liu (2021) who suggested that the presence/absence of *dou* reflects different QUDs. Liu's bookstore scenario in (4) shows that the use of dou is only licensed when the universal statement is relevant under the QUD.

(4) At a secondhand bookstore:

a. The bookstore owner: 'Our store is having a big sale,

   mei-ben shu mai 10 yuan

   mei-CL book cost 10 yuan

   'Every book is 10 yuan.'

   QUD: How much is every book?

b. John: This one looks brand-new. Is it also 10 dollars? The owner:

   mei-ben shu dou 10 yuan

   mei-CL book DOU 10 yuan

   'EVERY book is 10 yuan.'

   QUD: Are the books all 10 yuan?

In this talk, I will focus on minimal pairs such as (4) and pursue a different approach given the non-accidental connection between *dou*'s presence and homogeneity removal.

2. Dou as truth-conditionally vacuous? Liu treats *dou* as a focus particle; it is truth-conditionally vacuous with mere presuppositional contribution: Its prejacent is the strongest (in terms of entailment) among all contextually relevant alternatives. Assuming that *every* triggers individual alternatives (Zeijlstra 2017); in a context as (4a), the individual alternatives are intuitively not relevant to the QUD and are thus pruned. If there are 3 books a,b,c, then $Alt(\llbracket\pi\rrbracket)$ ={a, b and c is 10 yuan}. $Alt(\llbracket\pi\rrbracket)$ is a singleton set containing only the prejacent. The principle of non-vacuity blocks the occurrence of *dou*. But in a context like (4b), individual alternatives are contextually relevant and thus remain in the alternative set: $Alt(\llbracket\pi\rrbracket)$ = {a is 10 yuan, b is 10 yuan, c is 10 yuan}. Since *dou* carries an extra presupposition that the prejacent must be the strongest, Maximize Presupposition (MP) (Heim 1991) blocks the *dou*-less sentence. Liu's account suffers from various problems: Whenever *dou* co-occurs with *mei*, the prejacent is universal and thus always the strongest. *dou*'s presupposition is automatically satisfied and thus trivial. More importantly, the treatment of *dou* as semantically vacuous ignores *dou*'s other semantic contribution.

3. Missing piece of the puzzle: Homogeneity

Although *dou*'s ability to remove non-maximality and to give rise to distributivity has long been under the spotlight, its connection to (non)-homogeneity is by far overlooked. The diagnostics in (5) and (6) show that homogeneity (given rise to by the definite plural) disappears when *dou* is inserted. Surprisingly, Mandarin *mei*, unlike English *every*, doesn't collapse homogeneity in (7).

(5) haizi-men chi-le yi-ge pinguo ma

   kid-pl   eat-ASP   1-cl apple SFP

   'Did the kids eat 1 apple?'

With a negative answer: 'No, this is not the case.' ⤳ None of the kids ate 1 apple.

(5) haizi-men dou chi-le yi-ge pinguo ma

   kid-pl   DOU   eat-ASP   1-cl   apple SFP

   'Did the kids all eat 1 apple?'

With a negative answer: 'No, this is not the case.' ⤳ At least one kid didnt eat 1 apple.

(7) mei-ben-shu 10 yuan ma

   mei-cl-book1 10 yuan SFP

   'Every book 10 yuan?'

With a negative answer: 'No, this is not the case.' ⤳ None of the books cost 10 yuan.

This observation motivates my assumptions that a) Mandarin *mei* is nothing more than a $\oplus$ operator; so $\llbracket\text{mei-cl-book}\rrbracket^C = \llbracket\text{the book}\rrbracket^C = \oplus$ book in C; b) since the non-quantificational *mei* lacks the power to remove homogeneity, *dou* is therefore required when the context is non-homogeneous. Following the widely adopted idea that homogeneity, as a fundamental property of predicates, is introduced by the silent distributivity operator DIST, I argue that if DIST can be seen as taking a predicate and returning a new homogeneous predicate as in (8), then *dou* instead returns a non-homogeneous predicate as in (9).

(8) **DIST**(P)(a)

   true iff $\forall a' \preceq a : P(a') = 1$

   false iff $\forall a' \preceq a : P(a') = 0$

   undef. otherwise

(9) **Dou**(P)(a)

true iff $\forall a' \preceq a : P(a') = 1$

false iff $\neg \forall a' \preceq a : P(a') = 1$

undef. never

I further propose a licensing condition on *dou*: assume there is only one slot at LF for distributivity, *dou* and DIST are in competition; *dou* is only licensed by non-homogeneous contexts. (10) is one possible formalization of my idea following Gajewski (2005). In a non-homogeneous context like (4b), DIST's presupposition is not satisfied and thus requires the presence of its overt counterpart *dou* by MP. To demonstrate the power of the proposed analysis, I will also go beyond the bookstore example and discuss more cases where *dou*'s presence/absence can be explained by the non-homogeneity condition.

(10) a. $[\![DIST]\!] = \lambda P_{et}. \lambda a_e : \forall x[x \preceq a \rightarrow P(x)] \vee \forall x[x \preceq a \rightarrow \neg P(x)]. \forall x[x \preceq a \rightarrow P(x)]$

b. $[\![DOUK]\!] = \lambda P_{et}. \lambda a_e. \forall x[x \preceq a \rightarrow P(x)]$ *Implicated presupposition: Non-homogeneity*

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Reduplication in the Formation of Manner Adverbials: A Case Study in Mandarin Chinese

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Reduplication and Manner Adverbials Reduplication is applied as a morphological strategy in the formation of manner adverbials in many languages, such as Turkish (Lewis 2000), Indonesian (Macdonald & Dardjowidjojo 1967), Mandarin Chinese (He 2006), and Japanese (Ishihara 2013). Mandarin Chinese, with its productivity and prevalence of reduplicated adverbial forms, as well as its diversity in reduplication forms, is selected as the case study for this paper. In the use of reduplication for manner adverbials, there are monosyllabic morphemes (A) reduplicated in AAs, and disyllabic morphemes (AB) in AABBs, as exemplified below.

(1)   A: 慢 > AA: 慢慢
        màn mànmàn
        slow   slowly-RED

(2) AB: 漂亮 >   AABB: 漂漂亮亮
         piāoliàng   piāopiāoliàngliàng
         beautiful   beautifully-RED

Larson (2018) labels reduplicated adverbs in Mandarin Chinese as "purely adjectival" adverbials, as opposed to nominal adverbials like大声 *dàshēng* "loud (literally, loud voice)". However, it is also hypothesized in the literature that all the manner adverbials are indeed adpositional phrases (PPs) with embedded nominal elements (Emonds 1976, 1985; Alexeyenko 2015; Cover 2021). Aboh (2005: 157) also specifically mentions reduplicated adverbs in the analysis of Gbe languages and puts such adverbs alongside headed relatives and postnominal phrases (pPs) in the preverbal object position.

Research Questions and Hypothesis Given the above discussion of manner adverbials and reduplicated forms, we are curious about the following questions:

(1) What is the actual syntactic status of these reduplicated manner adverbials in Mandarin Chinese: adjectival, nominal, or adpositional?
(2) What is the underlying structure of these reduplicated forms?

In this paper, we propose that these AAs and AABBs are adpositional phrases (PPs), and they have the nominal element embedded in PP rather than adjectival elements proposed by Larson (2018). With the explicit spell-out of their traces, they form a special kind of manner adverbials, differentiating them from other manner adverbials.

Analysis Firstly, this paper argues that they are not adjectival. Larson (2018) concludes the adjectival property of reduplication from the phenomenon that they never occur without the adverbializer 地*de*, as compared with other nominal adverbials. Yet this view is based on inaccurate language facts since it is not always obligatory for reduplicated forms to co-occur with *de*, see Gu and Zhou's (2019) statistical study from corpora. Moreover, adverbials AAs and AABBs cannot be used as typical adjectival constituents, either as predicates or as attributives, as also stated in Zhu (1992). These reduplicated forms

cannot be modified by degree adverbs either, such as 慢慢 *mànmàn* "slow-RED" with很 *hěn* "very" > *很慢慢 *hěnmànmàn* "very-slow-RED".

Secondly, their nominal properties can be corroborated by their correlation with nominal suffixes. The derivational suffix 然 *-rán* can be applied to monosyllabic bound roots, such as 悄然 *qiāorán* "quietly" for 悄*qiāo* "quiet", and *-rán* here literally means "in a way of......". The AA form of 悄*qiāo* "quiet", 悄悄*qiāoqiāo* "quiet-RED", functions in the same as 悄然 *qiāorán* "quietly", i.e., they have the same syntactic distribution, indicating the parallel syntactic status underlying.

The inflectional suffix is the diminutive marker 儿 *-r* in rhotacization. It can be attached to almost every AA and AABB manner adverbial especially in the colloquial informal register, like 慢慢儿 *mànmànr* "slow-RED-r" (Zhu 1982; Gu 2007). In Mandarin Chinese, rhotacization is restricted to nouns to indicate diminutive meanings, and these reduplicated manner adverbials are regarded as exceptions under this rule (Li 2003). This paper tries to argue that instead of taking them as exceptions, it is more reasonable to consider the nominal properties of these reduplicated forms. Another piece of evidence is that the suffix *-r* cannot be combined with reduplicated constructions that are adjectival, like 酸酸 *suānsuān* "sour-RED" > *酸酸儿 *suānsuānr* "sour-RED-r". Systematically, even for the same AABB, the rhotacization only happens with its adverbial use rather than the adjectival use, as shown in the examples below.

(3) a. 这间干干净净(*儿)的 房间

    *zhèjiān gàngànjìngjìng(*r)-defángjiān*
    this-CL clean-RED-(*r)-DEroom
    this clean room

  b. 他干干净净儿地 离开了。

    tāgàngànjìngjìng(r)-de líkāi-le
    he clean-RED-(r)-DEleave-PFV
    He left cleanly.

There is also a comparable nominal suffix 叫*-jiao* observed in Chinese dialects like Northern Wu and Jin (Shi 2011), though more restricted in its combination. It can only be attached to the reduplicated form of monosyllabic morphemes, i.e., AA-*jiao*.

Thirdly, despite the nominal features aforementioned, this does not fully explain their performance in the language. They also exhibit non-nominal features, such as the inability to be topicalized and to act as predicates like other nominal phrases. In this case, we find the PP hypothesis much more powerful. It is hypothesized that there is a functional layer PP over nP, and the adverbializer *de* is the *p*-head. Within the framework of distributed morphology, the morphological elements can be unspecified roots first, and then merge with their categorical heads through the head-movement (Marantz 1997; Embick and Marantz 2008). We propose that the root first incorporates with *n*-head to get the nominal category. The form of reduplication, in the meanwhile, is the double spell-out of the trace of the original root and the end terminal of incorporation at PF. The whole nominal phrase is projected by the adpositional phrase.

In the end, as for the bigger picture, the empirical materials and theoretical analysis presented in this paper can contribute to a deeper understanding of reduplication and manner adverbials, in the way that the former is related to the head-movement and the latter is further affirmed as not being a separate syntactic category (Emonds 1976, 1985; Alexeyenko 2015; Cover 2021).

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